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RAM BAGH, PATIALA

IMMORTAL HEROES OF THE WORLD

To

The Memory of Great Heroes

THE STATELY SHIPS OF LONG AGO



THE SORT OF SHIP COLUMBUS SAW AT SEA IN SUCH A SHIP SAILED FRANCIS DRAKE

IMMORTAL HEROES OF THE WORLD

SOME OF THE GREATEST PEOPLE WHO HAVE EVER LIVED

Being Volume 1 of

THE CHILDREN'S TREASURE-HOUSE

A Companion to the Children's Encyclopedia

Edited by Arthur Mee

Editor of the Children's Newspaper

The whole work comprising the following 12 volumes

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   Some of the greatest people who have ever lived
2. NATURE IN ALL HER GLORY
   The book of the changing year
3. THE MOTHERLAND AND THE EMPIRE
   Round the world with the flag
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THE GATE OF THE TREASURE-HOUSE

TWELVE years have gone since there came into the world that book in which the children find, plainly told for all to read, the wondrous tale that never tires the human mind, the tale of Life and its Children, and all that they have done upon the earth.

THE Children's Encyclopedia has made its way in these twelve years into the homes of millions of people of all ages and of many nations. It has gone round the British Empire with the flag. It has spread throughout the English-speaking world beyond the Atlantic Ocean. It is on the bookshelves of France and Italy in their own tongue. The children of Spain can read it in Spanish and the children of Russia in Russian. It has gathered to itself a great multitude of that universal brotherhood of all who are young, and it may be said with truth that no other encyclopedia ever printed has been so widely read or is so much beloved.

BUT it is the way of boys and girls to grow up; it is the way of the world to move on; and no encyclopedia can contain the whole of what we want to know. And so it has been thought worth while that those who made the Children's Encyclopedia should look out upon the world again, should pick up the wonder and glory and treasure of it, and should tell more fully here the story of those things that encyclopedias can only touch upon. Here is a book to travel in, a book for the young explorers who want to know more and more of this vast treasure-world into which we all are born.

IF you would seek a hero, seek him here. Here is poor Columbus, with the quenchless faith of a poet, the dauntless courage of a man, and the high pride of a king, seeking and finding an unknown continent, giving a new world to Spain, yet living in chains and dying in poverty and scorn. Here are Livingstone and Bruce, those deathless men who opened up a continent. Here is Kelvin with all his great inventions; Faraday peering into electric mysteries; Michael Angelo chiselling his way to everlasting fame; Pasteur and his wonderful lamp; here are men of every age and every land, and all the wonders that they did.

IF you would go on a journey, take one here. Here are the countries of the earth, the sights of every continent; thrilling rides through desert and veldt and jungle and bush. Crumbled empires, vanished cities—here we find them, teeming with the ruin of the past. We live through ages that have gone; we see the world by land or sea or air, and the vastness of it all, and the glory of it all, grow on us more and more.

THE GATE OF THE TREASURE-HOUSE

WOULD you come with Nature into her secret places? Would you learn of those stupendous processes by which the Sun and all the worlds keep in their places; of the unknown powers that tenant all the realms of space; of the invisible forces in an atom that could break a continent in two; of the marvel of a little seed that grows into an oak, or scatters itself until it clothes the countryside with gold?

WOULD you know of all the great inventions that are changing the face of the world—of aeroplanes, and wireless telephones, and submarines, and motor-cars, and kinematographs, and gramophones, and turbines, and pneumatic devices, and electric ships, and engines worked by light and air, and books that actually speak? All these, and wonders without end, are here.

AND if you would know how a flower is born, through what mysterious adventures it comes to us, out of earth's darkness into glorious light, here is this, too. Every year our harvests come by ways that never yet have failed; every year our gardens bloom; daffodils and bluebells spread their glory in the woods; the wild rose creeps along the hedge; the common is afire with red and gold: and it is not an accident. It is our business here to find out what we can about these wondrous things.

AND then we meet, within this Treasure-House, those neighbours of ours in this wide, wide world, the great dumb multitude inhabiting jungle and hill and plain, valley and prairie and veldt. We meet wild life in its ancient haunts. We climb the mountain peaks and find it there; we descend the ocean deep and find it there; we reach the boundless ice-fields round the Poles, and Life has had its great adventures there. No tales of fiction ever told can equal those of Life.

AND yet we have our fiction here, for what is life without imagination? And what would this great world be like without its colour, its music, its dreaming, its poetry, its humour, and its play? All these the seeker in our Treasure-House will find, for it is the aim of those who build this house to make it like a little world, to which a traveller comes seeking the joy of life, and finding it. It is meant to be in very truth your Treasure-House, to guide you along a thousand ways; to take you, when you come to it, along the paths laid down for you by God Himself, the paths that lead, through the kingdom of knowledge, to the greatest treasure this world holds—a happy life. ARTHUR MEE

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POOR COLUMBUS

This is the tale of a beggarman who was mocked in the streets with his little son; who pleaded with a king in vain, but moved a queen to sell her jewels; who collected criminals from prisons and made them sailors; who set out with three little ships to find a New World; who found it with a rebel crew, and came home from it in chains; who died a beggar's death, and left behind him an immortal name.

EVERY child who can read knows his name, the name of Christopher Columbus, and most of us at some time or other have read the story of how he discovered America. But not all of us realise how terrific was the adventure, how great the achievement, how much more wonderful than poem and story was the romance of it all. Columbus did a much greater thing than Jason and the Argonauts. Jason and his comrades live in an old Greek story. Columbus was a second Jason, but instead of a Golden Fleece he sought a golden world—and found it.

There were no printed records when Columbus was born, and we are not sure of the date of his birth. But as an American scholar has written a whole book solely to prove that the year was 1451, we may take it that the question is at last settled. Columbus was born, therefore, four years before the first book was printed. Genoa, now a city, but then, like other Italian centres, a state to itself, was his birthplace. His father was a poor man engaged in the weaving trade, a woolcomber, and, as Christopher's son afterwards wrote, a noble descent would have conferred far less lustre upon him than to have sprung from such a father. The elder Columbus gave his son the best education possible, and it is generally believed that Christopher was sent to Pavia, where there was a university, as there still is, for poor scholars.

His early years were full of romantic adventures. He served on what we should now consider pirates' vessels, and he fought against pirates. He helped to rob and capture the rich galleons of Venice; he bravely fought against the monsters from Barbary, of whom we read elsewhere in the life of Cervantes. Once, in a fight, his own ship caught fire, and Columbus only escaped death by leaping into the sea and swimming nearly six miles to land, supported by an oar.

In the course of his travels he visited England, and, going north, reached Iceland. He was probably there in 1477. Now a marvellous possibility arises. Did Columbus, while in Iceland, hear of America? Or, rather, did he hear of the continent we now call by that name? For America had been discovered by the Vikings four and a half centuries before Columbus was born! A hardy Norseman named Bjarne Herjulfson was driven by a storm to within sight of its shores in the year 986, and upon his return to Iceland the record was kept. In the year 1000, Leif the Lucky, son of Eric the Red, set out on an actual voyage of discovery, and reached America. One part he called Helluland, or Stoneland, which is the modern Labrador; another part he named Markland, or Woodland, the modern Newfoundland; a third part he named Vineland, because he found wild grapes growing there; and Vineland is the Nova Scotia of today.

A year or two later, another Viking, Thorfinn Karlsefne, brother-in-law of Leif, set out with 160 men—twice as many as Columbus had for his immortal voyage—and lived for three years in Vineland. The records of these old Viking expeditions to America are still preserved in Iceland, and it is thought possible that Columbus heard, when he was there, the tale of the marvellous land which was to be reached by sailing out in the track of the setting sun. But we have no positive evidence on the point. We do not know that he could speak Scandinavian, though there may have been somebody on the ship who could. That ship, by the way, was British, for it sailed from Bristol, which,

in those days, had a regular trade with Iceland, little dreaming of the land that lay westward over the sea.

It seems impossible to us today that anyone could doubt that land must lie beyond the Atlantic, but no one in Europe then knew that that was so. People thought the British Isles were the last of land towards the west. They thought the world was small and flat; that it stretched away for a great distance eastward into Asia, and there ended. They knew of only two continents—Europe and Asia. They had not heard of America or Australia, and they disbelieved in Africa. It was there, they knew, but they believed that beyond the Equator it became hotter and hotter, that a man who went there was turned into a negro, and that as one went still farther south it became hot and intolerable, and actually the abode of demons. It took the mariners of Portugal a full half-century to work their way down the west coast of Africa, and when, eventually, Diaz reached the Cape of Good Hope, he braved the terrors of all the wise men of that time, who vowed that the reef of Cape Bojador had been placed south of Morocco to prevent men from going farther south. He braved, too, the threat of being devoured by the liquid flames into which the sun's rays were said to turn beyond that point. But Diaz went and returned, and Columbus was in the crowd that witnessed his triumphant return to Lisbon.



COLUMBUS AND HIS WIFE, WHO DIED BEFORE HIS FAME

Columbus was by this time a married man, for he had settled down in the Portuguese capital, and had there wedded a dark-eyed daughter of the first governor of Porto Santo, one of the Madeira islands, to which a storm had carried a Portuguese mariner from the African coast in 1418. Columbus brooded over the thought of what lay beyond that trackless deep. His own reason told him that land must be there. So did his reading. But he had heard also from sailors of strange finds far, far away from land. They had picked up wood strangely carved; they had found huge bamboos, such as were unknown in Europe; they had found the dead bodies of strange, broad-faced men, differing from any other men ever seen. These finds must have come from a westward land. He studied the charts he had received from his father-in-law; he studied all the writings he could reach, and derived considerable assistance, we are told, from the works of our own Roger Bacon. And the more he studied and pondered, the more confirmed in his theory he became. He lived with the idea of finding this new land. His whole aim in life was the study and making of charts, and for some time he earned his living by their sale. He determined at last to seek assistance for getting a ship to put his theory to the test. He had to wait, for Spain and Portugal were at war, and the last great conflict with the Saracens in Europe was in progress. But at last he gained the ear of John II., King of Portugal, and explained his scheme. It was based on a wild mistake. The man who found the New World did so on an utter miscalculation!

Columbus thought, as very few men did then, that the earth is round, but he thought it considerably smaller than it really is. In this erroneous belief, he argued: "Asia extends an enormous distance to the east. Asia's westward side is the only side known to Europe. But it must have an eastward coast. Therefore, if it stretches so far from the west to the east, and the earth is so small and round, the unknown coast of Asia must reach out towards Europe. I have only to sail out across the Atlantic in order to find it."

He did not dream that the earth is so big; he had no idea that between the west coast of Europe and the unknown coast of Asia lay the great continent of America. The

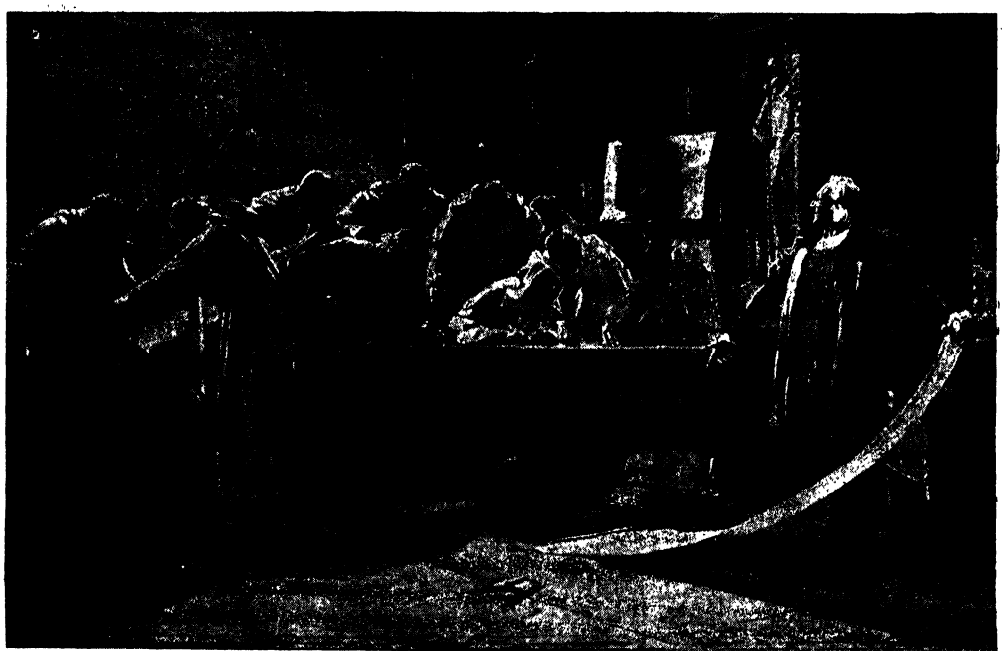


COLUMBUS ARGUING WITH THE MONKS

King of Portugal listened to his plans. It was the very scheme he wanted. Marco Polo had learned the way overland from Europe to India, China, and Japan, and trade had been established along that route; but the

rise of the Arab power and the coming of the Turk into Europe had closed the trade avenues, and all the journeys down the coast of Africa had been made with a view of finding a way through that continent to the East. The plan of Columbus interested the King, and he referred it to two commissions of his learned men. They ridiculed it, but a sneaking bishop, the Bishop of Ceuta, suggested to the King that he should "keep Columbus amused" while he secretly sent out an expedition to find the way by Columbus's charts, without paying Columbus the reward he demanded. And a Portuguese expedition did set out, unknown to Columbus, to find Columbus's way to China across the Atlantic, a passage which poor Columbus thought could not be more than 2500 miles. But the rascals who set forth on this expedition turned cowards after leaving Cape Verde Islands, and turned homewards, declaring to their dishonest master that the water was impassable, and the air could not be breathed.

Columbus, when he heard of the deception, was furious, and, his wife being now dead, he shook the dust of Portugal from off his feet and set out for Spain, where Ferdinand and Isabella reigned. Columbus, like Joan of Arc, believed that he was guided in his work by the voice of God, and he must have thought that divine inspiration directed his footsteps on his journey into Spain. With his little son he set out, as Marco Polo had set out with his uncles, on foot. He had no money, he was shabbily dressed, and he was starving, when one evening he stopped with his boy at the door of a small monastery called Santa Maria de Rabida. Here is a picture of him: "A man who had scarcely reached the middle of life, of tall stature, robust in figure, majestic in his bearing, with a noble brow, an open countenance, a pensive gaze, and mild and gracious lips. His hair, of a blond, lightly tinted with brown in his early youth, was prematurely marked at the temples by those grey shadows which misfortune and mental labour hasten. His forehead was lofty; his complexion, originally ruddy and bronzed by the sea and sun, was paled by thought and privation. The tones of his voice were manly, rich, and penetrating, like the accents of a man accustomed to give utterance to profound ideas. Nothing of levity or thoughtlessness was revealed by his gestures; all were grave and harmonious, even in his lightest movements. He appeared to respect himself modestly, or to act as if he were in the presence of God." The monks were touched by the noble appearance of the shabby, wayworn man, and while the father and his son sat down to a humble meal of bread and water and olives, they summoned the prior, to tell him of the arrival of the two interesting strangers.



COLUMBUS FACES THE SCOFFERS WHO WOULD NOT BELIEVE IN AMERICA

By a marvellous coincidence, the good prior was perhaps the one man in the world best able at that time to help Columbus. For one thing, he had lived some years at this monastery, which was near the port of Palos, from which Columbus was destined to set forth on his immortal expedition, and was therefore familiar with sailors and nautical science, and so able to understand his weary visitor's plans. But, more important still, this worthy prior had formerly been confessor to the good Queen Isabella, and in after years he wrote to her on behalf of Columbus, telling her of his lofty ambition, and earnestly commending him to her goodwill.



COLUMBUS EXPLAINING HIS PLANS TO THE FEW FRIENDS WHO BELIEVED IN HIM

We must not dwell on the long years of vexatious, heart-breaking delay which followed the appearance of Columbus at the Spanish Court. We all know how he was now favoured and now rejected; how he was treated with honour as an officer and liberally maintained, and how from time to time, when he pressed his scheme, he was fobbed off with various excuses. We do not often hear the reasons people advanced for refusing to provide him with the modest ship for which he pleaded. None of us should forget how magnificent were his promises. He was certain he could find India, China, and Japan, which Marco Polo had described; that he would gain sufficient wealth to equip an army which would for ever free the Holy Sepulchre from the infidels. He would open up the whole Eastern world to the influence of Christianity, and at the same time unlock the gates of such a commerce as the world had never known. It was all to come, let us remember, from merely sailing part of the way round the world.

Why, then, if the King and Queen listened at all to him, and went so far as to maintain and honour him, did they refuse? Of course, money was short. The great war with the Saracens had bled the country white. The venture would have been a profitable one if the great men of the earth could have been convinced of the soundness of the scheme. But the wisest

men in Europe, to whom the King and Queen referred the scheme, reported against it, and here are the very reasons they advanced against the paltry cost of fitting out a little ship.

"The doctrine of there being another side to the world is not consistent with the historical foundations of our faith. Such a thing would be to maintain that there were nations in existence not descended from Adam. In the Psalms the heavens are said to be extended like a hide—that is, a covering like a tent. Then, even granting that the intolerable heat of the torrid zone could be passed, the circumference of the earth must be so great as to require at least three years to the voyage; and those who should undertake it must perish of hunger and thirst, from the impossibility of carrying provisions for so long a period. Even supposing that the earth were round, it was habitable only in the northern hemisphere, and in that section only was it canopied by the heavens. The opposite half was a mere waste of water, a gulf, a chaos. Even should a ship succeed in reaching, in this way, the extremity of India, she could never get back again; for the roundness of the globe would present a sort of mountain up which it would be impossible for her to sail with the most favourable wind."



COLUMBUS, WHO OPENED THE GATES OF AMERICA TO THE WORLD

Those opinions were uttered, not by children, not by uneducated men, but by the gravest scholars in Spain. They tell us what the learned men of the age really thought of the world on which they lived. Need we wonder, then, that Columbus was regarded at Court as half madman, half impostor, when the grave and learned men of the kingdom spoke thus in respect of him? His name became a byword; the very children mocked him in the streets as he passed. In his despair, Columbus offered his scheme to his native Genoa; he sent his brother Bartholomew to England to beg for the support and patronage of Henry VII. He twice set out for France, and was proceeding on his second journey there when a final message from the Queen of Spain brought him back. She was only just in time. The King of England had sent for him; he might have sailed under the British flag! But the Queen had been convinced at last of the greatness, sincerity, and wisdom of this humble sailorman, with the flaming eyes and the dauntless faith. Granada had at last been won from the Saracens, and Spain was free to seek a world beyond the seas; and, in order that the money for doing this might be found, the Queen had to promise to pawn her jewels.

Three little ships, such tiny ships, were found. Only one of them, the Santa Maria, in which Columbus sailed as admiral, had a deck; the other two were but big rowing boats with sails, with the sides raised high to provide cabins for the crew. No wonder men were afraid to go in them. Sailors could not be had for love or money for the voyage, and criminals had to be taken from the gaols to man these ships that were to make Spain the richest country in the world.

All told, the crews of the three ships amounted to eighty-eight souls, and the little vessels set sail from Palos, the port near the monastery where Columbus had been befriended. It was in the early morning of August 3, 1492, that the expedition put forth, when Columbus, if our reckoning is correct, would be forty-one, though his snow-white hair suggested a greater age. All went fairly well up to the Canaries, but when they saw an eruption of Teneriffe the fears of the crew were aroused, for there was not a man on board who did not

believe in demons and all the horrors of the Dark Ages. The last point of the Canaries was left behind, however, and these rough men launched themselves into the unknown, to smite the sounding furrows where never keel had ploughed before.

When the last peep of land disappeared, the miserable crew began to lament their fate. They were there against their will. They had left behind in Spain all that they cared for; they were sailing, they felt sure, towards destruction—not to that common fate by drowning which threatens every sailor, but to death by some horrible means which supernatural powers would set in operation against them for challenging the wrath of Heaven.

The men broke into loud lamentations and sobbed like children. Columbus did his best to comfort them with assurances of the safe issue of the great adventure, and with promises of rich and glorious reward. But, to be on the safe side he kept two reckonings One was the actual distance covered each day. This he kept to himself, so that the crew should not be alarmed. The other was the account which he allowed his men to see, this showing less by several leagues per day than the actual mileage accomplished. But he himself had no doubts. He gave orders to the other two ships that if they parted company they were to sail westward for 2100 miles, and that at the end of that time they were to halt from midnight until daylight, as at about that distance, he said, land would be visible. Soon the magnetic needle began to behave strangely, and ceased to point unerringly to the north. This frightened the sailors greatly. If this, their only guide, was perplexed and failing in these strange waters, where were they to turn for succour?

Columbus told them that the variation was due to the North Star revolving daily round the North Pole. They were for a time appeased, but their fears grew again as day after day passed without the sight of land. The sight of strange birds and the outline of clouds mistaken for land buoyed them up with false hopes, and made their disappointment all the greater, and their fears reached breaking-point when the ship ran into a vast mass of floating weed. This, named on the spot by Columbus the Sargasso Sea, or Sea of Seaweed, is one of the wonders and terrors of the Atlantic Ocean, a mass of floating weed nearly as big as the whole of Europe, from whose deadly embrace no sailing ship may escape. The sailors thought that this must surely be the beginning of the great swamp in which the world was supposed to end, and the home of demons to begin, but Columbus got his ships clear before they became engulfed, only to find a new terror rising. The breeze was so uniformly favourable to them that the men, knowing nothing about seasonal winds, argued: "If the wind blows always in this direction, how can we ever return?"



A PICTURE WHICH COLUMBUS MAY HAVE SEEN. A drawing of the expedition made at the time

At last, maddened with fear, the men, from quiet mutterings among themselves, became openly mutinous. They were led, they said, by a madman, who cared only for notoriety and was prepared to buy it with the lives of them all. They proposed to throw him into the sea and to declare, upon their return, that he had fallen overboard. No one, they said, would care about the fate of a mad navigator who had been unsuccessful.

But Columbus was a match for them all. He appealed to the better feelings of the least bad of these men; he renewed his promises to the greedy; he sternly threatened with punishment the utter cowards. And so the weary days wore on, until he found from his private diary that he had covered not merely the 2100 miles at which the ships were to stop, but 2724. By this time, he reasoned, he ought to have been off the coast of Japan.

He had gone too far north, he thought, so turned his ships more to the south. Had he gone on, another 720 miles would have brought him to the mainland—the coast of Florida; the alteration put him in line with the Bahama Islands, the nearest of which was 505 miles away. Even now the danger to his life grew hourly, and he could not much longer have kept the mutineers in check, when, on October 11, a piece of wood was sighted floating in the water, which bore upon it unmistakable evidence of carving; they saw also a branch of hawthorn with the berries on it; they saw a nest which was still attached to the bough that the wind had blown from a tree, and the eggs were in it and the mother bird was sitting on them.

Even these things the men regarded as the allurements of magic, but that night, after the sun had sunk to rest, Columbus, pacing the deck, saw a light on the horizon. He called to him a trusted comrade and, in a whisper, asked if he saw anything. Then he asked a second. They both saw the light—the most welcome light that ever the eyes of man gazed upon. They decided that it could be but one of two things. It appeared to move, and disappeared from time to time. Either it was a torch set up in a canoe swaying on the waves, or it was some dim fire upon a native hearth, obliterated from view now and again as the waves rose and fell.

With the break of day all doubts were dispelled. There were cries of "Land, land!" The New World was discovered! Two leagues away lay a beautiful island, glorious with verdure, gleaming with the light of the sun on many rivulets. The crews raised a hymn of praise to God. The man whom they had so recently desired to kill as a madman they now regarded as inspired by Heaven and more than human. Columbus was only too happy to forgive and forget. He gave orders to man and arm the boats. He dressed himself in armour, over which he cast a rich mantle, and, accompanied by officers bearing the royal banner of Spain, emblazoned with the Cross, he was rowed ashore. On landing the men of the Santa Maria knelt at the feet of their leader and humbly implored his forgiveness.



THINKING OUT THE WAY TO THE NEW WORLD—COLUMBUS WORKING AT HIS PLANS IN A MONASTERY

It was on the morning of October 12, 1492, that Columbus first set foot in the New World. On reaching the shore he knelt down, kissed the earth, and wept for

joy as he solemnly offered up a prayer of thanksgiving to God. His companions erected a crucifix and sang the Te Deum, and Columbus then formally took possession of the island in the name of Spain, and called it San Salvador. It was probably what we now know as Watling Island. This, he reasoned, must be an island off the coast of Japan. He had sailed to the West and found the East, he thought. It seemed to him that he was on the extreme edge of Asia opposite the place where Asia joined Europe, but as a fact he had discovered the Bahama Islands. But where were the cities, the opulence and splendours of the East, the gold and precious stones, the richly costumed people of Japan? Instead of these he saw only naked savages, wealth that Marco Polo had described—these were all at hand, within easy sail of this Japanese or Indian island. Some of the natives, he noticed, were wearing ornaments of gold. He asked by signs where they obtained it, and they pointed south, so confirming his belief that the country he sought lay in that direction, a small distance away. After a short stay he set sail to find his real land of gold, and first discovered islands which we now know as Cuba and Haiti. Cuba, he thought, must surely be the mainland of Asia—China itself, Marco Polo's "Cathay."

At Haiti one of his ships was wrecked, and from her timbers he built a fort for such men as cared to stay, the first colonists in the New World. Then he returned to

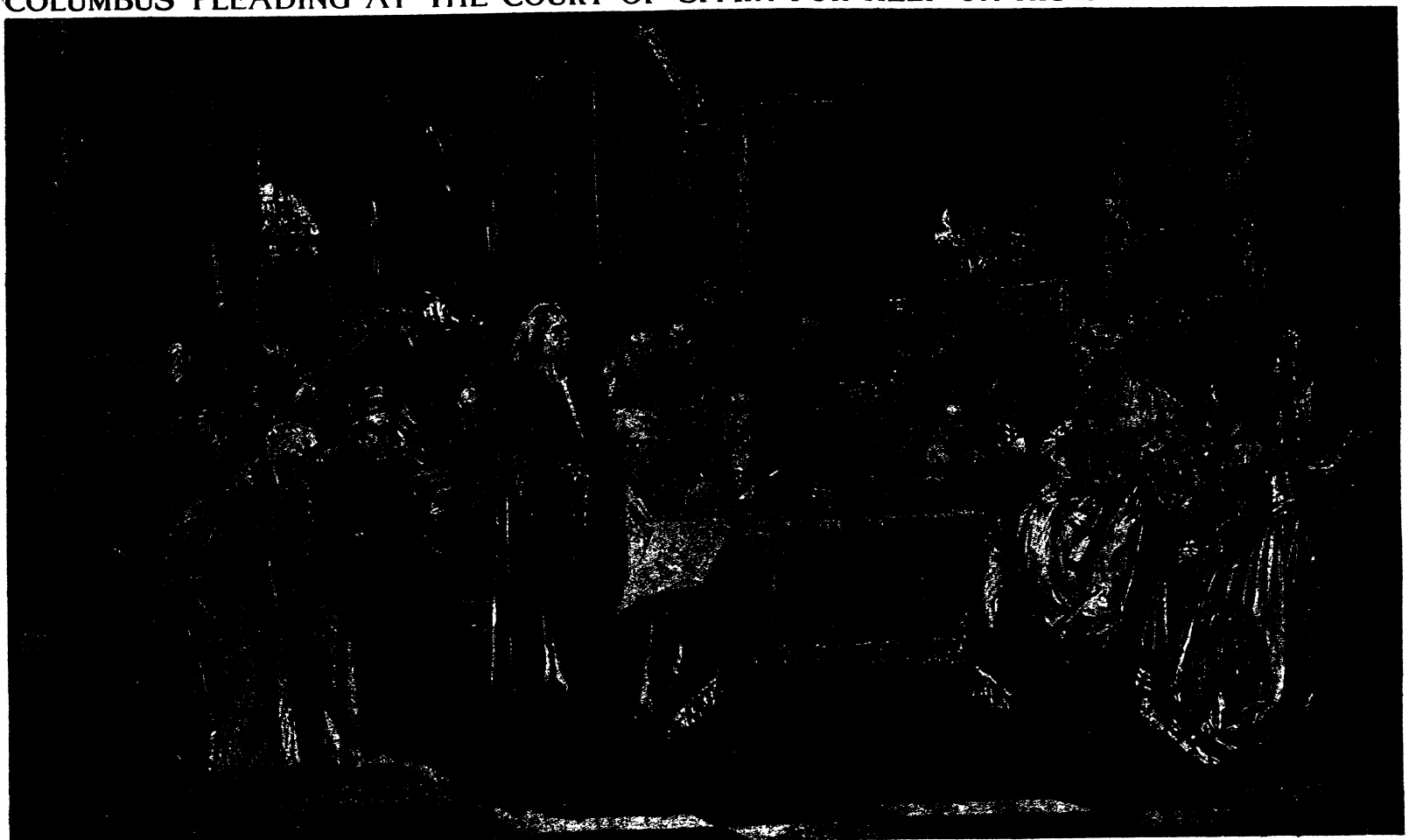


TO AMERICA! COLUMBUS LEAVING PALOS TO JOIN THE THREE SHIPS WHICH WERE TO CARRY HIM TO THE NEW WORLD

with tawny skin and painted with strange devices. Judging from their colour, he thought they must be natives of the race which peopled India, for India and China were all hereabouts, he thought. So he called the people Indians; and all the group of islands associated with the early voyages of discovery became known as the West Indies—to distinguish them from the East Indies, which are really half a world away.

The natives were at first terribly afraid of the newcomers, and thought them sea-gods, and their ships creations of magic raised from the deep to destroy them. Columbus, too, was surprised by what he saw. He believed that the mighty cities, the great populations, the incalculable Spain, and arrived there, at Palos, on March 15, 1493, having indeed found a new hemisphere, but not the land he thought it to be. He took with him a number of natives, gold, and strange birds, curious plants—among them, cotton—native arms, and a host of other things. He was received at Court like a great conqueror, and sat down before the King and Queen—an extraordinary honour—while he told his glowing story. The highest honours were heaped upon him, and soon a second and larger expedition set forth under his command. He discovered the islands which we now call Dominica, Santa Cruz, Porto Rico, and several others, but he found his colony at Haiti dispersed or destroyed. He

COLUMBUS PLEADING AT THE COURT OF SPAIN FOR HELP ON HIS IMMORTAL VOYAGE



COLUMBUS SOUGHT THE HELP OF KING FERDINAND IN VAIN, BUT QUEEN ISABELLA, STRUCK BY HIS EARNESTNESS, PLEDGED HER JEWELS TO OBTAIN FUNDS FOR THE VOYAGE WHICH ENDED IN THE DISCOVERY OF AMERICA

established a fresh colony, found gold-mines, hurried from island to island, still seeking the promised land, until he was brought almost to death by fever and worry.

In the meantime, envious rivals who had accompanied the expedition had wrought great harm. The evil spirit of the Spaniards had already begun to show itself. They were not colonists, but cruel conquerors, and trouble quickly arose with the natives. During his absence, malicious reports were sent home by the ships which now began to ply between Spain and the West Indies. When he returned to Spain he was received with kindness, but his reign as viceroy of the new lands was over in all but name. The misdoings of the colonists were all laid at the door of Columbus, and the King was clearly disappointed at having to provide money for expeditions instead of immediately receiving enormous revenues. Columbus made a third voyage in 1498, and found and named Trinidad, then passing on to the actual mainland of South America. Here was the continent he had so long sought, but the point he had reached at last seemed to him but an island, and in exploring the mouth of the Orinoco River he thought the headlands he saw were simply islands too. But they were not, and finally Columbus realised that he had found a continent.

After this, Spaniards of the worst type flocked out to the newly discovered territory, and the terrible story of murderous oppression and slave-making began. Columbus, who was deeply pained by the misdeeds of the ruffians who came out to plunder the people, was punished for their wrong-doing, and, after the third voyage, suffered the humiliation of being arrested on false charges and put in irons by a rascal named Bobadila, who was sent out to take command of Haiti. The great man's heart was almost broken at this indignity and wrong. He was sent on board a ship to be carried home, chained like a felon. The captain of the ship wished to remove his chains, but Columbus refused, saying they should not be taken off until the King of Spain himself commanded it.



COLUMBUS GOES OUT INTO THE UNIVERSE—THE DEATH OF THE DISCOVERER OF THE NEW WORLD

It was a wanton outrage upon a great and noble man, and the memory of it remains a blot upon the history of Spain.

When news of the outrage reached Spain, the heart of the nation was stirred, and full reparation was made to Columbus, but he never forgot this terrible chapter in his life, and kept his chains always hanging by him, to remind him, as he said, of the rewards of public service. He made yet one further voyage, and continued his discoveries on the mainland, and to the last he believed that he had really found China, though he could not locate its wealthy cities. He died believing that he had reached the Eastern Empire, and not until after his death did it dawn upon men that

in this mighty America, which does not even bear his name, he had given a New World to the Old.

After the death of the Queen he was forsaken by the King, to whom he had given a continent. He died in poverty and neglect at Valladolid on May 20, 1506, broken-hearted yet rightly proud to the last of his immortal achievement. Forsaken by the world, stretched on a pauper's bed, who discovered in the West the mainland, the islands, and the Indies." And then he ran through the dignities and possessions he thought his to bestow, and, with a beautiful human touch, he remembered to leave " half a mark of silver to a Jew who used to live at the gate of the Jewry in Lisbon."

It was a sad and painful end to one of the most glorious careers in the history of man-



THE RETURN OF COLUMBUS—HIS TRIUMPHANT RECEPTION ON HIS FIRST HOMECOMING

This picture is reproduced by courtesy of Messrs. Goupil & Co.

he called for a book and pen, and in these last hours of his brave life he wrote his will, settled the way in which his titles should descend in his family, and bequeathed seas and islands and countries as if they were all in his grasp.

" I pray my Sovereigns and their successors," he wrote, " to observe for ever my wishes in the distribution of my wealth, my rights, and my offices—I who, born at Genoa, came to serve them in Spain, and kind, for he left his family actually without support, and the poor people whom he had gone out to seek and to save for Christianity had entered upon that agonising slavery which Spain, to her ineffable shame, had imposed upon them.

But there were nobler days to come, and undying glory for poor Columbus, and there is no man now alive upon the earth who can hope for an immortality more splendid and sublime than his.

CAPTAIN CERVANTES

We will call him captain, for he was captain of his soul; he triumphed over chains and slavery, over poverty, cruelty, pirates, and kings, and who does this is conqueror of the world.

THERE are a few books that will never die, and one of them is "Don Quixote." It is the story of the Knight of the Rueful Countenance, whose head has been turned by reading stupid old books of false romance and chivalry—not the true chivalry of the heroic knight, but the nonsense which foolish writers of the Middle Ages mistook for it. Don Quixote read these stories until his kindly heart was on fire and his weak brain whirling; and, long after the last of the old knights had laid his lance to rest and passed peacefully to the tomb, he found a suit of ancient armour and set out upon a raw-boned steed, with a country clod as squire, to seek knightly adventures in a world which knew not knights. The story of his adventures, of his tilting at windmills which he mistook for giants, of his thrashing and getting thrashed by indignant citizens whom he mistook for cruel warriors, is one of the most mirthful books that ever was written.

Well, this merry book was written by a man whose life was as full of grief as a man could bear. He lived at the same time as Shakespeare, when there was in progress that great struggle between Europe and the Turk which, more than three centuries later, is coming to a head in our own days. He took part in the Spanish Armada, which was to have destroyed England. He, the man whom the English love better than all other foreign writers, was in the ranks of our enemies, travelling about Spain getting money and corn and oil for the ships which lie to this day at the bottom of our British seas.

We all know his name, or the name by which he is made immortal. He was christened as Miguel de Cervantes Saavedra, but he is plain Cervantes to all the world. He was born at Alcala de Henares, near Madrid, on October 9, 1547. If we look at the calendar we shall find the date of his death given as April 23, 1616, the day when Shakespeare died, but Cervantes died actually ten days before Shakespeare; our calendar had not then been reformed, so that England was then ten days behind the times. Still, the two men died within ten days of each other. It was truly a marvellous age of great men. There were living at the same time, in addition to these two, Milton, Velasquez, Rubens, Kepler, Harvey, Spenser, Raleigh, and other giants of history. Perhaps Nature never was more generous in her gifts of great men to the world.

But there seemed small chance of greatness for Cervantes. He was a member of a good old Spanish family, but his father and mother were poor, living on a tiny farm, where Cervantes and his brother passed the days of their youth. There is no doubt that Cervantes was sent to a university, probably under a scheme which made it possible for the sons of poor people to go. There is no doubt, also, that he was fond of reading as a boy, for we know that he would pick up torn pieces of newspaper to gratify his thirst for knowledge. But it is not till Cervantes is twenty that he becomes really a living figure to us—up to then we cannot clearly trace him. Nobody dreamed that he was to be famous, and he passed on his way unnoticed. To understand the tremendous tragedy and the great romance of his life, we must imagine ourselves for a moment in England at that time.

When Cervantes was still a boy, Queen Mary ruled over England. Under her father, Henry VIII., the country had thrown off the yoke of the Pope and become Protestant. When Edward VI. died, young Lady Jane Grey was made queen, but Mary quickly reached the throne, sent her rival to the Tower to be beheaded, and put into prison the little girl who was to become famous as our Queen Elizabeth. Then Mary began to bring back Roman Catholicism into

England, and, to the horror of the nation, married Prince Philip of Spain, the fanatical prince who was later to build the Armada to crush England, but whose reign, instead, ruined Spain. He was not king when Mary married him, and he came to England as her husband and lived here fourteen months. The effect of his spirit showed itself in Mary She lived only four and a half years after her marriage, but in the last three years of her life she caused Latimer and Ridley, and hundreds of other men and women, to be burned at the stake.

While such fearful things were happening in England, Philip was ruling in Spain, having succeeded his father, and it was the death of a vagabond son of Philip—who was poisoned, it is said, for plotting to kill his father—that brought Cervantes into touch with the great people of his time. For, though the King of Spain could not have mourned his cruel son, the Pope of Rome sent an ambassador to Spain to sympathise with Philip; and it was natural that such a mission, seeming but a hollow mockery, should be coldly received. The ambassador, therefore, sought consolation for the royal neglect, and found it in the company of such men of wit and learning and spirit as he could find at Madrid. One of these was Cervantes, who was already known as a poet and writer of some distinction, and so well did the ambassador like him that, when departing for Rome, he took Cervantes with him. Such is the generally accepted story, though some say it was in Rome that the Cardinal and the writer first met. Anyway, in 1568, when Cervantes was twenty-one, he certainly was a member of the Cardinal's household. Two years later Cervantes left Rome to take his place on the great stage of the world, and help in the making of a glorious chapter of history. In 1570 Spain joined forces with the Pope and Venice to fight the Turks. The brave heart of Cervantes leapt at the thought of war with such a cruel foe, and he joined the army. The rival forces met at sea, off the little town of Lepanto, a place famous in history, lying on the north side of the Gulf of Corinth. Here took place, on October 7, 1571, one of the greatest naval battles ever fought, and Cervantes was in it.



CERVANTES AS A YOUNG MAN

The battle was waged by very different ships from ours. The vessels were small, and were called galleys. The Turkish galleys were rowed by Christian slaves, poor souls captured by the Turks on land and sea, and thrown into chains because they could not get the ransom required for their release. There was no escape, for they were chained to their oars. Each galley would have about thirty benches on each side, and on each bench sat five slaves —five to an oar. To pull that oar was the sole business of their lives. A sort of bridge ran between the two lines of seats, and on this walked two men armed with fearful whips, solely to flog the slaves upon their naked bodies to make them pull harder.

The Turkish galleys were rowed to the battle of Lepanto by no fewer than 12,000 galley-slaves, tugging with breaking hearts at the oars to drive the Turkish ships against the forces come to set them free. If their masters won, their slavery would continue; if they failed to do their utmost, they would be cut to pieces by the whips of their captors.

Such was the situation on the morning of the battle of Lepanto, when Cervantes came face to face with the Turkish enemies of Christendom. The great day found him ill with fever, and he was told that he would not be able to fight. But he would not hear of being idle. "I would rather die fighting for God and the king," he cried, "than think of my own safety!"

There was no withstanding his courage and zeal, and he was allowed to have his way. As a reward for his valiant spirit, though he was only a private soldier, he was placed with a dozen others in the post

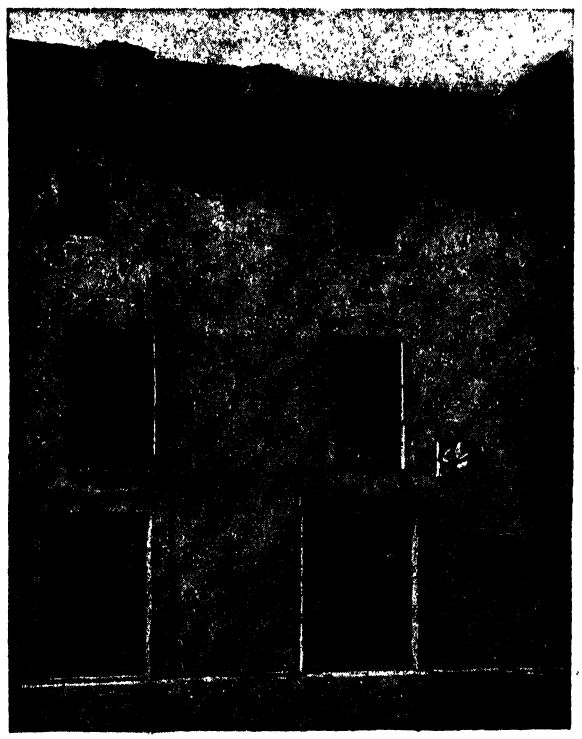
A GREAT MAN'S FAREWELL TO HIS FRIEND



" My time is short, my pains increase, my hopes vanish," the dying Cervantes wrote to an absent nobleman who had befriended him, " but we must bow to the will of Heaven, and all that remains is to acquaint your Excellency with the deep feeling of affection towards you which I carry to the grave." They were almost the last words Cervantes wrote.

of honour, on the side of the galley which was likely to see most fighting. There was terrible fighting there, and Cervantes fought like a lion, performing wonders, and feeling that every blow he struck dashed the fetters from some poor slave chained in the Turkish galleys before him. He was badly wounded, but fought on bravely, though one gun-shot shattered his left hand and arm and two others struck him in the chest. Here are his own brave words: "I held my sword in one hand; from the other flowed waves of blood. My bosom was struck with a deep wound, my left hand broken and crushed; but such was the sovereign joy that filled my soul that I was unconscious of my wounds." He added a noble-spirited boast, making light of his maimed left arm in this way: "I lost the use and movement of the left for the glory of the right."

He did not strike in vain. The sea-power of the Turks was crushed that day. Eighty of their ships were sunk, nearly a hundred were abandoned or destroyed, while nearly a hundred more fell to the victors. Best of all, after the battle the chains were dashed from the limbs of the 12,000 galley-slaves who rowed the Turks to their defeat.



THE HOUSE WHERE CERVANTES LIVED AT VALLADOLID

It was then that Spain might have finished the work so well begun, instead of leaving it to be finished this very year by the little nations then unborn. But Spain did not. The alliance with the Pope was broken off. The King of Spain was too anxious to burn the Protestants in his own land to trouble about suppressing the enemies of mankind, and the great advantages of the victory of Lepanto were soon thrown away. The fighting died down, and poor Cervantes, maimed for life, turned homewards, sad at heart. His brilliant services were not forgotten, and his commander gave him a fine letter of recommendation to the Spanish king, asking that the valiant soldier might be made a captain. Another noble gave him a similar letter, and, thus equipped, Cervantes set out for Spain, taking with him his brother Rodrigo, who had been with him in the battles, but of whom we hear little up to this point. And now a strange thing happened.

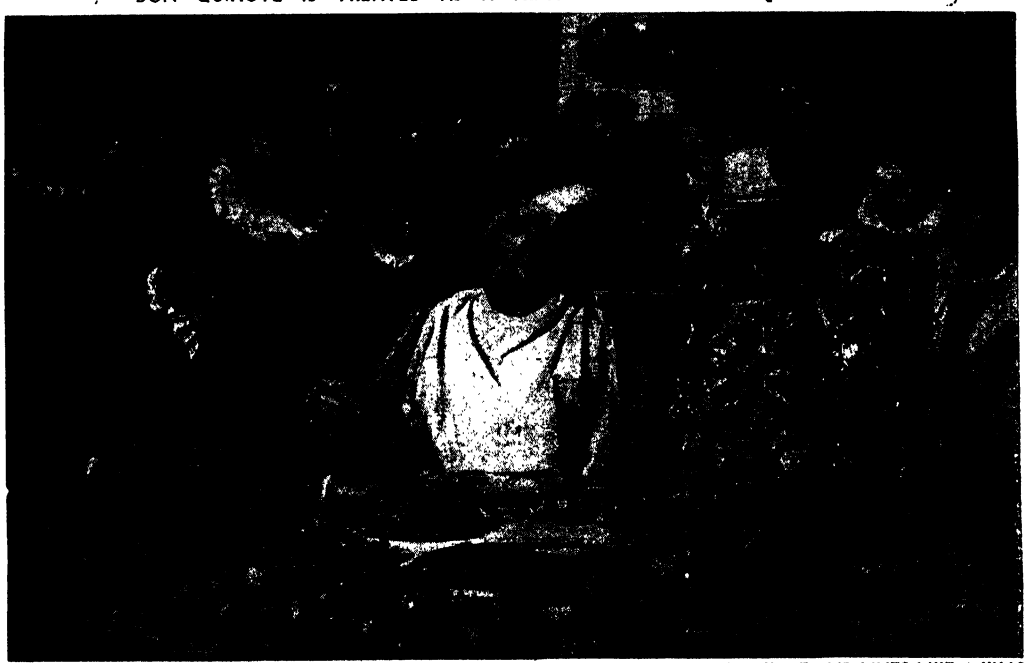
The little galley by which Cervantes sailed homeward was captured by Algerian pirates. The man who had fought so gallantly to free the galley-slaves of the Turks became a galley-slave himself. Fortunately, his captors found the letters Cervantes carried in his pocket to the King of Spain, and, supposing him, from these to be a man of great importance, they gave him special treatment, in the hope of obtaining a ransom from his friends.

Though he was indeed a slave, Cervantes was only chained, and not set to labour. He was even allowed to go about in Algiers. He became the moving spirit of the captive colony. Nothing could destroy his gallantry and daring. Out of his tiny capital he fed the hungry; out of his boundless store of courage he protected the weak and cheered the faltering, sustaining them in their faith in God and buoying up their hope of freedom. But he was not a peaceful prisoner. He was always planning to escape. He had not been there long before he tried to escape with a number of other captives. The attempt failed, and Cervantes boldly led his companions back and confessed to the pirates that the fault was his. He was much ill-used for this, but remained undaunted. Nothing could destroy his spirit.

ADVENTURES OF DON QUIXOTE & HIS SQUIRE



DON QUIXOTE IS TREATED AS A HERO IN THE HOUSE OF A DUKE



SANCHO PANZA, THE SQUIRE OF DON QUIXOTE, BECOMES GOVERNOR OF A PROVINCE AND LIVES LIKE A KING

Meanwhile another captive from his ship had been ransomed and sent home, and through him the story of the slavery of Cervantes and his brother was made known to his friends. The poor folk scraped together every farthing they could get, and sent it to Algiers for ransom, but the pirate who owned Cervantes laughed at so small a sum for such a man. He had a great idea of the value of Cervantes. He saw what a man of spirit he was, and was wont to say that "if he had his maimed Spaniard in safe keeping, he would reckon as secure his Christians, his ships, and his city."

It was in vain that the father and mother of Cervantes sold all their little property and beggared themselves, in vain that his unmarried sisters gave up their wedding dowries; the total was not nearly enough to buy the freedom of the two brothers. So, with a generosity that does not surprise us in him, Cervantes offered the money for the release of his brother, and Rodrigo was set free. That was like Cervantes.

Although this seemed like chaining himself for ever, Cervantes did not rest. He had told his brother to send a ship to fetch the captives home. Two distinguished men among the prisoners gave Rodrigo letters to persons of wealth; and at last a ship was secured and sent to Algiers. Cervantes made ready for it by an extraordinary plan. On the seashore was the house of a dreadful tyrant named Hassan Aga, to whom Cervantes used to carry messages from his master. Now, Hassan had a Christian slave as gardener, and Cervantes persuaded him to make a cave in the garden, which ran down to the seashore. When the cave was finished, Cervantes led to it fifteen captives, and there he hid with them. His disappearance caused a great outcry, as we may well imagine, but the cave was not discovered, and there the captives hid for five or six months, though all Algiers was being searched for them. The gardener brought them food, and the whole scheme was managed by Cervantes, whom



CERVANTES, WRITING HIS GREAT BOOK, FANCIES HE SEES DON QUIXOTE AND SANCHO PANZA BEFORE HIM

the others, most of them Spanish nobles, trusted exactly as a child trusts its father.

At last the hour of deliverance seemed at hand. The vessel which was to bear them to freedom drew near. With muffled oars it crept silently towards the coast, in towards the sea garden with its secret cave. Then, at the last moment, a sentry saw the vessel, and raised an alarm. The captain did not wait to give the captives a chance of fighting their way to safety, but fled to save himself. The vessel turned about and rowed away as she had come in, like a vision in a troubled dream.



CERVANTES MAKING HIS WILL DURING HIS LAST MOMENTS

It was a terrible ending to a great adventure. The captives were now in desperate plight. Soon they saw lights and heard footsteps, and into their cavern marched an armed force. Cervantes cried to his comrades to be silent, saying that he would take the blame and save their lives. As his enemies dashed into the cavern he proudly faced them, saying: "Not one of the Christians here is guilty in this matter. I alone am the author of it, and it is I who brought them here." When taken before the man who owned him, faced with threat of death and torture, he told the same story, and boldly defied the tyrant, who, he has told us, "every day hanged a slave, impaled one, cut off the ears of another, and this upon so little occasion, or so entirely without cause, that the Turks owned he did it merely for the sake of doing it, and because it was his nature."

Nothing could terrify this bold-hearted Cervantes, yet, though he twice had the hangman's noose round his neck, and was

repeatedly threatened with torture, he lived unharmed. His chains were strengthened, but his master thought that such a man must really be worth a fortune in ransom, and his greed kept the prisoner alive. Cervantes wrote to the King of Spain, showing how, at a single blow, he could capture Algiers, which was quite unprepared for defence, and save the lives of 25,000 men, women, and children who were kept in slavery there. But such things did not appeal to the Court of Spain.

THE FEARFUL MISCHANCE WHICH CUT CERVANTES OFF FROM FREEDOM

Then Cervantes wrote to the Governor of Oran, a Spanish colony, saying that if the governor would lead a force against Algiers he would raise a force within the city and make the capture certain. Here, again, a fearful mischance befell Cervantes, for the messenger who carried this letter was captured, and the letter was read by the master of Cervantes. No wonder he thought his captive the only man he had to fear, but his hope of ransom saved the prisoner's life. Once more Cervantes was detected in a general plot to escape by ship, and for this he was kept heavily chained in prison for five months. At last, after a long and sad captivity, the great deliverance came. His proud old father, already beggared, appealed to the chief magistrate at Madrid, and told in the public court the whole story of his son's captivity. The Court was moved, and eventually a sum of money was raised as a ransom. It was not enough, however, being only 300 gold ducats, whereas the pirate demanded 500. Now, it happened that the pirate was on his way to Constantinople, and when the messenger arrived to ransom him, Cervantes was actually in the galley which was to take him with his master to the capital of the hated Turk.

HOW CERVANTES WON HIS FREEDOM AT LAST, AND RETURNED TO HIS NATIVE LAND

When the messenger found that the ransom was too small, his heart was so touched by the noble aspect of the gallant prisoner, and by the story of the sacrifices made for him by his father and mother and sisters, that he went to the merchants in the port and begged and borrowed from one and another until he made up the sum demanded. The 500 ducats were paid, and Cervantes, after five and a half years of slavery, was once more free. He returned to Spain, and was so glad to see his native land that as he stepped on shore he fell on his face and kissed the earth.

He hoped that his fortune would now be made; that his sufferings and heroism would be remembered; and that he would be adequately rewarded. Most of all, he hoped that on hearing his story King Philip would fly to stamp out this foul nest of pirates and release the 25,000 suffering captives there. But there was no fortune for Cervantes; there was no expedition to Algiers. Cervantes was free, but he was doomed to live in poverty. He wrote books and plays without success; he married a lady with a tiny dowry; he gained a poor appointment under the Government, his work being to collect taxes and stores to provision the ships of the Invincible Armada, which Philip II. was then preparing against England. Having married one English queen, and been refused by a second, the king now sought to overwhelm our island kingdom. The Armada was vanquished, and Philip's ships were sent to the bottom of the sea, but Cervantes continued in his post, a poor tax-gatherer. But he became so discontented that he sought a situation in Spain's West Indian colonies, as Robert Burns was to do long afterwards.

THE KING FOR WHOM NOBODY CARES, AND THE POOR MAN WHOM WE HONOUR

Happily, both these great men applied in vain for the post that would have taken them from their real work in the world. In the days of his poverty Cervantes was thrown into a debtors' prison, and it was there that he wrote the first part of his delightful "Don Quixote." This is inferred from the fact that Cervantes spoke of his book as "just what might be begotten in gaol." The first part was published in 1605, when Cervantes was fifty-eight. The second part was not given to the world until a few months before his death.

So that perhaps it was good for the world that Cervantes remained poor. Had he been rich we should not have had his immortal book, and the world would have lost the joy which has gladdened its heart for 300 years. The name of Cervantes is one of the glories of Spain; the memory of the king who ignored him remains as a reproach and a warning to rulers. Philip sowed the seeds of a nation's ruin, but the poor captive, with his heart of gold and his mind of sunny fancies, made not only Spain but all humanity richer by his work. In spite of his misfortunes, Cervantes went through life with a smile upon his face—hero, humorist, philosopher, and friend; and all the world loves the book he left behind him. Nobody cares a penny for King Philip, but the memory of Cervantes is one of the priceless treasures of mankind.

LEONARDO AND HIS WONDERS

NEARLY four hundred years have passed since the grave closed over Leonardo da Vinci, yet, though very little of his work still exists, we all reverence and treasure his memory as that of one of the greatest men of all time. Artists, engineers, scientists, poets, musicians, philosophers, anatomists, botanists, all claim him as one of their brotherhood, and all in turn complain that he did not devote himself to their own branch of learning.

Thus we find Ruskin, in one of his little grumbles, saying in pretended anger, "Leonardo fretted his life away in engineering, so that there is hardly a picture left to bear his name." Engineers, caring less for pictures than for iron and steel, lament that one of the greatest natural geniuses of any age should have spent his time in painting when he might have been erecting bridges or building engines or constructing great works. The sculptor has a grievance against engineering and all the other callings because Leonardo spent so much time on them and so little in carving figures of marble and bronze. Scientists and inventors also look to Leonardo as to one of the most remarkable of their forerunners, as a man who fashioned in his brain the beginnings of revolutions which it has taken centuries to bring about. The fact is that Leonardo da Vinci was what is called a universal man.

He took all knowledge for his province. There was no branch of learning in which he did not distinguish himself; there was no science too difficult, no mechanical problem too intricate, no labour too arduous for him to undertake. There have been few such men in the world. Most of us have known somebody of whom it is said that he is Jack of all trades and master of none, but Leonardo was Jack of all trades and master of all. He seemed to have the gifts and powers of a score of men, and history furnishes no real parallel to his astounding career. It seemed as easy for him to originate as it is for most men to copy. He was to art and science what Julius Cæsar was to statecraft, what Shakespeare was to poetry.

Yet, as has been shown, very little of his actual work remains to us. His pictures are for the most part in ruins or have utterly vanished; his statues were left incomplete or have been lost or overthrown by ruthless soldiers. His engineering works are a memory; the musical instruments he made are reduced to dust; the marvellous melodies he composed have disappeared with the kings and princes who listened to them. But, in spite of all, his name remains to us undimmed, immortal, glorious in art and learning, a magic name in science and invention; grave and learned men, when they write of him, can only say that the feats of this universal man seemed to be almost miraculous.

It is impossible to account for the heritage of pure genius which came to this man. His father was a lawyer of Florence, and little Leonardo, who was born at Vinci, a fortified hill village near Florence, in the year 1452, grew up in that city of ancient splendours. Florence witnessed the rebirth of learning and culture in Europe after ignorance and barbarism had reigned for a thousand years, and Leonardo was born in a golden age of which he himself was to become the foremost figure. His schooling began in the household of his father, where he easily outdistanced the other children by his marvellous gifts. He mastered arithmetic and music as easily as most children learn a game, and he took naturally to drawing and painting. His father let him develop in his own way until he was eighteen, when he placed him in the studio of Andrea Verrocchio.

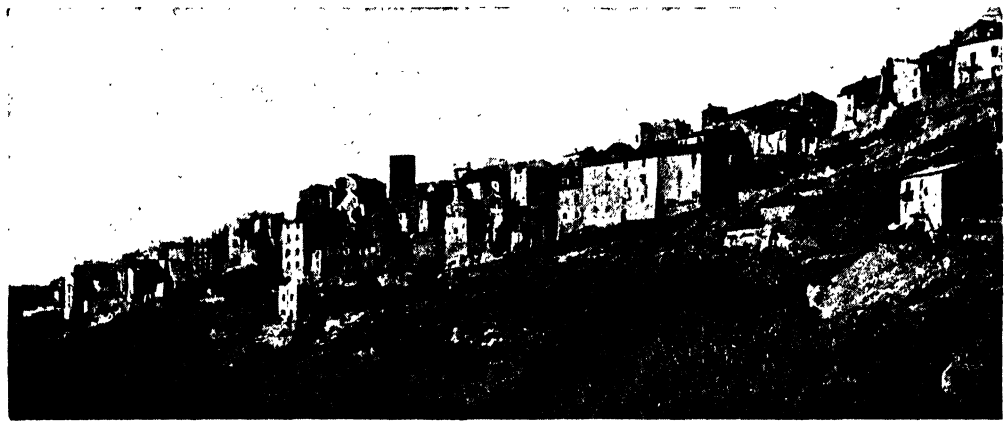
This Verrocchio has an interest for us, for he was the favourite pupil of Donatello, and carved parts of the famous door of the sacristy in Florence for the artist Lucca della Robbia. He himself

executed a lovely and famous little statue of David, and died while carving the marvellous Colleoni statue in Venice. Verrocchio had not quite finished the horse when he died, and it was left to another hand to carve the masterful figure of the rider. But Verrocchio was painter as well as sculptor, and we know him for his work with the brush from one noted picture, the only one remaining. It depicts the baptism of Jesus, and is specially precious to lovers of Leonardo, for the experts, as they stand before the picture in Florence, can point here and there and say with certainty, "Leonardo painted this," and "Leonardo painted that." For the pupil quickly equalled his master, and was allowed to paint in portions of his pictures.

The genius of Leonardo flowered early. The work of his master's studio did not content him, or exhaust his energies. He pursued his studies in all directions. At twenty he was enrolled a member of the guild of independent artists in Florence, which shows that he very early became subject to other influences than Verrocchio. Yet in that time he had executed various marble figures and works in terra-cotta, as well as several paintings and designs for tapestries.

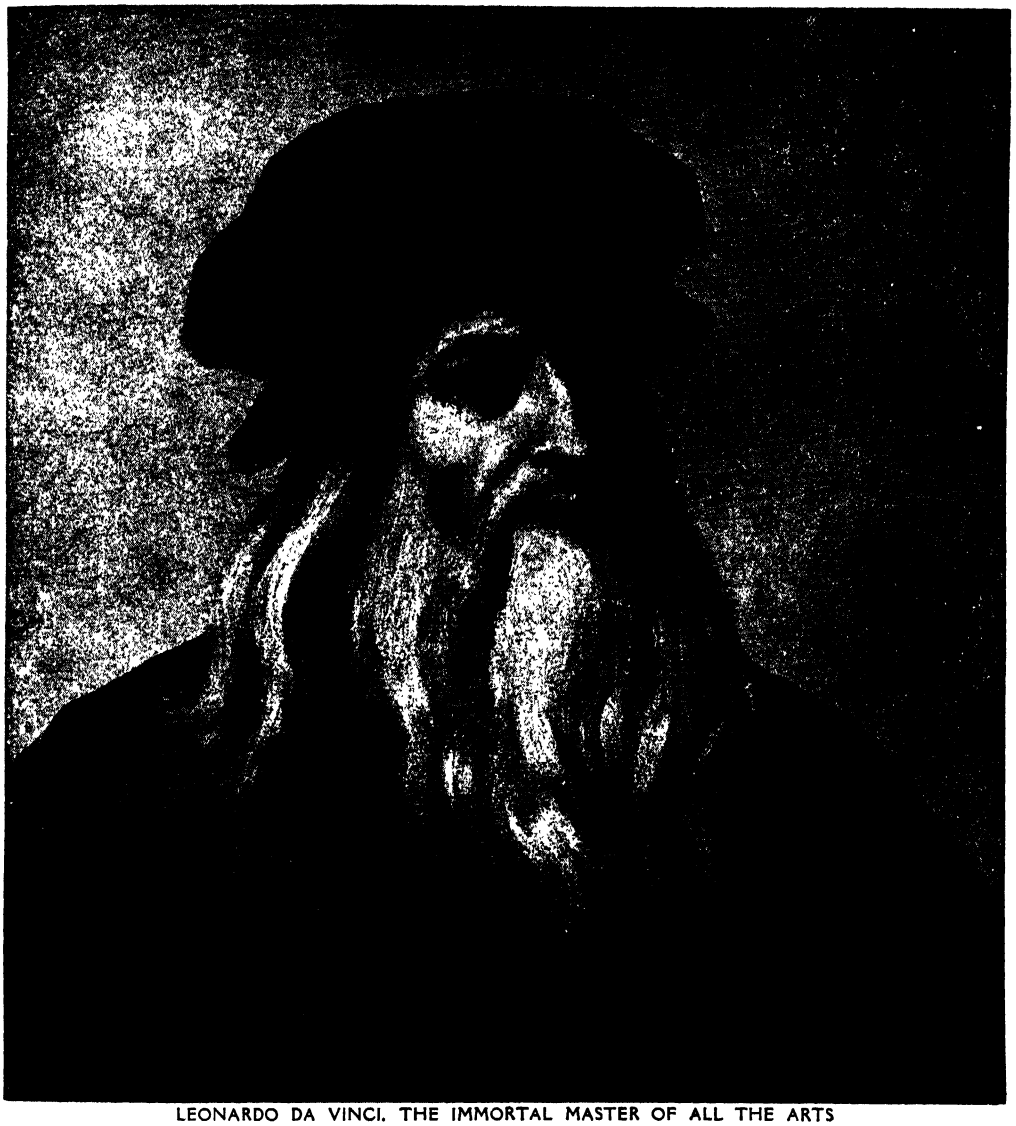
Men of his time wrote with loving enthusiasm of these works, but hardly a vestige of them remains. At twenty Leonardo was famous among lovers of art as artist and sculptor; but he was famous in scientific circles for his researches into the mysteries of Nature, for his inventions, great and simple, and for his skill as an engineer. Like King David, he played on the lute with exquisite skill, but he made his own instruments, and wrote his own music. The mind which conceived lovely pictures produced poems and machines, statues and hand-saws, great works for watering barren lands and mighty fortresses to defend them. He invented new schemes in mechanics while he was studying geometry, mathematics, and philosophy. He studied astronomy that he might understand the stars above him; he studied botany that he might know the flowers at his feet; and he, first of modern painters, introduced us to the real beauty of the human body, made human life appear, in marble and bronze and painting, as human life really is.

And then, with all these accomplishments at his command, with the rich men of Florence hungry for his services, Leonardo was seized with a passion for travel, and wandered off to Egypt, to take service *as an engineer* under the ruler of Egypt, who was then known as the Sultan of Cairo. It was while he was about thirty years of age that Da Vinci wandered and laboured in the East, but, fortunately, after about two years he returned home, to take service with Lodovico Sforza, who was ruling Milan at the time. Sforza means simply "stormer of cities," and was bestowed upon this line of rulers from the fact that to storm cities was their profession. The family took its rise in a humble woodcutter, who was living up to within thirty years or so of the birth of Leonardo. He gathered about him a powerful mob of armed men, who lived as free-lance soldiers. If the Pope wanted them, they would fight for him for payment; but if his enemies offered more they would cheerfully fight against him. At one time they would be fighting in defence of Milan, next they would be helping to storm it. Money fixed their cause and their leaders, and by it they had risen to power, married into ruling houses, acquired territories, sometimes ruling well and encouraging arts



VINCI, THE LITTLE HILLSIDE TOWN NEAR FLORENCE, WHERE LEONARDO WAS BORN

and science, sometimes ruling evilly and as ignorant tyrants. One of the greatest tyrants of them all was assassinated in the porch of Milan Cathedral when Leonardo was twenty-four, and this tyrant's son should have been ruler in his stead had not his uncle, Lodovico, imprisoned both him and his wife, and taken the government into his own hands. Lodovico was a bad, unscrupulous, but able man, and, though he died a prisoner in a foreign land after being deposed, he comes down to us with his name not altogether despised, because he did all in his power to promote study and encourage the tide of learning which was rising in Italy at the time.



LEONARDO DA VINCI. THE IMMORTAL MASTER OF ALL THE ARTS

It is strange that the knightly Leonardo, the man with the glorious genius, the man with the face of a saint and the stature of a king, should serve such men as a barbarous Eastern potentate and this tyrant of Milan. But serve them he did, and brilliantly, in many ways. It is very interesting at this day to see, as we may, the very letter which Leonardo wrote asking Lodovico for employment. It is odd to think of this immortal man making a written application for a situation. But Leonardo did. He wrote to Lodovico describing his experience as architect, engineer, mathematician, and so on, and then he added: "I can execute sculpture, whether in marble, bronze, or

terra-cotta; also in painting I can do as much as any other, be he who he may."

That last sentence was to be put to a test which remains famous in art to this day. Lodovico was satisfied with the credentials of the applicant, and engaged him to discharge duties such as have surely never before nor since fallen to the lot of one man. He was engineer, architect, mathematician, sculptor, artist, and general director of scientific, mechanical, and artistic works, so that he would be engaged at one time on a statue, a painting, a new system of hydraulic irrigation, and the fortifications of a citadel.

THE REMARKABLE INVENTIONS OF LEONARDO THAT WERE FORGOTTEN

And while Leonardo was planning a court ball, and inventing a saw for cutting marble at Carrara, he was inventing also a process for printing photographs by sunlight—a process which was to be rediscovered three hundred years later by Daguerre and his friends. Leonardo made the first suspension wheel, as we call it, the light wheel with thin spokes from which the hub is suspended—a stronger, lighter wheel than the old, and cheaper. But Leonardo's wheel was forgotten as time passed, and had to be reinvented. He invented a steam gun, but that, too, was forgotten. There was hardly any branch of science or mechanics to which he did not add new knowledge and new inventions. One of our greatest historians tells us that unpublished manuscripts by Leonardo contain discoveries and anticipations of discoveries within the compass of a few pages so as to strike us with awe. For fifteen years Leonardo laboured at his science, his inventions, his poems, his writings. His writings alone would have made the foundations of a good library had printing been invented, but his great thoughts could only be written down on paper. But there were great works to occupy his attention in addition to these things.

HOW THE FRENCH SOLDIERS DROVE LEONARDO OUT OF MILAN

In addition to his engineering, his music and poetry and writing, his botany and anatomy, he was still the court painter and sculptor, and in these capacities he was engaged at the same time to carve a great statue for Lodovico and to paint a picture for a monastery at Milan representing the Last Supper. The statue was to be a huge one and to contain a hundred thousand pounds of bronze. The bronze was never forthcoming, and the statue was not executed, but the model was completed, only to be broken by the French soldiery, it is supposed, when they invaded Milan, and drove the great artist away with Lodovico. The statue was to be carved in the citadel; the painting was in the monastery, on the other side of the city. Leonardo made the most careful studies for both. He frequented crowded parts of the city where all sorts and conditions of men gathered together. He called groups of people together and fed them at his own expense, not merely because his loving heart yearned towards them, but because such gatherings enabled him to study them at close quarters and to get hints for his work.

Leonardo was the first painter who could paint human beings and invest them with lofty qualities, portraying all the emotions, depicting a noble idea and clothing it with beauty. He would labour from sunrise to sunset at his painting, forgetful of hunger and thirst, absorbed in his work, while the monks gathered, silent and spellbound, around him. While he was working on his model for the statue, an idea would strike him which he would hurriedly jot down on the tablets he carried at his girdle, then he would rush across the city by the nearest route to paint the idea while it remained fresh in his mind. Year after year passed away, and Leonardo seemed to know that he was painting for posterity.

THE STORY OF ONE OF THE GREATEST PICTURES IN THE WORLD

But the prior of the convent, a stupid man, thought the artist was too long at his work, and complained to Lodovico, saying that there was only one head to finish, yet Leonardo neglected to complete it. Leonardo, called before Lodovico, answered that he laboured at his task two hours every day. The prior hotly replied that the artist, so far from working two hours a day at the picture, had not been near the convent for a year. Leonardo was again summoned before the ruler, and he answered: "It is true I have not entered the convent for a long time, but it is not less true that I have been employed every day at least two hours upon the picture. The head of Judas Iscariot remains to be done; and, in order to give it the features suitable to the excessive wickedness of the character, I have for more than a year past been daily frequenting the Borghetto, morning and evening, where the lowest refuse of the capital live. But I have not yet found the features I am in quest of. These once found, the picture shall be finished in a day. If, however," he added, "I am still

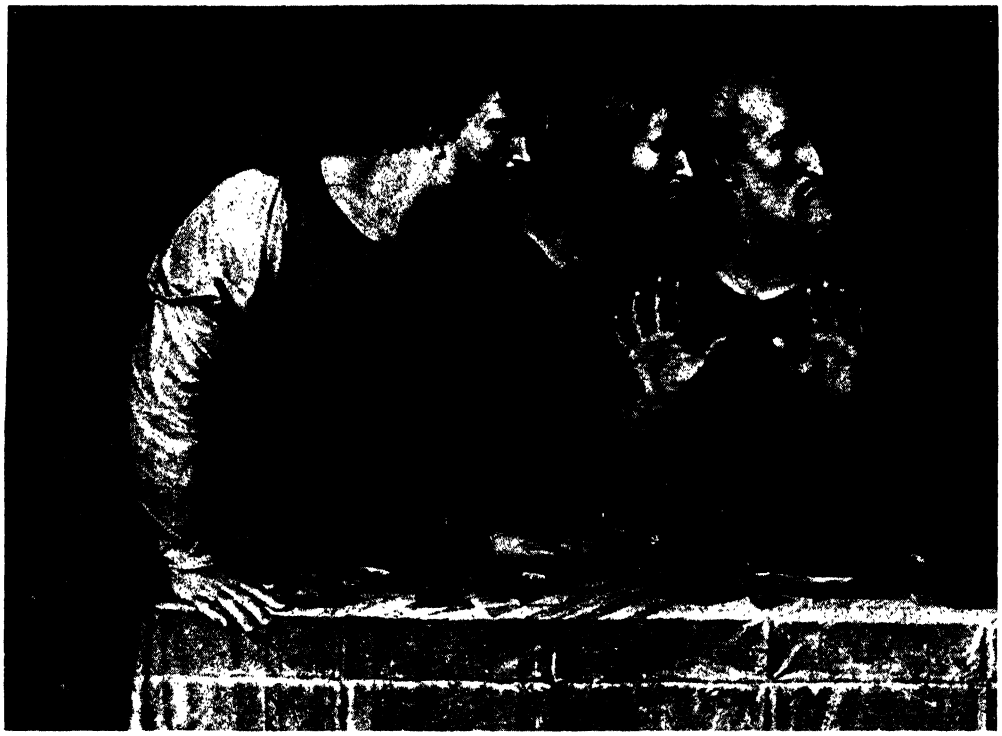
unsuccessful in my search, I shall rest satisfied with the face of the prior himself, which would suit my purpose extremely well, only that I have for a long time been hesitating about taking such a liberty with him in his own convent."



ONE OF THE MOST BEAUTIFUL FACES OF JESUS EVER PAINTED—FROM LEONARDO'S PICTURE IN THE BRERA PALACE, MILAN.

Leonardo was as good as his word; the picture was soon finished, and it is said that the face of the prior did actually appear in the painting. All great judges declare the work to have been the greatest picture ever painted, the most complete and beautiful and perfect; but today it is a wreck and ruin, though still seen fading away on the walls of the little convent in Milan. The after-history of the picture is a tragedy. Damp from the wall soon began to tell its direful tale. The monks, in order to get more easily from their kitchen to the room, cut a hole through the middle

THE LAST VISION OF JESUS ON THE EARTH, NOW



THE FACES FROM LEFT TO RIGHT ARE—BARTHOLOMEW, JAMES THE YOUNGER, AND ANDREW



THE FACES FROM LEFT TO RIGHT ARE—JUDAS, PETER, AND JOHN

The most sublime conception of the last meeting of Jesus with His disciples, "The Last Supper," painted by Leonardo, is still to be recognised on the walls of a convent in Milan, but it is perishing with the decay of

FADING AWAY FROM THE SIGHT OF THE WORLD



THE FIGURE OF JESUS AT THE LAST SUPPER. FROM LEFT TO RIGHT ARE—THOMAS, JAMES, AND PHILIP



THE FACES FROM LEFT TO RIGHT ARE—MATTHEW, THADDEUS, AND SIMON

nearly 400 years, and this glorious representation of the last appearance of Jesus before His arrest and crucifixion is fading away from the eyes of men. This copy of it has been restored as nearly as possible to the original.

of the painting, and nailed the ruler's coat of arms over part of the work. Unskilful men were permitted to make restorations, doing infinite harm to the original, and afterwards, when Napoleon's soldiers took possession of the monastery, they pelted the painting with stones, while a flood was allowed to stand in the room until the water evaporated. The greatest picture in the world has had a history of misfortune almost unmatched. Yet, in spite of all, we can still trace Leonardo in its fading colours; the deep feeling and the marvellous composition of the master are still there. Leonardo made hundreds of sketches for the work during the progress of the picture, and many of these still exist, some of them being in the royal library at Windsor Castle.



THE VIRGIN AND THE LILIES—BY LEONARDO DA VINCI

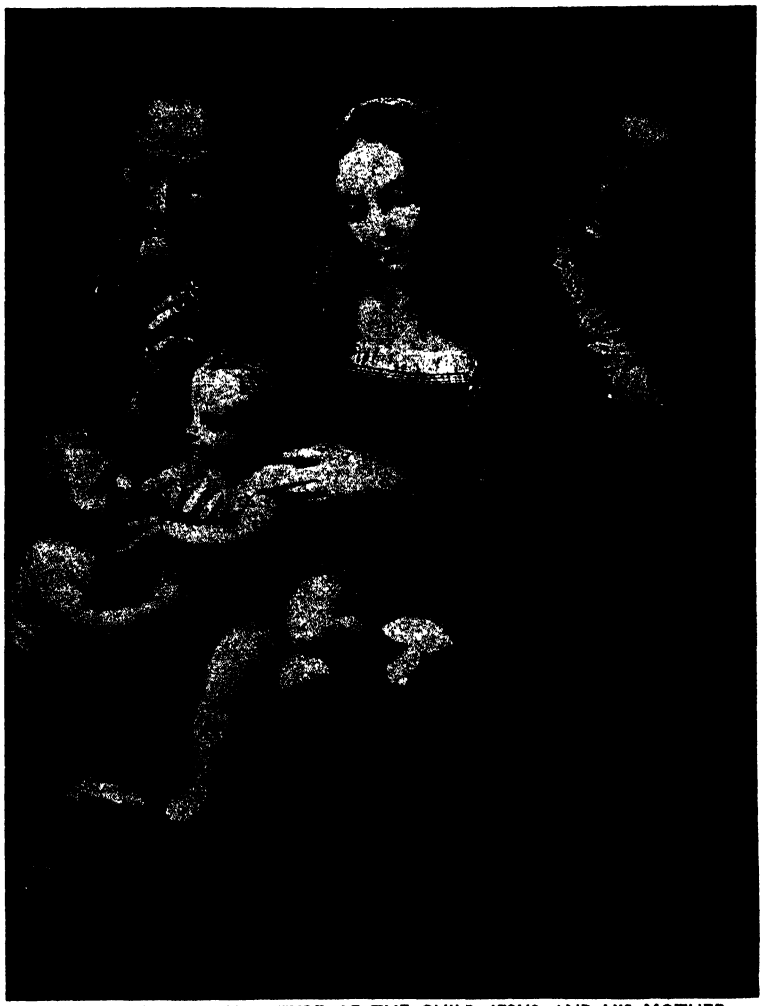
It was in 1500 that the reign of Duke Lodovico came to an end. The French invaded Milan, and took him prisoner. After that Leonardo went to Florence and entered the service of Cæsar Borgia, one of the monsters of history, an evil wretch whose name stands to us today for all that is bad. We must all wonder how so glorious a character as Leonardo could tolerate such service; upright, self-respecting men of our day could not suffer association with such a creature of infamy.

But a thoughtful writer, who has closely studied the great men of these times when learning was rising from its sleep of a thousand years, explains the matter in this way: "The great men of the period were in a high degree energetic and creative; they shaped the world with a revolutionary energy and a feverish activity, in comparison with which the modern processes of civilisation almost vanish. Their instincts were rougher and more powerful, and their nerves stronger, than those of the present race. It will always appear strange that the tenderest blossoms of art, the most ideal creations of the painter, were put forth in the midst of a society whose moral wickedness and brutality are to us moderns altogether loathsome. If we could take a man such as our civilisation produces and transfer him into the days of Leonardo, the daily brutality, which made no impression whatever on the men of that age, would shatter his nervous system, and probably upset his reason." We look back from a standpoint different from that of Leonardo; the crimes and misdoings of Lodovico and Cæsar Borgia were such as ruler after ruler of that time committed,

and they could not seem to him any worse than the crimes of Benvenuto Cellini appeared to the kings and godly men who employed that strange and great man.

Some of his finest engineering, his finest fortresses, his best surveys, Leonardo did for Cæsar Borgia, and we have his maps and plans before us today to tell us what he did and how well he did it. But now we come to the most romantic period of his life, to the great contest in which he was to prove the daring words of his youth. For Michael Angelo, over twenty years his junior, had arisen, and was being recognised as a great rival of the older man, and the two were now pitted one against the other. Michael Angelo, who hated Leonardo, courted the contest; Leonardo did not. The first trial of strength between them gave us Michael Angelo's immortal statue of David, carved from a mighty block of marble which had been thrown away as useless. Several men had tried to carve a colossal statue from it, and had failed to shape the great mass. Leonardo was now asked to undertake the work.

For a hundred years the marble had lain aside, disfigured by the chisels of many artists, and Leonardo declared that nothing could be done unless the defects thus caused were remedied by the addition of new marble. But his rival undertook the task, and carved with such marvellous skill that the old block from the rubbish-heap leapt, almost to life, we might say, into one of the biggest and noblest statues ever fashioned by the chisel of a sculptor. It was Michael Angelo's victory. Perhaps we should never have had it if Michael Angelo had not been jealous of Leonardo. This jealousy appears to have grown, and there soon came another opportunity for a further test of skill between the two men, for the magistrates of Florence, who had given the order for the statue, loved their beautiful city, and determined to have their council-hall nobly decorated. With the services of the two greatest artists in the world available, they cleverly resolved to put the two in opposition. One half of the chamber was allotted to Leonardo, and the other to Michael Angelo. The subject chosen was the wars of Pisa, which had ended in a great victory for Florence. Leonardo recognised that if Michael Angelo had triumphed over the statue, here was an opportunity for him to regain his lost laurels. No rival kings or generals ever prepared with greater care and anxiety for a campaign than did these two kings of art. Wherever news of the competition was carried the greatest



LEONARDO'S LOVELY PICTURE OF THE CHILD JESUS AND HIS MOTHER

excitement prevailed. The brutal instincts of the murderer, the brigand, the freebooter, and the professional bravo were slowly dying down, and the love of art was beginning to glow in the nation's heart.

The two artists chose different aspects of their subject. The younger man, profiting, perhaps, by the example of Leonardo, had made a close study of the human body, and chose to represent soldiers naked in the water, a subject enabling him to display his powers in depicting the human frame. Leonardo selected a bigger subject, a great battle in which the armies of Florence vanquished their enemies. In this he concentrated all the results of his experience and all the powers of his mind. The forms of the soldiers, the expressions upon their faces — steady courage, vindictive hate, mingled hope and fear, the exultation of triumph, the despairing appeal of the dying, the dash and ferocious force of the battle-steeds - all combined to make the picture a supreme achievement. But it was not the finished painting that men saw; that was never done. Only the cartoon was finished, the preliminary drawing. Two years Leonardo laboured at his task, then, finding that the method which he had employed was unsuitable for painting on the plaster of the chamber, he gave it up, and it was never finished. All we know of the work now comes to us from various drawings, and from the words of those who saw the cartoon.



THE FINE HEAD OF A WARRIOR BY LEONARDO

It was in 1506 that Leonardo, disappointed at the failure of the method of painting he had chosen, retired from the contest with his rival, but while engaged in the competition he must have been at work also upon the work by which we know him best. This was the portrait of Monna Lisa, the third wife of Francesco del Giocondo, of Florence. It was the most wonderful portrait in the world, the most famous, the most admired, the most mysterious. Monna Lisa was a lovely Neapolitan, but we do not know whether her loveliness was the loveliness we see in the portrait, or whether the beauty there reflected was the poet-painter's conception of a lovely woman. He took four years over the work, and while painting her portrait always had someone in his studio to sing or play or amuse her, so that the portrait might not be melancholy, as were too many portraits of the age. So he painted her with a smile which has bewitched the world for four hundred years. Generation after generation of people have flocked from all parts of the world to see this famous painting, for they have felt that here they saw the very manifestation of the mind and spirit of the great Florentine.

It might have seemed that nothing could add to the glory or renown of the picture, so many people had reverenced it, so many great scholars and critics and poets had written about it. But one of those things which seem impossible actually happened. A workman walked into the Louvre in Paris, where the picture had hung for a century, took it down from the wall, popped it under his blouse, walked out to a staircase, removed the frame, and stumped off home with the portrait. For two years he kept it hidden in a dingy garret, while a hue-and-cry ran throughout the civilised World. We need not repeat the details of the amazing adventure, but the incident has made the name and fame of Leonardo even more precious to us all. So much has he been discussed of late that he seems a man of our own generation instead of a giant of the days before Columbus.

After his great contest with Michael Angelo, Leonardo visited Milan, and, going to Rome, competed again with Michael Angelo for the façade of another building in Florence. He was employed by the King of France, who set aside for him a chateau



THE PORTRAIT OF MONA LISA, WHICH HAS DRAWN ALL LOVERS OF ART TO PARIS FOR A HUNDRED YEARS

near Amboise, where on May 2, 1519, he died. The bulk of his work has perished, leaving only its marvellous memories, but an abundance of his manuscripts, his sketches and records of his great scientific ideas, still remain. The greatest of his written works is his " Treatise on Painting," which deals with the entire art of the painter. It is still one of our standard works, and remains a monument to the genius of one of the most marvellous men who ever lived. He was the first great painter who, scorning the example of other ages, went to Nature herself for his models, and painted Nature as he saw her.

All that has since been written or taught about painting is based on Leonardo's works. He has been four centuries in the grave, yet his influence is felt in every part of the world today where beauty and art are loved. Every one of us who has a treasured picture owes it in some measure to Leonardo, for he was the first and greatest of modern artists, and he is the fountain from which all good teaching in art has flowed.

WHAT DARWIN'S GARDENER THOUGHT



Darwin's old gardener once said of his master, as he watched him studying flowers in the garden at Down: "I think he must be mad, for I have seen him stand for hours watching a flower." It was by watching a flower for hours, and by a lifetime of patient study of Nature, that Darwin learned so much about the mystery of life and changed the world's thinking.



The beautiful home at Down, in Kent, where Darwin studied Nature and wrote his famous books.

A MAN WHO SHOOK THE WORLD

THE BEAUTIFUL STORY OF CHARLES DARWIN

A TALL, bearded man, looking severe and worried, sat at the desk in his study, working anxiously. The law of his house was that he must not be disturbed during the time set apart for his labours. But as he sat so engaged, the door opened quietly, and the chubby face of a four-year-old boy peeped solemnly in. Gravely addressing the tall man, his father, the little boy said, "If you'll tum out and play wiz us I'll give you *sispence.*"

The big, stern man got up from his desk, sneaked out on tiptoes, went and played with his tempter, and did no more work that morning. The dreadful criminal is still alive, a very great scientist to-day, whom all the world admires.

You would never guess the name of the big, stern father who thus yielded to temptation without getting his sixpence. It was Charles Robert Darwin, one of the greatest thinkers and scientists the world has ever known. Those of us who are old friends of the Children's Encyclopedia have read of him before, but, even if books upon books were written of his life, we should never tire of them, rejoicing over his little jokes, over the funny lovable ways he had, and over those wonderful golden days with his children. Children and grown-ups could read the same book, but the children would understand him best. The stern philosopher was such a splendid great boy in his play that children felt at home with him at once. The clever grown-ups could not understand him nearly so well; they cannot imagine how this famous scientist, who has instructed all mankind, could possibly unbend to romp and trifle with children as he did. But Darwin had a giant's brain with a child's heart. He grew up again with his children, and that is how it was that, in spite of all the terrible laws about work, that rosy-cheeked rascal dared to creep into the study and offer the great man sixpence to go and play.

In order that we may be sure of the period in which this child-lover lived and worked, we had better begin with our dates. Charles Robert Darwin was born at Shrewsbury on February 12, 1809, and he died at his home, the village of Down, in Kent, on April 19, 1882, being buried in Westminster Abbey a week later. He was the son of a Shrewsbury doctor, and his mother was a member of the famous Wedgwood family. Scientists think that the genius of his grandfather lived again in Charles Darwin. This grandfather was Dr. Erasmus Darwin, a physician by profession, who was a scientist, poet, and dreamer by preference. In this man's mind there were gleams of light which enabled him in his writings to forecast,

to some slight extent, the great discoveries his grandson was to make regarding the origin and development of animals and plants. And he it was who, in the course of a poem, written when there was not a steam locomotive in the whole world, uttered the famous prophecy—

Soon shall the arm, unconquered steam, afar
Urge the slow barge and draw the flying car.

That was the man whose talents seem to have descended to his grandson, enriched and broadened. But Darwin's father would not have believed it. Darwin as a boy was as dull as the Duke of Wellington had been, and his father once said to him, "You will be a disgrace to yourself and to all your family." But his father did not understand him. The system of education was wretched in those days. It was made as hard and difficult as possible, and subjects which were of little use to him were forced upon the boy, with the result that his slow-working brain could not grasp them.

And so his father declared that the boy was no good for anything but rat-catching, dogs, and shooting, and would never be good for anything else. Things that interested him the boy studied with delight. Animal life always interested him, and so did the study of rocks and plants. He was very fond of shooting, and used to practise in his room at college. His scientific mind showed him that by simply discharging a cap, not a bullet, he could, if he aimed straight, put out a candle with the puff of air from the muzzle of the gun, and his master used to say he could not understand how it was that Darwin was always cracking a whip in his room.



The house where Darwin was born, at Shrewsbury

But we have not got him to that stage yet. He was sent, after leaving school, to Edinburgh University, where he studied medicine and surgery. But there was no Children's Encyclopedia to make hard things easy for young people in those days, and the boy Darwin found the lectures and books horribly dull and stodgy. As for the operations, his heart was too tender for these, for it was before the days of chloroform and the mercy which this brought, and one day when a little child had to be operated on, Darwin simply could not bear it. He fled from the ward, and never went back. Still, when he went home he helped in his father's practice, and made a good doctor's assistant. But his heart was not in the work, and he did not feel compelled to follow it up, because he knew that his father would leave him enough money on which to live in comfort. So he went on to Cambridge University, where he did only moderately well though he succeeded in taking his degree as Bachelor of Arts.

He preferred beetles and flowers and birds to the things to which they set him at the University, and his zeal for his private studies may be judged from one little instance. When he had caught two rare beetles, one in each hand, he saw a third, which he could not bear to lose, so he popped one into his mouth in order to free his right hand. But the prisoner ejected an intensely bitter fluid into his mouth, burning his tongue, and causing him to lose not only that beetle, but also another that he had got in his hand. Although he felt himself so poor a scholar, so slow and dull, there was something unusual about this young fellow which attracted great men at the college, and he walked and talked with professors and scholars older and wiser than himself, a fact which had an important bearing on his life soon after he had quitted Cambridge.

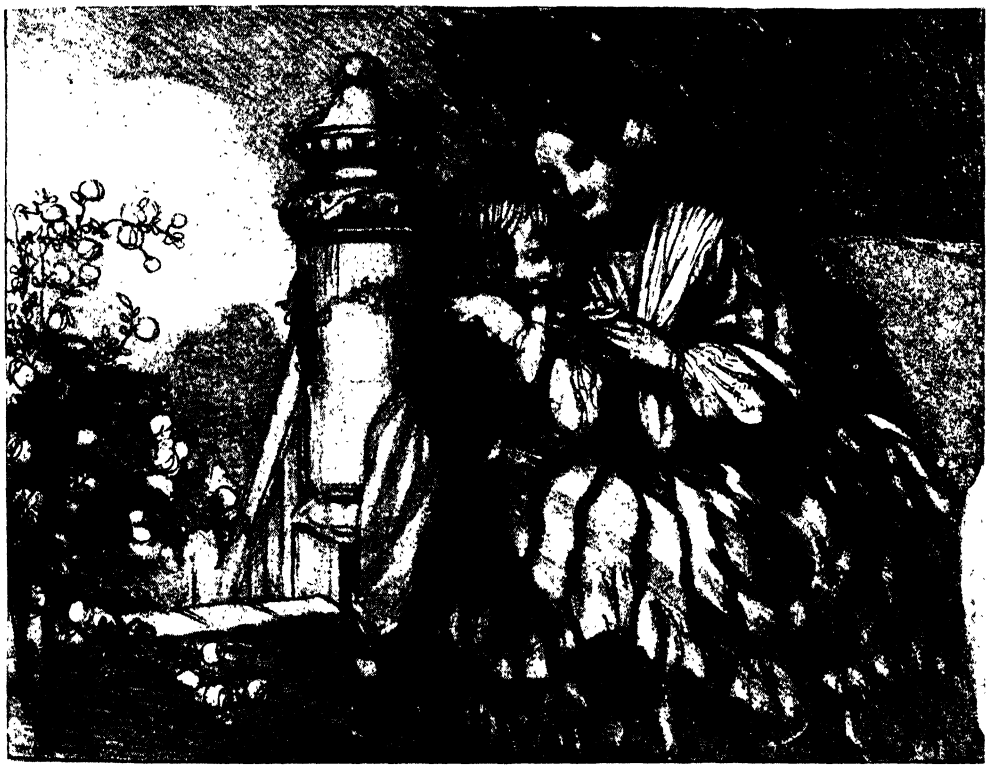
It happened that the British Government was sending out a ship to complete the survey of Patagonia and Tierra del Fuego —the land at the southernmost point of South America—and then to sail right round the world, taking scientific observations on the way and exploring parts not then well known. The leader of the expedition, Captain Fitzroy, announced that if a naturalist would accompany the ship without payment, he should share the captain's cabin with him. One of the distinguished men with whom Darwin had been friendly at Cambridge recommended him for the post, but Darwin's father pooh-poohed the notion. He thought nobody would agree to such a plan, so, rather as a challenge, he said, "If you can find any man of common-sense who advises you to go, I will give my consent."

The poor young man had to write off refusing the offer; but that very day he rode over to see his Uncle Wedgwood, and told him the sad tale. Now, this uncle thought a good deal of young Darwin, for, apart from the sweet nature of the fellow, there was evidence of ability in him. Besides, the elder man had studied his nephew's prominent nose, and, thought he, there is character in a nose such as that. So, instead of letting the visitor go out with a shooting party, Uncle Wedgwood, though the distance was thirty miles, drove him straight back to his father, and advised that he should be allowed to go. And the father kept his promise, for he thought a great deal of the opinion of Wedgwood.

Now, his going turned upon the shape and size of Darwin's nose. But the same organ, though he did not know it until later, almost defeated him, for Captain Fitzroy, who was a curious person, thought *he* knew something about noses, and he said to himself on seeing the young naturalist, "Nobody with a nose like that can have energy enough for such a voyage as this." But he was wrong, as all the world knows now, and Uncle Wedgwood was right.

Up to this time Darwin had enjoyed good health, but the sea did not suit him. He suffered agonies from sea-sickness. Nelson was sick every time he went to sea, and so it was with Darwin, who believed that the long illness which made him nearly an invalid for the rest of his life was due very largely to his sufferings on the voyage.

Having noted how the strange chance of the shape of his nose decided his career, let us not overlook another strange turn of fate in the same period. When the ship was approaching South Africa, Darwin was so ill that he begged to be allowed to land near Natal and to make his way, on foot or mounted, as best he could down to Cape Town, and rejoin the ship after a spell of relief from the sea. The captain was about to send him off in a boat, when a wind sprang up from the land and carried the ship away seaward again. Now, had Darwin carried out his wish, he could hardly have reached Cape Town alive. Apart from other dangers of travel in so wild a land, the Zulus would in all likelihood have killed him. But for that lucky gale of wind we might never have heard of the great scientist.



CHARLES DARWIN'S MOTHER TEACHING HER BOY HOW TO UNDERSTAND A FLOWER

The voyage lasted nearly five years. In its course, Darwin went round the world. He visited South America, and, leaving the ship at Valparaiso, he crossed the continent to Buenos Ayres, though he was still suffering miserably from the effects of his sea-sickness. On the way he discovered great quantities of bones, which he saw had belonged to the colossal animals of other days. His adventures in South America, which are to be read in the book that he wrote, are as fine a story as boys and girls need wish to read.

THE GREAT MIND THAT TOOK AN INTEREST IN FISHES AND BEETLES AND BUTTERFLIES

Indeed, all his travels told in this charming book make splendid reading, for the work is that of a man who, in spite of his illness, made the best of his life, who reaped enjoyment and happiness where he could, and worked untiringly to note the strange things that he saw.

His mind might be slow in school work, and it was always slow in argument, but there never was a finer mind for observation. Nothing escaped his notice. All that was novel in the lives of the people that he saw he carefully recorded. He grasped the heart of secrets which had been hidden from all the world before. He was able to show, for the first time, the nature and origin of the beautiful coral and volcanic islands and reefs in the sea. He took notice of living animals, their ways and wonders; he reconstructed the lives of those that had been long ages dead. He studied birds and fishes, beetles and butterflies. Wherever he went it was the same—in Australia, in Africa, in the Atlantic and Pacific Islands, on land and sea—wherever he had time he made his far-seeing observations. He did not merely pile fact on fact. He got his facts together, and began to build up laws upon those facts.

THE NEW POWER THAT MEN REALISED IN ENGLAND WHEN DARWIN CAME BACK

The true history of animal life and of man himself was being gradually built up in the slow but sure brain of the young traveller during his world-wide voyage. And when he came home and wrote the story of his travels, and described the animals that he had seen, men of learning saw that a new power had come into the world of observation and reasoning.

He settled down in London when he returned in 1836, and three years later married his cousin, Miss Wedgwood, taking a little commonplace house for her in London until he could find a home in the country. He chose for his home a house about a quarter of a mile out of the pretty Kentish village of Down, which is about twenty miles from London. Two or three miles away stands the grand old park which contains the famous Wilberforce oak, and near at hand was the home of the Lubbocks, whose present head, the gifted and amiable Lord Avebury, became one of Darwin's most affectionate and brilliant disciples.

It was quite a modest home that Darwin established, for though he had comfortable means, which allowed him ample leisure for his work, he liked to live well within his income. He had eighteen acres of land with the house, and part of this he devoted to a capital kitchen garden, part to a garden for experiments with his plants. He extended the house, building a handsome bay right up the front of the three storeys; he built greenhouses, and laid out shrubberies, and planted trees, and made a gravel track running round a one-and-a-half-acre field. This was known as the sand-walk, and there he would take exercise, walking up and down the path, kicking a stone from a heap by the side of the path each time to mark the number of trips that he made up and down the walk.

THE LIFE OF DARWIN AT HIS VILLAGE HOME IN KENT

Here, at Down, his boys and girls were born, and here they lived their happy life. Darwin was almost a confirmed invalid after his voyage. Company tired him, and he, who had been round the world, was completely ill at the mere thought of travelling the twenty miles to London to a scientific meeting. In his simple goodness of heart, when his fame spread and people wanted to visit him, he thought that they must dread the twenty-mile journey as much as he did; and would anxiously inquire if the fatigue were not too great, then give them as careful instructions about the way as if he had been living in China. Year after year never a day or night passed without his experiencing illness. But he had the best of physicians in his wife and children.

They studied his every want, and their lives were planned on a system almost comically methodical. The state of his nerves made it necessary for him always to take breakfast alone, then he would begin his work. Afterwards he would read his letters and deal with correspondence. The number of letters he got was immense. All sorts of people would write, worrying on subjects in which he was interested; people who were strangers to him and had

no claim upon his time. But he made it a rule to answer everybody. If he left a letter unanswered, his conscience would so vex him that he could not sleep at night.

He would read his paper after letters, then go for a stroll, taking his dog and one or two of the children. If he went alone, he would discover birds and timid animals, but so kind was he that he would keep the discovery to himself, because he found that to have missed such finds made his little ones unhappy. There never was a more thoughtful man. After lunch someone would read to him novels, scientific works, books of travel, and biography. Then he would go back to work for a little longer, and would meet his family again at tea or dinner, and join the children in their games.

It was understood that he was not to be disturbed at his work, but we have seen what the four-year-old tempter did. And the others were as daring. When they wanted a hammer, or a piece of string, or some sticking-plaster they would creep into his study, where they knew they could find these things. But if little cut fingers needed sticking-plaster the children would hide in the passage until their father had left the room, because they knew that the sight of their injuries shocked him.

In spite of his illness, he lived a very happy life under these conditions. "Peace on earth, good will to men"—that he always thought the most perfect description of happiness that words can give, he once said; and he realised happiness in his own life, and diffused it about him. His wife and children were the means of keeping him alive; he would have died without them. Such comrades his children were! He dared not believe they were brilliant, because he was too modest to imagine that genius or great talent could be the portion of any children of his. But how he loved and admired them! And how he appreciated anything that they did for him! The least favour seemed to him the greatest kindness, and whether it was the act of a servant, or of his wife or children, or of some distinguished guest, he showed the same sweet sense of gratitude, which made all glad and proud who served him. He was happy when one of his little boys found a new grass which his father had not previously noticed.



DARWIN WATCHING AN ANT-LION CAPTURING ITS PREY DURING HIS VISIT TO AUSTRALIA

"I am an extraordinary grass-finder," *said the little fellow, popping his tiny find* down on the dinner-table. And his proud father quite agreed with him.

He had one or two little weaknesses. He was as fond as a boy of sweets, though they always made him unwell, so he used to vow to himself not to eat them. But he would sometimes break his vow by slipping one or two into his mouth, laughing that the vow could not count against him unless spoken aloud.

Now we have got some sort of picture of this delightful Darwin home at Down. There was the great man making observations every day, and storing these in his memory or committing them to his note-books. New facts he combined with old facts to build up his world-shaking theory of the origin and development of all living things. As most of us know, the first of his works which drew the attention of the world to him was his immortal book called "The Origin of Species." The amazing thing about this book is that, just as he was nearing the completion of it, he learned that his friend Dr. Alfred Russel Wallace, who had been exploring and investigating in the Malay Peninsula, had at that very time arrived at almost exactly the same theory as himself as to the way in which all animal and plant life has grown up upon the earth. It was one of the most startling coincidences in the whole history of learning. Jealousy and furious quarrels would have resulted in similar circumstances between many men, but not between these two noble fellows. Darwin actually presented his rival's writings at the same meeting of the learned society before which his own were read, both these wonderful documents appearing at one and the same meeting. To Dr. Wallace's eternal credit, be it said that he heartily and enthusiastically threw himself into the work of his great contemporary, and gave him practically all the credit. He did more than that. He wrote a long book on the subject, and what do you think he called it? He named the book, not by any title associating himself and his own labours with it; he called it simply "Darwinism." That was the deed of a hero. Dr. Wallace lived until the 7th of November, 1913, so that we may all boast of being contemporaries of this great man, who was truly a gentleman.



A HERO

A great man and a hero was Dr. Alfred Russel Wallace, who, at the same time as Darwin, in another part of the world, discovered the theory which made Darwin's name immortal, and willingly gave Darwin all the credit, calling his own book "Darwinism."

Darwin wrote many other books, all indirectly bearing upon the great central idea which he had evolved, but we shall read more of that subject on another page. We must content ourselves here with another peep or two at his *life*. With all his vast knowledge, he had great difficulty in writing. Words did not come easily to him; he could not simply and clearly express what he wanted to say, and when he got some sentence which he could not satisfactorily shape he would ask himself, "Now, what *is* it that you want to say?" and the answer that he gave himself he would write down, and that would be the sentence to go into the book. The number of his observations and experiments was enormous. Once, noticing that when a table was struck the vibrations affected the leaf of a sensitive plant, he got one of his sons to play a bassoon to see if the plant responded to music. All sorts of things he tried with seeds, and would say, "The little beggars are doing just what I want."

With vast care he watched the growth and development of flowers, and his old gardener, seeing him standing mute and motionless for some minutes before some plant, would say, "Oh, poor master is very sadly. I do wish he had something to do. He moons about in the garden, and I have seen him stand doing nothing before a flower for ten minutes at a time. If he only had something to do, I really believe he would be better." But when "master" was "mooning" before a flower he was learning some of the deepest of Nature's secrets, and was to tell the world in his books of his discoveries.

When he died, in April, 1882, his loss was mourned by the whole world. He was buried in Westminster Abbey, an honour reserved by England for only the very great of the British Empire.

of the most undistinguished of his callers, and listened to their opinions with as much respect as if they were the great authorities.

With all his work and worries, he found time to interest himself in the affairs of his village. He was a scrupulous treasurer of the Down Friendly Club and of the coal club, and accounted for every farthing as carefully as he would account for the operation of some great law in Nature. He loved music, yet had "no ear," and if you played the National Anthem faster or slower than usual he could not have told you what it was. Yet good music thrilled him. "How does your backbone feel after that?" he would ask a friend after they had listened to some great melody. Music acted upon his nerves like electricity on telegraph wires.

He worked almost to the last, and died surrounded by his family, happy and peaceful. "I am not in the least afraid to die," he said. The whole civilised world mourned his death, and the representatives of six nations followed him to his grave in Westminster Abbey, where he lies close to the tomb of Sir Isaac Newton. There, almost side by side, lie two of England's greatest men, united in the dreamless sleep that knows but one awakening.

WHAT DARWIN REALLY THOUGHT AND SAID

THE greater a man is, the farther he is from ordinary people, and the more difficult do they find it to see him and understand him properly. In studying the world and its laws, scarcely any three men were greater than the three Englishmen, Harvey, Newton, and Darwin. Harvey found that the blood goes round the body in a circle, and his reward for making this greatest discovery about the body was that he lost nearly all his patients, for the ordinary doctors of the time all spoke against him.

Newton found that the planets, including the earth, go round the sun by what he called the law of gravitation, and his reward for making this greatest discovery about the universe was that he was branded as an atheist, a man who denies that there is God behind all things; though afterwards men declared that the power and majesty and universal scope of God were never better proved, for convincing those who denied Him, than by Newton's law. Darwin found that men and animals and plants, of all the many kinds we see, were not specially created as they are, each separately, by the hand of God, but that these different forms of life have grown out of one another by what we now call evolution.

His reward was that the sort of men who nearly ruined Harvey, and said Newton denied God, said the same of Darwin; and now that Darwin is asleep in Westminster Abbey, though his spirit is alive and multiplied a millionfold in ours to-day, men say what they learnt in time to say of Newton's law, that what Darwin taught does not deny God at all, but that, when really wise and religious people study it, they see it to glorify God and prove His power and skill to be greater than we knew. These men of to-day who are good enough to think so kindly of Darwin are too well employed, no doubt, to read him, and that is why they do not know that he ended his great book on evolution with these words, so little known that it looks as if no one had had the patience to read the book through:

There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning, endless forms most beautiful and most wonderful have been, and are being evolved.

So, plainly, if anyone, friend or foe, sincerely wishes to know what Darwin really thought and said, this final sentence of one of the greatest books ever written is the first that we should read.

It is so important to know the truth about this, and the truth is so remarkably similar to what we learn of the history of great men in general, that we had to place it first. And now we are prepared to learn a few of the principal ideas which Darwin gave to the world. He did not write many books, he wrote very clearly, and no one more honest with himself and other people, and with the facts before him, was ever born or ever will be. So much the less is the excuse for the many long years of wicked misrepresentation which puny and faithless men have uttered, too small and blind to believe that God and His ways may be greater than they had guessed

When Darwin, scarcely more than a boy, sailed round the world in the Beagle, the students of life were already much inclined to doubt the old view of "special creation"; but though they could not believe that all the forms of life had been specially made by God, as a mere human being might turn out different kinds of toys from a factory, yet

their difficulty was that they could not discover any other theory which agreed with the facts. The great German Goethe, the Frenchman Lamarck, and Darwin's own grandfather, a remarkable doctor named Erasmus Darwin, had all declared that different species sprang from one another, and had common ancestors; but they could not invent any satisfactory explanation of how these species took their origin.

Young Darwin thought about the problem too, and was convinced that "special creation" was not the answer to it; but how did species change? He "opened his first notebook" for collecting facts; and at the end of twenty years, after he had filled many notebooks, he wrote his great book, "The Origin of Species," of which the last sentence is quoted on the previous page. The explanation given in that book is a simple one, to which Darwin himself gave the name of "natural selection." It is not the best of names, and Herbert Spencer improved upon it by calling the process the "survival of the fittest," a term which Darwin at once accepted, and which everyone now uses.

THE GREAT THING THAT DARWIN SAID ABOUT LIFE AND DEATH

This idea was also formed by Dr. Alfred Russel Wallace, whose writings greatly helped the spread of what is called Darwinism. The idea of the evolution of species from one another is not Darwinism. It is as old as Heraclitus and Buddha, as we saw when we studied them. But Darwinism is the right name for Darwin's explanation of evolution.

He said that there is a great competition, or struggle, for life among living things. There is not room for all, and many die. Those who die will be those, on the whole, least suited to live under the conditions in which they find themselves. Thus there will be natural rejection of the least fit, and natural selection, or survival, of the fittest. The young of all species vary among themselves, and those that vary in the direction best adapted to their surroundings will be the survivors in this great struggle for existence.

That is the explanation, according to Darwin, of the fashion in which living species, animals and plants of all kinds, are found to be so beautifully fitted, or adapted, to the conditions of their lives —the fish with its scales and gills, the bird with its feathers and wings, the oak with its wood and leaves, the microbe with its poisons, and man with his mind.

Darwin did much other work. He studied the life of corals and the doings of earthworms. He suggested a theory to explain how young creatures resemble their parents, a theory of heredity, long studied, and now known not to correspond to the facts. But, above all, he devoted himself for many long years to studying the way in which young creatures differ among themselves, and from their parents.

THE SECRET KNOWN TO A MONK, FOR WHICH DARWIN WAS WAITING TILL HE DIED

This question lies at the very foundation of Darwin's theory, for if all young tiger cubs had equally good eyes and equally strong teeth, or if all young saplings had the same natural qualities in their root and wood and leaves—well, all would be equally "fit," and so there could be no survival of the fittest. In the course of his experiments Darwin discovered many important facts, but he did not find the key to them.

Neither he nor anyone else knew that a monk in Silesia, called Mendel, had been breeding peas in the fifties and sixties, just at the very time when Darwin was studying the same subject here; and that Mendel had made a discovery, now called Mendel's law, which is the key to half the facts that Darwin and others had observed. Mendel heard of Darwin, but he became an abbot, spent his time with lawyers over some quarrel about land belonging to the monastery, and never even wrote to Darwin, who died in 1882 without having heard Mendel's name.

Mendel died two years later; and science never had a greater loss than this, that for twenty years Darwin worked without the single but invaluable piece of knowledge which Mendel had already discovered, but which no one outside his little town of Brünn ever heard of until 1900, when Mendel and Darwin were dead.

WHY DARWIN WOULD NOT BELIEVE TO-DAY WHAT HE BELIEVED IN HIS LIFE

Those who hold the theory of Darwinism to-day, in the form in which Darwin announced it more than fifty years ago, are a very small and rapidly diminishing band, whose motto is the familiar one, "No new truths wanted!" Darwin himself would not be of their number now. For him there was "no end to learning," and every fact was priceless and full of meaning. Few who read the record of his mind can doubt that, were he alive to-day, he would call "natural selection" an esssential and invaluable *part* of the truth, but not the whole truth, as it was once thought to be.

PASTEUR AND HIS WONDERFUL LAMP

This is the story of Louis the Great of France. The last King Louis sat on the throne and lost it; this Louis was enthroned only in the hearts of men. He was like a new Aladdin, turning his bright lamp of wisdom on to his microscope, exploring a new kingdom of invisible life, and opening for mankind the golden gates of a new age.

LOUIS PASTEUR was the greatest son of France. We can hardly help associating his name with Napoleon's, for he was the son of a humble soldier who served the Emperor in many a stubborn fight, and who, one day in the stillness that followed a battle, stood up among the dead and dying to be decorated for some brave deed. Napoleon passed to his exile on a lonely rock; the lowly soldier went back to his native town of Dôle, without fortune or prospects, without even a roof under which to shelter.

After the excitements and horrors of great wars he took up the unlovely toil of a tanner, working for his daily bread among the raw hides that had to be converted into leather. He was a steady, thoughtful fellow, and had the fortune to marry a happy-hearted girl who, with all her gaiety and charm, had serious thoughts. When their baby Louis was born, on December 27, 1822, they declared that they would devote their lives to making him an educated man. The child was vowed to scholarship before he could speak.

It was a great day in the lives of the young couple when the old soldier was able to buy for himself a small tanyard at Arbois. As he grew older little Louis played about in the tanyard, and so loved the place that in later years, when he was away studying in Paris, and became homesick and weary, he would declare that if he could once again breathe the odour of the old tanyard he would be well again.

But his father did not mean that Louis should become a tanner. "We will make him an educated man" was the cry of the parents, and as soon as he was able to go to school the boy set out on a career of learning which lasted all through his life.

He was always learning. He went first to a small school in the town and then to the college of Arbois. "Ah," said his proud father now, "if only you could become some day professor in your college, I should be the happiest man on earth!" Louis must have thought his father expected too much of him, for he was not one of the boys who take eagerly to learning; he *could* learn and could learn easily, but he loved play better. He was a pranksome, high-spirited lad, and many a time, when his father sat waiting for him at home to go over his lessons with him, Louis would be off at his games, with no thought of professorships in his young mind.

He wanted to be a painter when his father wanted him to be a professor; and he would have wanted to be something else had his father suggested painting. But Louis had a real talent for drawing, and in later days, when he was one of the most famous scientists in the world, an old lady, looking at some of his early pictures, sighed, "What a pity that a man who might have made a reputation as a painter should bury himself in chemistry!"

But while he was still young his fine nature asserted itself. His eyes were opened to the sacrifice his parents were making for him, and he realised that he must respond to their vow, "We will make him an educated man." The principal of the college, seeing how easily Louis outstripped all the other boys, said to the father, "It is not for a professorship in a small college such as this that we must prepare him, but for one of the great colleges." And, turning to Louis, he said, "Think of the great Normal School, my little friend."

But it was not left to the old professor to carry his preparation much

farther, for Louis passed on to Besançon, where he not only read for a minor degree, but studied for the examination that he must pass before entering the greater school for which he was destined. It was here that the boy first acquired a passion for chemistry. The old professor who, in a rather primitive way, taught chemistry at Besançon found his mind constantly on the stretch to answer the eager inquiries of Louis Pasteur, and at last said, "Really I ought to put questions to you, not you to me." The pupil had already outdistanced his master, and Louis, unable to travel fast enough along the path of knowledge, used secretly to take lessons from an aged chemist.

The Boy who was in Earnest and How He Marched Breast-Forward

At last the time for the examination for the Normal School came, and Louis appeared fourteenth on the list. It was a pass, but it did not satisfy Louis, who at once set himself another year's study in order to re-enter for the same examination and join the school with a worthier record. His fellow-students were amazed, as perhaps his parents were, but Louis persisted. He went to Paris, and studied in one of its dreary suburbs. This time he did better, coming out fourth on the list. He had now ample opportunity to study chemistry, for, not only had he a first-rate tutor at his school, but he was allowed to attend lectures at the Sorbonne, the University of Paris, one of the most famous French seats of learning. Here he came under the influence of M. Dumas, a great scientist who was also a great teacher. Louis almost worshipped his master, and was proud to preserve a handkerchief which Dumas had touched during a chemical experiment.

Pasteur himself now gave up his leisure and his holidays to research. His old school long kept one of the relics of his experiments—some bones he had bought from a butcher, and which, after carrying out the necessary processes from four in the morning until nine at night, he had reduced to sixty grammes of potash.

The Old Man who Trembled at the Thought of Pasteur's Great Discovery

He was 21 when he began at the Normal School; at the end of three years he obtained his degree for physical science, and in order to become assistant to his old master he refused a professorship at Tournon. It was fortunate that he did refuse, for the professorship would have carried him out of the main stream of scientific research, and away from a study to which he was devotedly attached. This was the study of the crystals left after the evaporation of tartaric acid.

It had been discovered that these crystals caused rays of polarised light to twist to the right. Pasteur, after many experiments, found that certain of the crystals caused the polarised light to twist to the left hand, and that there existed, therefore, what he called left-handed tartrates. When he saw that his theory was proved, that he had done a great thing in chemistry, he rushed from the laboratory, and declared that he felt so nervous and excited that he could not look through the polariscope again.

This discovery, though technical and not very romantic to us, is of enormous value to human life. News of it reached the Academy of Sciences, and M. Biot was deputed to test the young man's statement. He did so kindly, but without faith, believing it all to be a wild mistake. But when the experiment was carried out, and the truth of Pasteur's announcement was before his eyes, the old man trembled. His own discovery of the right-handed tartrates had hardly been believed. With this new wonder before his eyes, he said to Pasteur, with great emotion, "My dear child, I have loved science so well throughout my life that this makes my heart beat fast."

The World of Superstition that Pasteur Swept Away

Soon after this Pasteur was appointed assistant professor of chemistry at Strasburg, where he enthusiastically carried on his investigations. So deeply devoted was he to his work that on the morning of his marriage he had to be called from an experiment in his laboratory and reminded that that was his wedding day. But his wife did not afterwards find him forgetful, and much of his later success was due to the happiness and harmony of his home.

We cannot follow the eager student through all his experiments, but we may jump to a point at which they become important to us all. He found that there existed in his solutions a living microbe which would devour the right-handed tartrates and leave the others alone, and this led him to the discovery that the fermentation of other fluids and substances is due to the action of living organisms. These organisms, he said, came from the air.

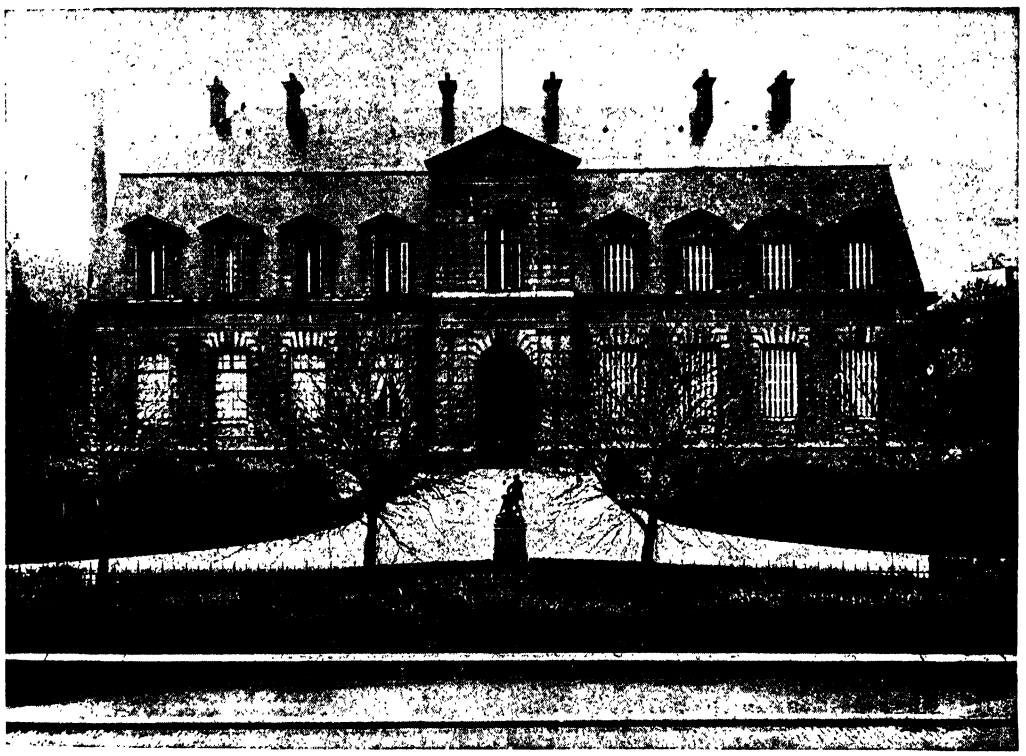
That seems a little thing today, but what a world of credulity and superstition it swept away! Up to that time men had believed in what they called spontaneous generation. They believed that life could suddenly come into being without cause,

Leave a vat of wine or beer, or a decoction made of hay, they said, and life would arise from it. Massed damp rags, or paper, or even a damp hayrick, will in due course produce fire from overheating, they said, and they argued that in the same way their brews would produce life. But Pasteur showed that life cannot arise anywhere unless life has preceded it. The microbes in the wine and milk did not proceed from nothing; they were the descendants of microbes like themselves, and reached the liquids from the air.

"Keep your air free from microbes, or keep the microbes from your vats," he said, "and your milk and wine and beer will not turn sour." He proved his case, and caused a revolution in the manufacture of wines and vinegar, in the preservation of foods and so on.

But even that was trivial in comparison with the effect his discovery had elsewhere. Those who have read the life of Lord Lister remember what use he made of Pasteur's discovery, and how generously he told the world that he owed antiseptic surgery to the great Frenchman. "If," thought he, "milk and meat can be kept pure when microbes are excluded, then surely wounds on the human body can be treated in the same way." And while Pasteur was applying his discovery to vinegar and wines and foodstuffs, the great Lord Lister applied it to the saving of human life, saying always, "I am but following in the footsteps of Pasteur."

If the fluttering heart of M. Biot beat fast when he first saw a left-handed tartrate, the heart of the world beat faster when it was seen what glorious results were to come from the discovery of Pasteur. From the Dark Ages onward men had been trying to find a sure way of curing wounds, and had not succeeded. They had been trying for hundreds of years to prevent gangrene and corruption of wounded flesh, and had not succeeded.



THE PASTEUR INSTITUTE IN PARIS, WITH THE STATUE SHOWN IN DETAIL ON PAGE 48

The most extraordinary devices had been attempted. One of the greatest surgeons of the sixteenth century dressed his patients' wounds with boiling oil, and thought himself the happiest man on earth when, for a great sum of money, he secured another surgeon's secret for the same sort of case. The new remedy was to stew poppies in oil of lilies and apply the fluid to the wound! But millions of lives were thrown away because no one could keep an open wound free from

infection. Then Lord Lister, with a splendid flash of genius, saw that Pasteur's was the right way; he applied it, and won for himself the gratitude of the whole civilised world Therefore, though Lord Lister was the father of antiseptic surgery—the surgery which enables doctors now to perform the most incredible operations formerly beyond the merciful art of the healer—Pasteur was the discoverer of the secret which placed this power at the service of Lister and the world at large. Surgeons had thought that the organisms producing gangrene in a wound existed in the wounds themselves, or grew there spontaneously. Pasteur proved that they could only come there from without, and so he began the revolution which, above all else, will keep his memory green as long as records of the human race remain.

Appointments in Lille and Paris came to Pasteur in due course, and when he was forty-five he had the satisfaction of becoming Professor of Chemistry at the Sorbonne, the scene of his happy youth of learning. But it is with his work rather than with his appointments that we are concerned.

The Great Industry that was Dying in France and How Pasteur Saved It

Two years before going as a professor to the Sorbonne he was entreated by his old master, Dumas, to investigate the subject of silkworm disease. The silk industry is of enormous importance to France and Italy, but an epidemic was raging among the silkworms in both lands. Silk manufacture had become almost extinct through this mysterious disease, and millions of pounds had been lost. So at last they called upon Pasteur, who, at the time he began his investigations, had never seen a silkworm!

He went to the places where the disease was at its worst, and worked through the entire cycle of the disease. He found it to proceed from a germ, which could be discovered, as a rule, but not always, in the egg. It was discovered with certainty, however, in the caterpillar and in the moth. It was extraordinarily infectious. If a healthy caterpillar walked over a leaf where an infected caterpillar had been, the healthy insect contracted the disease. Germs travelled on the wind to healthy caterpillars and killed them. A mere touch of a stricken caterpillar's claw would serve to infect its healthy brother. When Pasteur had worked out the whole story, he showed that infected moths would lay infected eggs, from which infected caterpillars would issue, but that healthy moths would produce sound eggs, from which untainted caterpillars would come. The infected moths, eggs, and caterpillars must be destroyed; the healthy ones alone should remain. Their feeding-places must be kept clean; every method of ensuring healthy conditions must be put into practice.

The plan was perfectly successful, and the man who up to that time had never seen a caterpillar of the silk-moth restored to France the silk industry, whose profits during his lifetime were more than the cost of her first war with Germany.

How Pasteur's Study of the Silkworm Brought a Revelation to the World

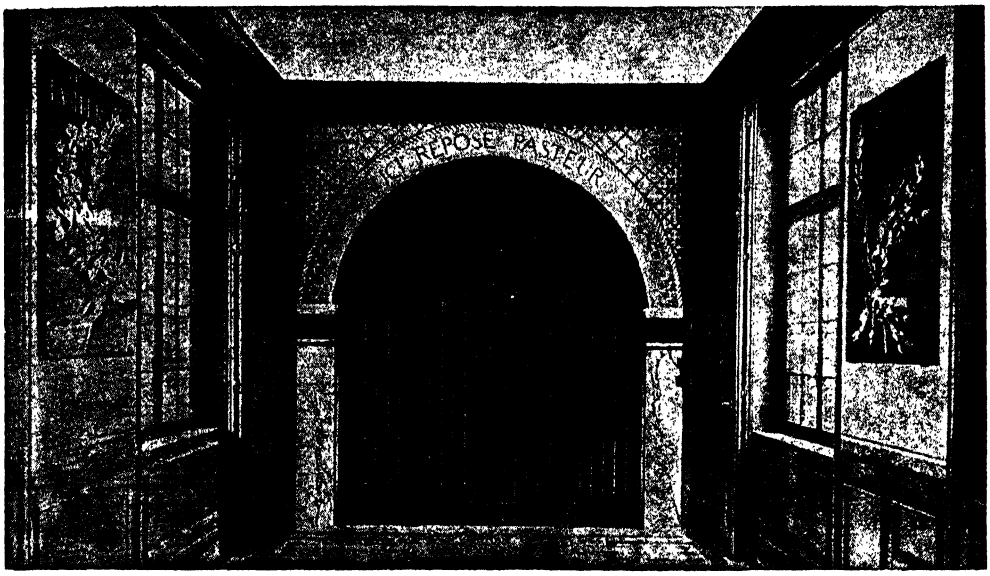
When this feat was accomplished, Pasteur was invited to undertake the cure of fowls attacked by cholera. The French had not only lost their silkworms, they were in danger of losing all their poultry, too. Pasteur had found that disease was communicated from one victim to another, as in the silkworms, by means of germs. This was a great revelation to the world. Armed with his knowledge of caterpillars, Pasteur felt confident that the same sort of thing was working havoc with the fowls, and that germs, spreading from infected birds, carried disease to healthy birds.

We must notice here an example of his thoroughness and brilliant originality. While experimenting as to the cause of another disease, he noted that, whereas certain animals died from the attacks of a certain parasite, birds escaped. What could this mean? Pasteur thought it must be due to difference in the temperature of animals and birds. The birds have the highest temperature of all living things. The bacillus which was fatal to the animals cannot live, or, at any rate, cannot multiply, in a high temperature, and the temperature of a bird's blood is too high for the microbe.

The Beginning of One of the Greatest Discoveries Ever Made

Pasteur proved this in a striking way. He took an ordinary fowl and put it into a cold bath—that is to say, he kept its feet in cold water until its temperature had been reduced. Then he inoculated it with the germ, and in twenty-four hours the bird was dead. Then he inoculated another chilled fowl in the same way, but, having done so, he put it into a warm covering of cotton-wool and placed it in a still lower temperature. The bird's natural warmth soon returned, and although, when the fowl was placed in cotton-wool, fever was raging in its veins, the parasite was soon

HERE SLEEPS PASTEUR, WHO WILL WAKE AGAIN



THE GATE OF PASTEUR'S TOMB AT THE PASTEUR INSTITUTE IN PARIS

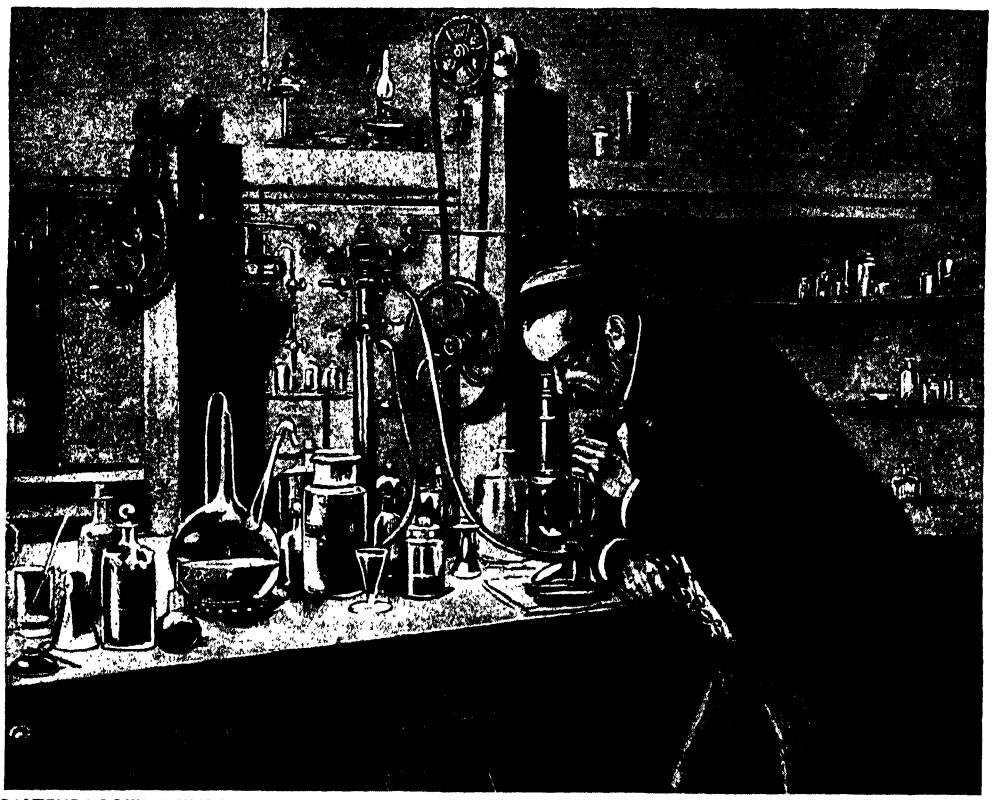


THE BEAUTIFUL SIMPLICITY OF THE TOMB IN WHICH PASTEUR LIES

rendered harmless with the return of warmth, and in a few hours the victorious fowl was restored to perfect health.

He succeeded in stamping out cholera among fowls, and then he was brought face to face with a horrible disease that begins with cattle and afterwards attacks man. It is known as anthrax or splenic fever, and it forms a memorable chapter in Pasteur's career and a notable sign-post on the path of human progress. For when Pasteur showed that anthrax is communicated by germs from one animal to another, or from an animal to a man, he showed for the first time that, although microbes do not spring to life from nothing in a wound, they do cause disease in man. Some day, as a great doctor has said, medical men of the future will ask a patient who is ill, " What is your microbe ? " Nearly all our illnesses spring from the effects of microbes, from a cold in the head to the deadly pestilence which for hundreds of years made tropical lands uninhabitable by white men.

Pasteur not only found that anthrax is caused by a germ, but he found how to cure it. He adopted the plan of Jenner, the man who introduced vaccination into England. Every microbe that invades our system must have certain properties upon which to feed, and when those properties are exhausted the parasites disappear, and leave us to recover if we can. But they make us ill, and when they have had their way they leave our systems exhausted of the substances upon which microbes live. Pasteur therefore determined to clear the systems of sheep and cattle by a gradual process of exhaustion, and to leave nothing upon which the microbes could seize. By a brilliant series of investigations he found out a method whereby the virus, after passing from animal to animal, and being exposed for a certain time to the air, can be fixed at known strengths. That done, he inoculated sheep and cattle with his virus, and the gentle doses gradually cleared the system of the food upon which the bacilli of anthrax lived.



PASTEUR LOOKING THROUGH HIS MICROSCOPE AT THE UNSEEN WORKERS HE REVEALED TO THE WORLD

To prove this, Pasteur first of all vaccinated 25 sheep, and placed with them 25 unvaccinated sheep. Fourteen days later the 50 sheep were all inoculated with the strongest

anthrax virus. Three days afterwards a host of scientists and farmers assembled to see the result. Of the 25 sheep which had not been protected, 21 were already dead, and the other four were dying; while the 25 sheep treated with mild virus were well. Similar results were reported of cows.

How Pasteur Gave the World the Safeguard Against a Terrible Disease

In that way Louis Pasteur gave to the world, without money and without price, the great safeguard against anthrax, one of the deadliest and most terrible of diseases. When we hear, as too frequently we do, of deaths from anthrax in the woollen manufacturing districts in Yorkshire, we know that these deaths should not have occurred.

Now we come to the most romantic of all the wonderful episodes in the career of Pasteur—his work for the cure of rabies, a madness which attacks many flesh-eating animals, especially dogs. When the animal is rabid, it refuses to drink, it howls and barks day and night, and on breaking loose it runs madly about, biting every living thing it can overtake. And every person so bitten, unless he be germ-proof against rabies, becomes in turn mad, and dies in agony. That, at least, was the case until Pasteur took up the question. Pasteur had pondered this mysterious malady in dogs, and the first case upon which he was called to practise was one that has become world-famous. The patient is alive today to rejoice and tell the tale to a wondering nation, but the master who saved him is dead.

The Shepherd Boy who Met the Wild Wolf from the Mountains

About thirty years ago there came down from the mountains near Salins a wild, mad wolf, its eyes aflame, its jaws streaming with saliva and foam. Children were playing as the wolf appeared in sight, and the wild creature made straight for them. But near by was a gallant shepherd boy, Jean Baptiste Jupille, and, seeing the danger of the children, he rushed at the mad wolf and grappled with it. Grasping its foaming jaws with his naked hands, he twisted the thong of his whip about the brute's throat and strangled it. It is more like a page from a story-book than a bit of real life, but it is true as well.

And the end is just as romantic. In his struggle the boy was bitten through the hand by the wolf. Now, of all bad examples of hydrophobia—as rabies is called—that in the wolf is the worst. The boy seemed doomed to a terrible death. But there was a man in Paris to save him. Pasteur had been experimenting, and had made a grand discovery. He had obtained the virus from mad dogs, had succeeded in weakening it, in fixing its strength, in using it as a vaccine; and the boy was hurried to him, was vaccinated, and was cured!

How could such a thing be? It takes the virus fourteen days to develop in the human system, and while the microbes were multiplying Pasteur was able to employ his own virus, as in the case of anthrax. While the deadly microbe was slowly making its way through the boy's system, the mild virus was quickly going about its work, harmlessly absorbing the very properties which the microbes from the wolf's jaws would require. The mild vaccine left a sort of wilderness for hydrophobia microbes behind it. There was no food for the untreated microbes, and they could not multiply. They died as a tree dies when it finds no food in the soil, or as a man dies for whom there is no oxygen in the air.

The Crowning Work of Pasteur's Life and How it Goes on Today

That was the beginning of the great campaign against rabies, and the result is that today we can cure people who have been bitten by mad dogs, we can prevent their being infected, and we can cure dogs or any other animal, if the case is taken in time. It was the crowning work of Pasteur's life. To enable him to carry it out on a large scale, a public appeal was made to build him a laboratory of his own. The Tsar of Russia sent £4000 to begin the fund, which quickly reached £100,000, and today the Pasteur Institute is one of the most important places in the world. It is richly endowed, too, for a few years ago a rich banker, who had intended to leave his fortune for the building of a French warship, altered his mind, and, instead of bequeathing the money for a mighty engine of destruction, he left nearly a million pounds for the work of life-saving at the Pasteur Institute.

The Pasteur Institute has now become a meeting-place for students of medicine and surgery from all lands. To all parts of the world travel the men who have been trained where Pasteur lived and worked and triumphed, and as each goes forth he becomes a centre of light and learning, a messenger of health and life to those who, but for the teaching of Pasteur and his successors, would be left to sicken and die in hopeless misery.

Here in England, too, we have our monument to Pasteur—one of the noblest monuments that any man, however great,

could wish to leave behind him. It was one of the happy experiences of Sir James Whitehead, in the year when he was Lord Mayor of London, to meet Pasteur himself at his institute, and to learn from his own lips the story of its work. But it saddened the great heart of Sir James Whitehead to learn that, though England sent Pasteur many patients, his country contributed nothing to the support of his institute, and, with the quick mind of statesmanship, he set to work immediately on his return to found a Pasteur Institute in London, which should work in sympathy with Pasteur's own. Sir James, the founder and first president of this new institute, gave up this post when it seemed to him that its widening field of service demanded a scientist at its head; and since then this institution has been named the Lister Institute, so that it stands today, with its incalculable benefits to the country and to medical research everywhere, as an enduring monument to two of the greatest benefactors of the human race.

Pasteur, who lived to be the man most honoured in his nation, carried on his work under such tremendous mental pressure that he brought on an attack of paralysis; but his invincible will seemed to rise superior to ordinary ills, and it was after this attack that his greatest work was done. He died on September 28, 1895, and was buried in the grounds of the Pasteur Institute. The man who watches over his tomb, and over the institute of which it is a part, is Jean Baptiste Jupille, the shepherd boy of other days, the first man to be saved by human aid from death by hydrophobia. And not only is Jupille there, but his statue is there too. It commemorates his brave act, and shows him, in his shepherd garb, grappling with the mad wolf that was about to attack the children. It is a fitting guardian of the gate of the temple in which the wonderful lamp of Pasteur burns brightly still.



THE BOY WHO MET THE WILD WOLF FROM THE MOUNTAINS
This statue is in front of the Pasteur Institute, where the boy is now caretaker. See page 43

GOOD WILLIAM CAXTON

SUPPOSE there were no Children's Treasure House, no Children's Newspaper, no other magazines or papers or books, nothing but musty parchments covered with writing in old Norman-French or Latin—what a dismal world this would be! Some roguish boy, who prefers play to reading in these summer days, may say, "It would have been better so"; but he is wrong. It would be worse, much worse.

There would have been no stories to enliven his dull hours. There would have been very few holidays away from home, for we could not have had the steam railway had there been no books. George Stephenson could not have invented his engine unless he had learned to read, and so discovered what men had already done with steam. There would have been little money to spend on pleasure, for people were poor and wretched, all save the few rich nobles, until books and papers arrived to enable them to learn, to store their minds with knowledge, to make them masters of arts and crafts whose secrets had been recorded for all time in print. Most of our people were serfs, or little better, until books came to educate them, to teach them that the right of man is to be free. The only excitements the poor knew were a fair or a feast now and then, or a war which would drench their homes with blood, or a raid which would strip them of all their belongings. Printed books have civilised us, made us free, made us skilful in arts and crafts and trades, and so made us rich and happy.

The man who laid the foundation of this glorious change in Great Britain was William Caxton, who grew weary of writing in his old age, learned the art of printing, which had been discovered on the Continent, printed some books himself, and set England's imagination on fire with longing for the secrets these new books had the power to teach them.

Caxton was born at Tenterden, in Kent, about the year 1422. We know nothing of his childhood, nor how he got his education. That his parents were kind and thoughtful of his future, and did the best in their power to make him a scholar, we learn from something he himself wrote when he was an aged man. Here is what he said, given in his own spelling: "I am bounden to pray for my fader and moder's souls that in my youthe sent me to schoole, by which, by the suffraunce of God, I gete my living, I hope truly." He was sixty-three when he wrote those words, but his deep sense of affectionate gratitude to his good parents was unabated.

He did well to be grateful, for, living in the wild forest part of Kent—the Weald, as it is called—schooling must have been a matter of great difficulty. English was still a foreign barbarous tongue to many people in England. From the time of the Norman Conquest French had been the polite language of the land; English had been considered vulgar and uncouth. Not until half a century before the birth of Caxton was English taught to English children in English schools.

Of course, there were no books for children such as we have today. Everything was written by hand, and it took so long for the scholar to make his copy of a parchment that the number available was about as many as we shall find today in some far-away Russian village where only one or two can read and write. Lord Macaulay, in his History, tells us that at about this time not one person in five hundred could spell his way through a psalm, and copies of the Bible were so costly that the priests, the sole instructors of the people, could hardly afford to buy them. We may imagine, then, the sort of teaching that would be given at such a school as William Caxton went to.

Yet he must have done well at his lessons, for when he was sixteen his parents apprenticed him to Robert Large, a London mercer. Such a position was greatly coveted for sons of the well-to-do, for to be a mercer, a

merchant in many things, was considered the highest of commercial callings. Sons of squires, and even sons of nobles, began their careers as pages in the kitchens of the wealthy. Sons of wealthy farmers and tradespeople started business life as apprentices to mercers, each hoping to become a Dick Whittington.

Caxton is said to have been a good penman, a gift which would place him high in the esteem of his master; for, at that time, to be able to write gave a youngster an equal footing with the priest, who was practically the only man of learning outside the Court. Noblemen were too lazy and small-minded to learn to write; they kept priests as clerks to write for them. To write their names was like putting on their armour; they employed servitors to do both. Yet they felt the difficulty and absurdity of the position, and were driven, in self-defence, to learn to write and read. Caxton started well, then, carving his fortune with his pen. His master must have thought highly of him, for at his death, in 1441, he left his apprentice twenty marks—about £150 in our money. In those days a mark would buy an ox and several sheep, so that, had he desired, Caxton could have taken his twenty marks and set up as a farmer with his capital. But he put his money in his pocket and went to the Continent, settling down at Bruges, where English merchants had a business colony. That was probably about a dozen years before the first book in the world was printed.

The old-fashioned method of trading between country and country was different from that of the present day. It could only be carried on by favour, not by right. The English had special reason to seek permission to trade abroad, for they had only the rudest and roughest manufactures at home. All their best wares came from the Continent. The Low Countries—Belgium, Holland, and Flanders—were the great manufacturing and distributing centres of the world. They could pick and choose their customers, so that it was a favour to be allowed to deal with them. It is evident, then, that Caxton must have been an amiable and gifted diplomatist, or he would not have been entrusted with the task of carrying on business with them in their own marts. He remained there for thirty years, during which time, so far as can be traced, he visited England twice only.

When he was forty years old Edward IV. appointed him governor of the English merchants at Bruges, and so he became perhaps the most important Englishman



THE STREET IN WHICH WILLIAM CAXTON WALKED ABOUT AS A BOY—THE VILLAGE OF TENTERDEN, IN KENT

on the Continent, regulating the trade between the Low Countries and England, inspecting all the goods going to England or coming from England, and acting as judge or arbitrator in disputes. So well did he manage his affairs that when a treaty between England and the Low Countries was about to lapse he was appointed ambassador to renew it. But Philip of Burgundy would have no more of English goods, he said; he preferred not to bother with the trade of this little island. As no more English goods could go into the Low Countries, England refused to accept goods from the Low Countries. That mattered very much to the English merchants, and in the end they were driven to smuggle in Flemish goods. For three or four years this condition of affairs lasted, and the time was a most anxious and responsible one for Caxton. But the death of Duke Philip brought an end to the disagreement. Charles the Bold was the new duke, and he married Princess Margaret, sister of our Edward IV., and re-established peace.



CAXTON'S HOUSE IN WESTMINSTER, WHERE HE STARTED PRINTING

During the course of his business Caxton had travelled about Europe, and made himself a finished scholar and master of languages. While England was plunged into the agonies of the Wars of the Roses, a great and marvellous revolution was taking place in Europe. Printing had at last been invented, and the watchful Caxton had heard of it, and seen some of its results.

Scholars have been quarrelling for three hundred years, and are still quarrelling, over the story of the invention. The story generally accepted is that John Gutenberg, of Maintz, Germany, invented the art, and printed his first book in 1455—a Latin copy of the Bible. It is a strange thing that printing tells us the history of almost all inventions but its own. But it is enough for us that, at the beginning of the second half of the fifteenth century, printing did come into being, that movable types were invented, that moulds were made from which many types could be formed, and that, instead of writing one copy of a book in the course of many months or years, a man could now print many copies of the same book in the course of weeks.

The city of Maintz was sacked in 1462, and the men who had up to then been engaged in the city as printers fled to various parts, carrying with them the secret of their art. Printing at once sprang up at Cologne, Rome, Florence, Venice, Naples, Bologna, and Milan. It did not reach England. Men there were too busy making war upon each other to trouble with the gentler arts of learning. But a new implement had suddenly come into the world, a power for civilisation greater than any that man had devised since the days in which the alphabet was invented.

There was a marvellous coincidence about the birth of printing, which Caxton was on the spot to witness. It followed immediately upon the fall of Constantinople. Printing came into being in 1455, but there existed very little written matter for the printer to print. Written books and manuscripts were so scarce that only the rich could possess them. A single copy of the Scriptures had to serve several monasteries. Writings were sent from one place to another with secrecy and under powerful guards, as if they were the treasure of kings.

In the very year that Caxton went to Bruges, the University of Oxford passed a regulation ordering that no student there should "occupy a book in the library above an hour, or two hours at most, lest others should be hindered from the use of the same." Not long before, the Countess of Anjou bought a book for 200 sheep, five quarters of wheat, five quarters of barley, and five quarters of millet. When the King of France wished to borrow a book from the library of the doctors of Paris, he had to

READING IN THE DAYS BEFORE PRINTING

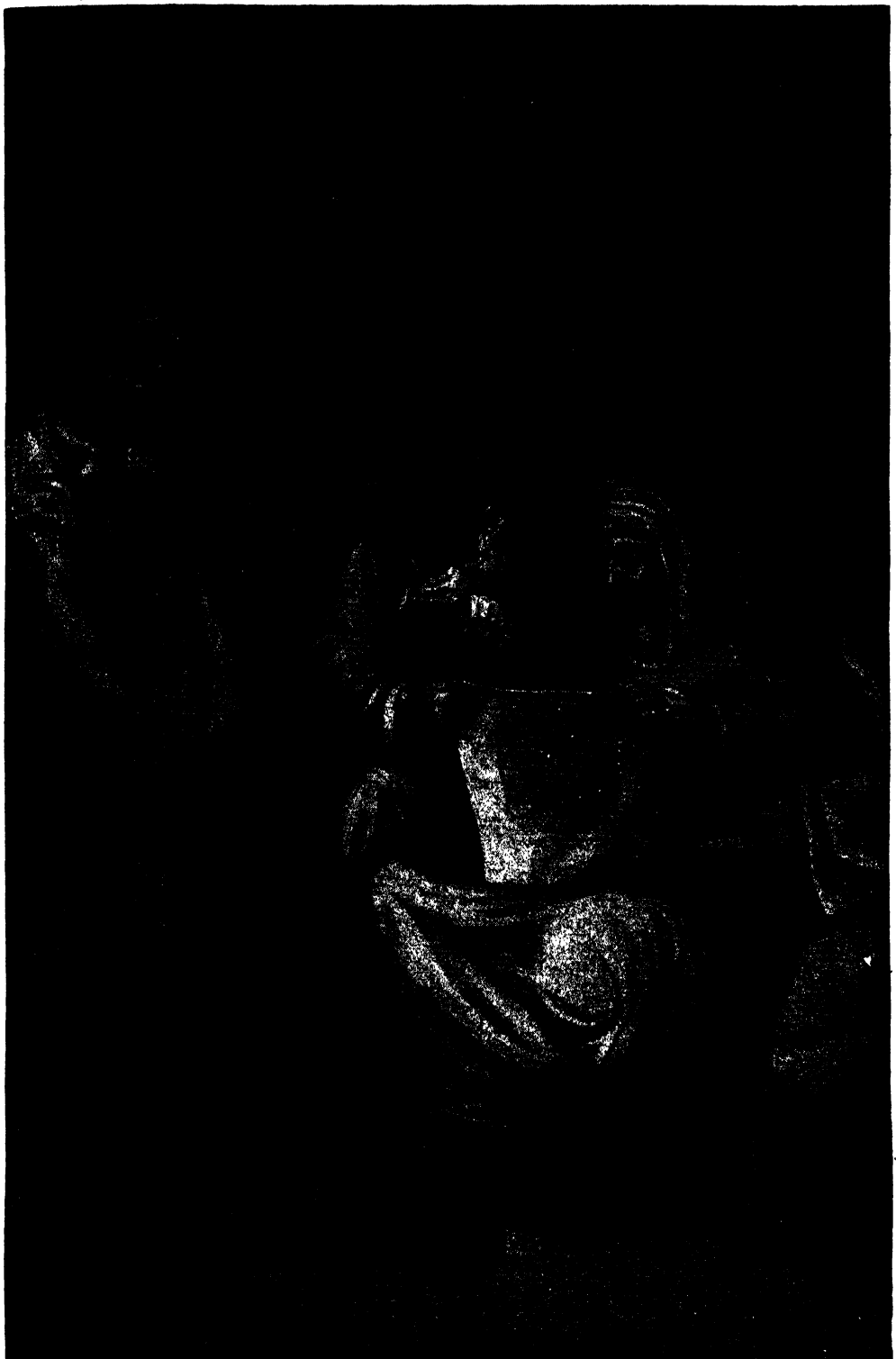


SCHOLARS IN THE MONASTERY IN THE DAYS WHEN LEARNING WAS PRESERVED BY HANDWRITTEN BOOKS



A SCHOLAR OF THE MIDDLE AGES IN THE SCHOOL OF ROME

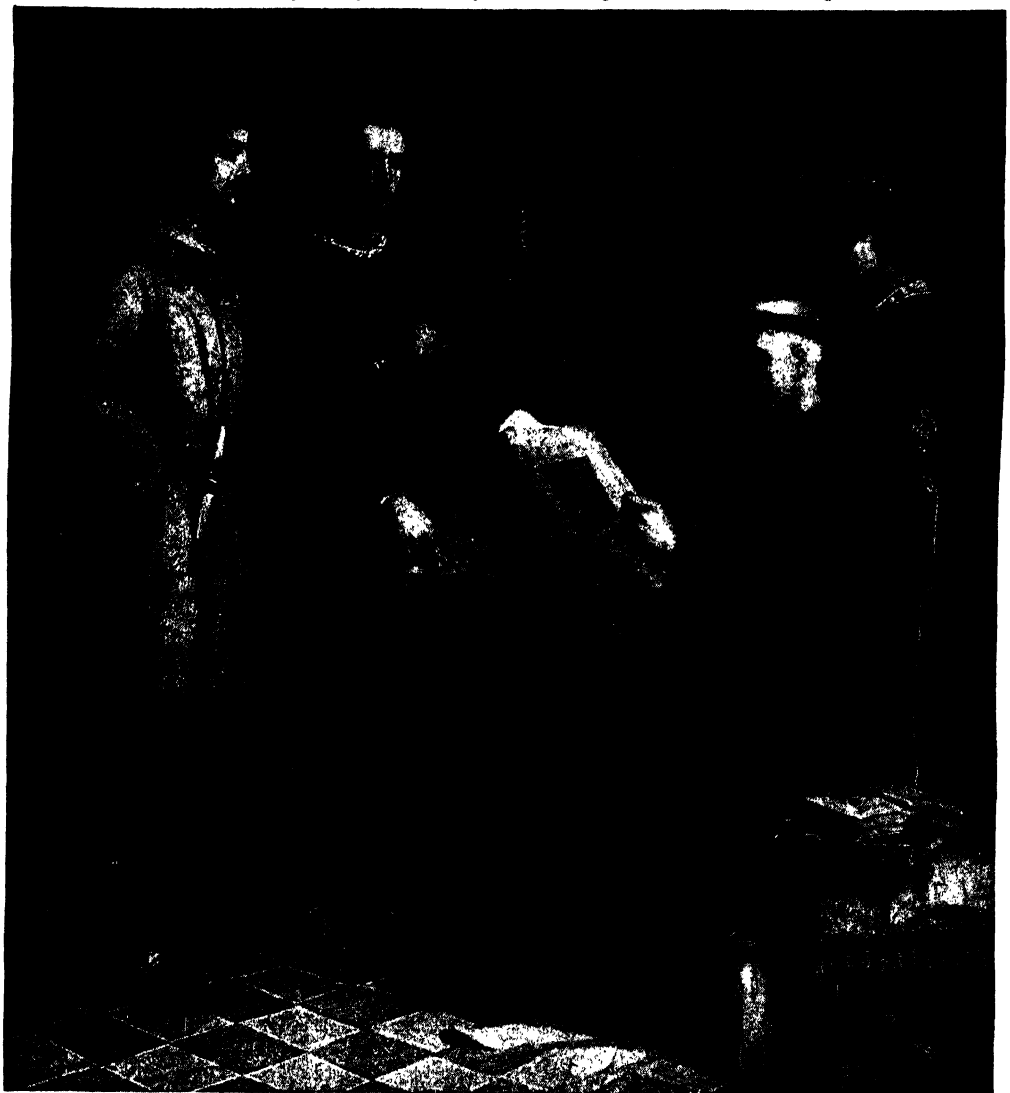
CAXTON EXAMINES HIS FIRST PROOF



THE BEGINNING OF A REVOLUTION IN ENGLAND—WILLIAM CAXTON RECEIVING THE FIRST PROOF FROM HIS PRINTING PRESS IN THE ALMONRY, WESTMINSTER, IN THE YEAR 1477

give gold plate as security, write a bond, and get one of his nobles also to give his bond, for its safe return. How, then, could ordinary people get books, or even see them?

A master carpenter at the time earned, in the money of the period, only fourpence a day: his workmen only twopence a day.



THE ABBOT OF WESTMINSTER CALLS TO SEE CAXTON'S PRINTING—WYNKYN DE WORDE, CAXTON'S ASSISTANT, IS BEHIND THE ABBOT

The man in the fields—and most men worked in the English fields at that time—received three-halfpence a day, with a halfpenny a day extra at harvest time, when he worked from sunrise to moonrise. A Bible was sold for £33 6s. 8d., which in the money of to-day would mean about £250. To have bought that Bible a worker in the fields would have had to labour over fifteen years and save every penny of his wages.

Now, by a wonderful coincidence, it happened that two years before the invention of printing the Turks captured Constantinople, for ages the chief seat of learning. All the leading scholars had gathered there in the city of Constantine, and when the Turks broke in the scholars scattered over Europe, taking their learning and their manuscripts with them. Thus, when printing was invented, there were ready many men to prepare books for the printer and to teach others to write. The fall of Constantinople could not have

happened at a more fortunate time for learning. In one respect it put back the clock of progress in a terrible way, but in another it gave an impetus to scholarship that nothing else could have aroused. The fall of Constantinople was in that sense a blessing in disguise, for it distributed the men of wisdom, deprived them of their

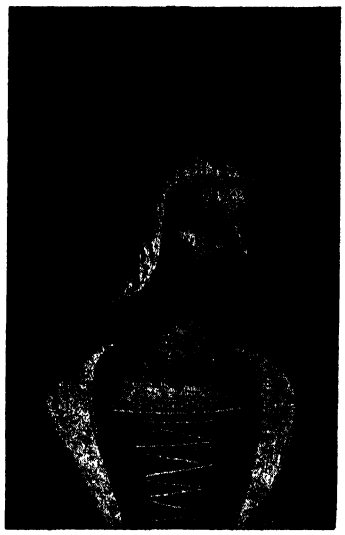


EDWARD THE FOURTH CALLING AT CAXTON'S WORKSHOP TO SEE THE BEGINNING OF PRINTING IN ENGLAND

snug berths in a safe city of learning which few people could reach, and made it needful for them to turn their learning to account. All this was happening while Caxton was travelling and trading in Europe, and his quick mind did not fail to grasp the use and value of the marvellous power which was springing into being under his very eyes. But he was not yet ready to take advantage of it for his own ends, and probably he never would have done so at all had he not felt himself growing old and weary.

He gave up commerce, and entered the household of the English princess who had become the wife of Prince Charles the Bold of Burgundy. Having leisure, he began to translate into English a book called the "History of Troy." He did so to avoid idleness, he tells us, adding wisely that "idleness is the mother and nourisher of vices." But before his task was finished he tired of it. The book was in French, which was a foreign language less familiar

to him than the language of the countries in which he had lived. Then there was the difficulty of translating it into English. The language of his motherland was not yet a settled speech. Difficulty growing upon difficulty, he became faint-hearted and put aside his work. But his young mistress, when she heard of what he had done, would not hear of his giving up, but commanded him to finish the work, and so he took it up again and laboured hard with brain and pen. But his eyes, he tells us, became dim with looking at white paper, his spirit for the work was not as high as it had been, and, fine penman though he was, he felt himself too old to continue writing out the book in the elaborate way in which books were written out in those days. So, the story goes, he decided to print it!



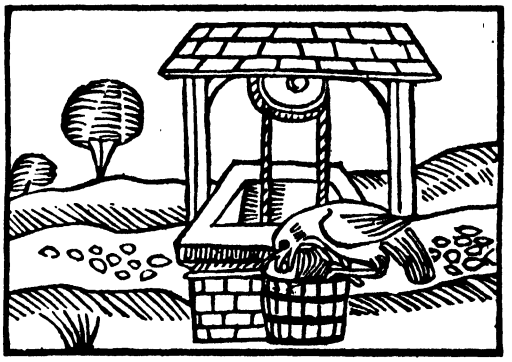
THE COUNTESS OF ANJOU, WHO BOUGHT A BOOK FOR 200 SHEEP

Another account tells us that he finished the first copy, after a two years' break, and that the demand for copies made him decide upon printing. Be that as it may, the "History of Troy"—published, as far as we know, in 1474—was the first book printed in English. Delighted with his new venture, Caxton translated and printed a book on the game of chess, and then returned to England in 1476, bringing with him his printing press and a fugitive printer from Maintz, Wynkyn de Worde, who was destined to assist him for the rest of his lifetime, and afterwards worthily to succeed him and carry on his splendid work. Caxton established himself in a building known as the Almonry, which may possibly have formed part of Westminster Abbey. We are not certain as to this, but if it be so, then it is one of the greatest glories of that noble cathedral to have been the cradle of English printing. Caxton's printing office, in any case, was at "The Almonry, Westminster."

Caxton's fit of weariness had passed. With printing to employ him, he resumed his labours in this new direction with all the zeal and enthusiasm of boyhood. The first book printed by him in England—in 1477—was a translation by Earl Rivers, edited and extended by Caxton himself, of a work called "Moral Sayings of the Philosophers." He afterwards printed Chaucer's poems, for which he had the highest admiration, and one or two other English works. But it is an interesting commentary on the scholarship of the time that the great bulk of the eighty books which came from Caxton's press were translations. There was practically nobody in England to write. Such books as were written were mostly worthless. There could be only one or two copies, and these could be read by only one in five hundred of the people.

Of the eighty works that he printed, Caxton himself translated no fewer than twenty-one—translated them, wrote them out in English, and, by his own labour, printed the greater part of them, and did all the correcting. He had too few assistants for others to achieve much in the way of printing, and his assistant, Wynkyn de Worde, tells us that Caxton was actually at work on the very last day of his life



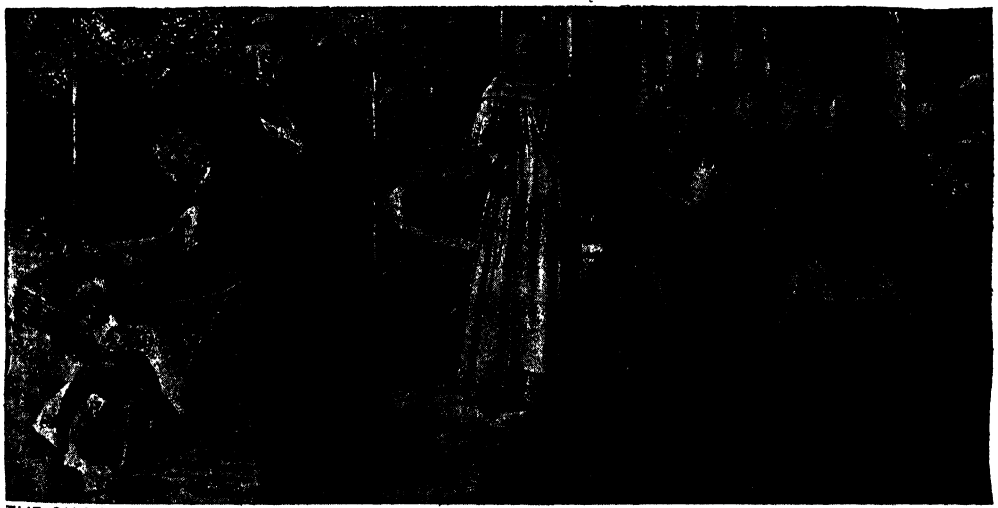


CAXTON'S PICTURES FOR ÆSOP'S FABLES—KING STORK AND KING LOG, AND THE CROW THAT WAS ATHIRST

THE SCATTERING OF THE SCHOLARS IN EUROPE



THE DESTRUCTION OF WAR FALLS UPON CONSTANTINOPLE, STRIKING TERROR INTO THE HEARTS OF THE SCHOLARS GATHERED THERE, AND DRIVING THEM TO FLIGHT



THE QUIET PURSUIT OF LEARNING IN THE MIDDLE AGES, BEFORE THE CAPTURE OF CONSTANTINOPLE BY THE TURKS SCATTERED THE SCHOLARS THROUGHOUT EUROPE

upon one of his books. Yet he was fifty-two years of age when he printed his first book at all, at which time he was declaring himself an old man—too old for more work! But after he had discovered printing he worked on for another seventeen years, and never again complained of being tired. No man ever worked harder, or more joyously, than this old hero did until he died, in 1491.

We can hardly realise today what his labours meant. All the books he produced had to be translated. If they were in French or Latin or Dutch he had to write them in English. If they were in English—well, whose English was it? There was no standard of English at that time. The language was in what we may call a fluid condition. As he himself wrote, "The common English that is now spoken in one shire varies from that in the next shire," so that the people of one county could hardly understand the people of another. And the language was changing rapidly. "The language now used varies from that which was used when I was born," he complained, and he wondered what sort of English to put into his books. He felt that he had succeeded pretty well when he translated Virgil into English, but some "honest and great clerks" said his language was "overcurious," and bade him use the old English words and phrases, while others said it was not curious enough. Caxton was not too proud to take a lesson, and here he tells us what happens. "Fain would I satisfy every man; and, so to do, I took an old book and read therein The language was so uncouth and broad that I could not well understand it. My lord Abbot of Westminster did then show me certain writings in old English and ask me to reduce it into the English now used. It was written in such wise that it was more like Dutch than English. I could not reduce it nor bring it to understanding." So he puzzled and puzzled, and gathered many counsellors about him, some advising him to use the old terms and so preserve them, others urging him to employ polite language and set a better standard. "Thus," he says, "between plain, rude, and curious, I stand abashed."



KING EDWARD IV. OF ENGLAND



DUKE PHILIP OF BURGUNDY

CAXTON'S FRIEND AND FOE

He chose a happy middle course. Caxton is not only the father of English printing, but the father of printed English. He fixed the language. For the first time he gave the nation a settled form of speech. A Lancashire man and a Devonshire man, talking together, might each speak a tongue that would be as Greek to the other, but both could read and understand Caxton's printed words. For the first time all Englishmen had a common tongue, and were no longer as foreigners one to another. The honest, lovable old scholar had hosts of friends, admirers, and patrons. He was a favourite at the Courts of Edward IV. and Richard III., and perhaps it may have been to please these monarchs that Caxton, instead of printing great books, printed works on chess and hawking and heraldry and fables. Well, we must remember that England was struggling out of the savagery of the Dark Ages, and Caxton could not go too far in advance of his times. He gave the English people Chaucer and Sir Thomas Malory's "King Arthur," and he laid the foundations of the national literature upon which Shakespeare and Milton and the glorious company of our English authors were to build. He was our first great educator, our great humaniser of knowledge, and all the kings and inventors of our land have never together achieved a more uplifting work than that of the simple son of the Kentish Weald who took up printing when his hand ached from driving the pen.

THE KING WHO TRIED AGAIN

A LITTLE spider hangs by a strand of web, dangling from a dusty beam in a dismal room. It swings weakly backwards and forwards, trying to reach the next beam. If it can reach that beam it will be able to fix the web to it, and so lay a cable in the air on which to hang its house.

Well, spiders are doing this sort of thing every day, and have been doing it ever since men first put up beams—why should we notice this one? Because a big, powerful man lies there watching it, lies there uneasily, on a rough heap of straw, fascinated by the swinging spider. He counts the number of swings the little spider makes—one, two, three, four—each without success. "Well, I have been beaten four times myself," says the man. But the spider does not give in. "Will she do it?" the man wonders. Again and again the spider throws itself towards the beam, and, at last, the seventh effort brings her there. The spider reaches the beam, grips it firmly, fixes its web, and is rewarded; it has at once a cable along which to run and a foundation for its work.

The big man rises from his straw and declares that, though he has four times failed, he will take this lesson from the spider; he will try again, and again, and again. He leaves his bed of straw and goes out in secret to call to his side one or two faithful followers hiding near, and they vow together that they will try again.

Now, the man who lay on the straw watching the spider was Robert Bruce, King of Scotland, and the vow the brave spider encouraged him to take was a pledge to strive afresh for the crown of Scotland, which he had won and lost.

To whom had Bruce lost his crown? To the King of England, the greatest as well as one of the most unscrupulous of the Plantagenet line of English kings, Edward I. Of course, it seems strange today to think of Scotland under one king and England under another, but we are thinking now of six centuries ago. As England had once been governed by seven kings, so the rest of the kingdom—Scotland, Wales, and Ireland—were governed each by its own sovereign, and it was Edward I. who first sought to get all the power into his own hands. To understand how all this happened, we must leave the unhappy king with the spider for a while, and turn back to what had happened before.

The Bruces were a Norman family who came over with William the Conqueror, and were rewarded for their services with ninety-one manors—some 40,000 acres of land—all in England. The next generation of the family reached Scotland, where the second Robert Bruce—the eldest son was always called by this name—was given a part of Scotland called Annandale, including nearly the whole of Dumbartonshire. The fourth Robert Bruce married a niece of William the Lion, King of Scotland, and became one of the great barons of the land. The sixth, King Robert's grandfather, was an indirect heir to the throne, and the king, Alexander II., sent for him one day, and told him that he should be the next sovereign. But after that Alexander had a son, who, as Alexander III., proved one of the best and wisest kings that Scotland ever had.

The disappointed Bruce bore this reverse nobly, and, passing his time as much in England as in Scotland, became the first Chief Justice of England. But the unexpected death of Alexander III. reopened the question of the succession to the throne, and that brings us to the turning-point in this strange story. It became a question with Scotland, "Under which king?" for there was a second claimant to the throne in the person of John Baliol, after whose father the famous college at Oxford is named. The Baliols were a notable Norman family of warriors, scholars, and builders.

Now, the John Baliol of Robert Bruce's time was the son of a descendant

of David I. of Scotland, and it was not easy to decide whether he or Robert Bruce should be king. So it was decided to refer the question to Edward I. of England. In doing so they are said to have regarded him as their overlord, but what they really meant was simply to have him as their umpire. Edward, who was a cunning man, decided that he would have the land for himself, but would put a puppet on the throne; and so he chose Baliol, who was the weaker of the two claimants, making him king in name, but in reality regarding him as a subject of his own. This, of course, put an end for the time being to the claims of the house of Bruce. The sixth Robert Bruce handed on his claims to the seventh Robert, and the seventh Robert passed them on to his son, the man who lay on the straw watching the persevering spider.



WHAT FIGHTING WAS LIKE IN THE DAYS OF ROBERT BRUCE

It was now nearly the end of the thirteenth century. Robert Bruce, the liberator of Scotland, was born on July 2, 1274, and was eighteen when Edward decided against his grandfather, the sixth Robert.

Baliol soon found that his position was simply a mockery, that he was merely the tool of the English king, and at last he rebelled, and war broke out between England and Scotland. The masterful Edward marched with an army to Scotland, dethroned Baliol, sent him prisoner to England, and carried off the famous Coronation Stone from its ancient place at Scone. That is the stone which is placed in the Coronation Chair at Westminster Abbey to this day, and it is said by legend—though of course it is not true—to have been the stone upon which Jacob laid his head on the night he dreamed of a ladder to heaven.

In the fighting the two Bruces, father and son, sided at first with King Edward, but then arose the patriot Sir William Wallace, of whom Burns' poem tells us, a great warrior who overran the land, and for a time was so successful against the English that he became "Governor of Scotland" He was defeated, after many brilliant successes, in a great battle at Falkirk, was captured, sent to London as a traitor —which he certainly was not—and executed with horrible cruelty. Bruce was inspired by Wallace, and fought under his banner, and when defeat came he was made to give up his little daughter Margaret—for he was by this time married and a father—as a hostage for his good behaviour. Edward feared to execute Bruce, wishing by cunning and a pretence of forgiveness to attach him again to his side. For some time Bruce kept the peace, but his heart burned within him, and he quietly entered into a solemn compact with other nobles never to rest until Scotland should be freed from the English yoke. However, he once attended Edward's Parliament in London, where he

saw a sight that must have almost maddened him with grief and shame. At Westminster he saw Scotland's dearest relic, her Coronation Stone, and on a hideous gibbet on London Bridge the head of his old leader, the great patriot Wallace.

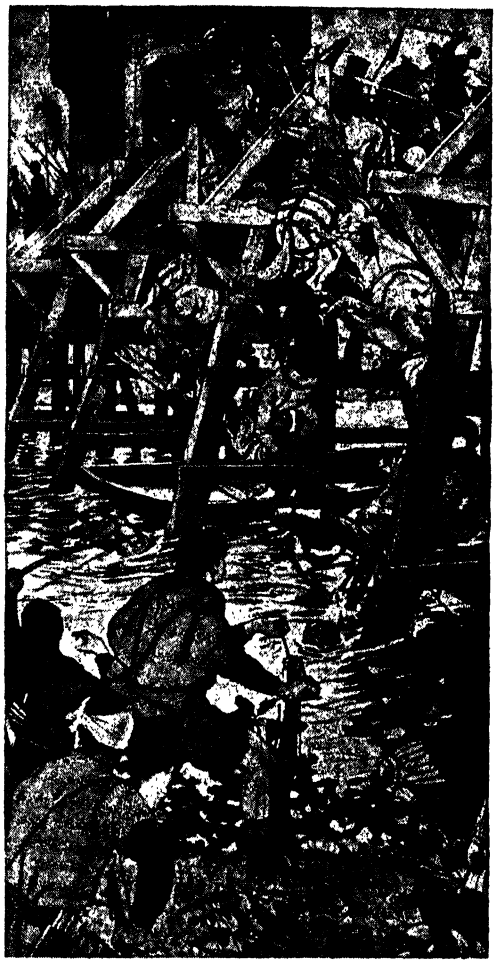
The execution of Wallace was simply murder by law. He was not a traitor to the King of Scotland; he was an enemy of an English king who was seeking by brutal and unlawful conquest to be the Scottish king. Wallace, in all his wonderful battles, never fought in his own name. He was the greatest general of his day, but he fought for and in the name of the unfortunate Baliol, whom Edward had deposed. In Baliol's name he raised armies, called Parliaments together, took lands from his country's enemies and gave them to her friends. He fought Edward I. as one defending his native land against an invader.

When at last his little army was broken by treachery and overwhelmed by the mighty hosts of Edward, Wallace was left unsupported. The English king offered rewards for his capture as if he had been an outlaw in a deer forest. The bribes proved effective, and it was a Scotsman who accepted and betrayed the great Scottish patriot into the hands of his enemies.

Wallace was carried to London, and taken through the streets in mock state, bound upon a horse, with every mark of ridicule and contempt. He was tried in Westminster Hall, standing upon a gallows, and with a mock crown of leaves upon his head. His trial was quite illegal. He was a soldier, an enemy of England, but not a traitor. The very words of the sentence pronouncing his doom showed this. That sentence speaks of Edward having "conquered Scotland," thus showing that Wallace was opposing, not a lawful king, but an armed invader. Wallace could not have expected justice, and he did not receive it, for he was condemned to death as a traitor to a king whom he had never promised to serve.

Nothing could exceed the barbarity of his sentence. It is almost too terrible to read of, and we will say here merely that he was murdered by stages. Part of his body was burned; his head was nailed up on London Bridge; while his limbs were sent to be exhibited on the gibbets of Newcastle, Berwick, Stirling, and Perth. Wallace died a hero, but his spirit lived on. It animated and fired the whole Scottish nation, and is alive today. Most of all was its influence manifest in Robert Bruce's career, to which we now return.

It was his visit to London that determined Bruce and moved his great spirit. While at the English court he received notice that a Scottish noble named Comyn, the nephew of Baliol, had betrayed to Edward the secret of his compact for the redemption of Scotland for the Scots. Bruce then secretly left the court, and hurried back to Scotland. There were no telegraphs in those days, no railways, no steamers,



THE BATTLE OF STIRLING BRIDGE, AT WHICH BRUCE FOUGHT AND WALLACE LED

no coaches, no great highways. It was horseback all the way, everywhere over narrow roads beset with outlaws and robbers, desperate men starved and hounded out of civilisation by the horrible laws of that time.

Bruce hurried to Dumfries and met Comyn in a church there. How the tragedy came about nobody knows, but we do know that the men quarrelled before the

A KING GOES OUT TO SEEK REVENGE AND MEETS THE KING OF KINGS



Edward the First twice invaded Scotland, and so, on his tomb in Westminster Abbey, he is called "The Hammer of the Scots." A third time he led his army north, where Robert Bruce was leading the nation to freedom and independence, and Edward vowed terrible vengeance, declaring that he would not sleep two nights in one place till he reached Scotland. But a greater power than kings stepped in to break his vow, for Edward died almost within sight of the Scottish border.

high altar, and in a fierce fight Bruce struck Comyns a blow with his dagger, and that one of his retainers completed the ill work with a thrust from his sword.

The die was cast. There could be no more indecision, fighting first for and then against the English king. Bruce must be outlawed, or become too high to be outlawed. He gathered together a few nobles and supporters, and, marching to Scone, where the Coronation Stone should have been, was crowned King of Scotland, with bishops to bless him, and noblemen of the highest rank to support him. It was March 27, 1306.

THE TWICE-CROWNED KING WHO WAS STILL WITHOUT A KINGDOM

He was king at last—twice enthroned, but still without a kingdom. That had to be fought for. He was thirty-one, and, his first wife having died, he had married again, this time a lady who was not in sympathy with his ambitions. "You are a summer king; you will not be a winter king," she sneered. She was cruel, but she was right. Bruce was not able to organise support before his enemies were upon him. He was one of the bravest of the brave, a man of enormous strength, great skill, and dauntless courage. But not even the greatest warrior can fight armies alone. He was defeated in three or four battles, owing to the inferiority of his forces. He sent his wife and daughter for safety to a church at Kildrummy, and, so far as is known, he did not see them again until after the battle of Bannockburn, eight years later. Truly, poor Bruce was not a winter king.

He fought with matchless skill and bravery, but was vastly outnumbered, as in a battle at Breadalbane, where he had but 300 ill-armed men against a thousand excellent soldiers. After desperate fighting, Bruce had to order his little force to retire up a pass into the mountains. He himself was the last to go, bringing up the rear and slaying those who came nearest.

HOW BRUCE FACED THREE MEN ON THE EDGE OF A PRECIPICE

At a critical point, between a precipice and a lake, and there was hardly room for his horse to move, three men sprang upon him. One seized his bridle, a second grasped his leg and tried to throw him down the precipice, while the third leapt up behind him on the horse. But his amazing strength and skill enabled Bruce to deal with each of the three in turn, and to escape with his life. A great baron witnessed the feat, and spoke generously of it to the Lord of Lorne, who commanded the army against Bruce.

"It seems to give thee pleasure that he makes such havoc among our friends," said Lorne angrily.

"Not so, by my faith," answered the other; "but, be he friend or foe who achieves such deeds, men should bear faithful witness to his valour. And never have I seen or heard of one who, by his knightly feats, has escaped from such dangers as have this day surrounded Bruce."

By this time Edward, whose friends in Scotland were fighting for him and against Scottish freedom, was himself on the way with a great army to Scotland. He vowed terrible vengeance on Bruce. "I will not sleep two nights in one place till I reach Scotland," he declared. Couriers raced before him to carry his instructions. The wife and daughter of Bruce were seized in their sanctuary and carried to England, where they were kept in cages like wild beasts. Bruce's youngest brother was beheaded, while a cousin was hanged on the same gallows as Wallace, but—thirty feet higher! Two other brothers of Bruce were captured, one of them being the Dean of Glasgow. Edward was so anxious to have them in his clutches that he had them sent on to him at Carlisle. There he had them executed, nailing up their heads on the tower of the citadel.

THE OLD KING MARCHES TO HIS DOOM AND THE YOUNG KING GOES TO HIS PLEASURES

Thus poor Bruce lost three brothers in this horrible march of revenge. But death was upon Edward, and his grim vow was not fulfilled. He died before he could reach Scotland. He decreed that his bones should be carried in a coffin before the army until Scotland was crushed. But his son, Edward II., wavered. He turned back to London, buried the dead king with great magnificence, and abandoned the war for a life of pleasure in his capital.

All this time, with only a handful of friends, Bruce was hunted like a wild beast through the mountains of his native land, and at last he took shelter in the little island of Rathlin, off the coast of Antrim, where, starving in his lonely retreat, he pondered bitterly over his fate. He had been defeated by superior numbers in four battles; his kindred were nearly all murdered; his wife and daughter were in captivity. Surely it could not be right to continue the struggle, he thought, as he lay miserably on his bed of straw, and his mind was made up to abandon it, to become a pilgrim to the Holy Land, and live as a hermit.

And then, as he lay grieving and brooding, the little spider swinging above him caught the king's eye. Six times the spider failed to reach the beam, and then it succeeded. If a spider can fail six times and win at the seventh, surely a king could try again! So Bruce left Rathlin, and crossed to the lovely little isle of Arran, where we still see the cave in which he lay and hid and pondered. He thought about the heroes of old time, of what they had done, and how; and he resolved that he would fight again and win, and consecrate his victory to the service of mankind.

Edward II. was carousing at the English court when Bruce stole out of his Arran hiding-place, and, at a signal from the Ayrshire shore, crept in a little boat across to the Scottish mainland. By that mysterious method of communication which has distinguished so many romantic risings in the Highlands, Bruce got in touch with his friends. Rich man and poor man, noble and serf, leapt to arms at his coming. He raised an army, carried conquest far and wide, defeating the powerful men who once had overwhelmed him. He was everywhere successful. He had a great cause, and he pursued it as a gifted soldier, but with humanity, showing mercy and tenderness to women and the weak, and striking like a giant at his stronger foes.

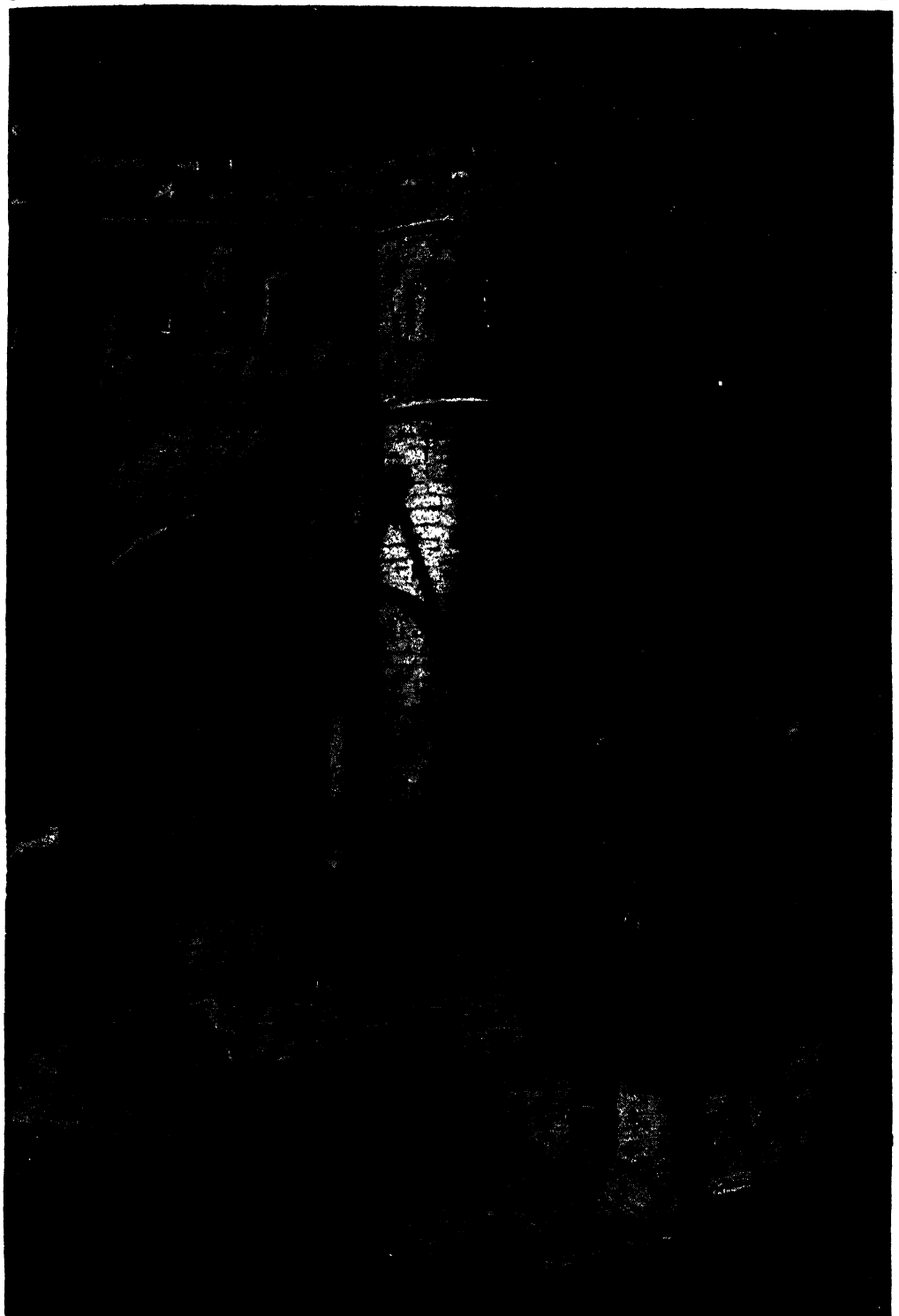
Like the good general that he was, Bruce realised that it was in the castles and fortresses that his enemies made the strongest and longest resistance; he had nothing to fear in the open field. So one by one these were stormed and broken down—all except the strongest, Stirling Castle. This was besieged, and its gallant defender agreed with his assailants that if help did not come to him by June 24, 1314, he would surrender to Bruce.



ROBERT BRUCE ADDRESSING HIS MEN BEFORE THE GREAT VICTORY AT BANNOCKBURN

Edward II., whose son twenty-three years later was to win the victory of Crecy, while his grandson, the invincible Black Prince, was to gain the day at Poitiers—this same Edward now went marching hot-foot to Scotland to keep the appointment the defender of Stirling had made. He was punctual. He reached Stirling two days in advance, so that if he won the battle he would relieve the citadel prompt to time. The English army was a hundred thousand strong; the Scots army was thirty thousand. When they arrived on

HOW SCOTLAND'S HEROES MET ON LONDON BRIDGE



ROBERT BRUCE, STOPPING ON LONDON BRIDGE, LOOKS UP AND SEES THE HEAD OF HIS HERO THERE
William Wallace, the national hero of Scotland, was savagely executed by the English king, and his head set up on London Bridge. Here Robert Bruce came by, and nothing gave him so much grief, or fired him with such determination to free his country from the English yoke, as the sad sight of the head of his hero among those of criminals and traitors.

the Sunday night, some of the English body-guard, led by a famous warrior, Sir Henry de Bohun, tried to force their way into the beleaguered town. They were met by a small number of Scots, with Bruce himself at their head. He was riding a pony, and had gone out to inspect the positions. Seeing Bohun advancing on his war-horse, Bruce rode towards him, and, raising himself in his stirrups, struck him dead with one blow of his battle-axe. That ended the fighting for the night, and the incident created a great impression on both armies. When remonstrated with for running such a risk, Bruce turned the subject by saying, "I have broken my good battle-axe."

THE GREAT DAY WHEN ROBERT BRUCE MADE HIMSELF MASTER OF SCOTLAND

The battle of Bannockburn was fought the next day, June 24, 1314. Bruce had planned the place of battle. He had arranged his small force so that the English cavalry, which was much to be dreaded, could advance only over marshy ground, in which he had caused pits to be dug, and the ground to be planted with hidden spikes. His spearmen he arranged in circles and squares, so that, no matter how they were attacked, they would receive their enemies on a wall of spears. The battle from the beginning went hopelessly against the English, who sustained the greatest defeat that a British army has ever known. The cavalry toppled over one another; the infantry were slain in heaps. At the critical moment of the fight a new host of men appeared behind the Scottish forces from the shoulder of a hill. The English thought it was another Scottish army, and fled in utter ruin. But the supposed army was really a mob of camp helpers whom Bruce had ordered to pour out at a given signal from behind the hill. They were not fighters, but looked like it.

THE HERO AND LIBERATOR AND THE FATHER OF HIS PEOPLE—ROBERT THE GOOD

The battle gave Scotland her freedom. Other kings invaded her in later years, but no king conquered her again, and, though happily she now forms part of the United Kingdom, she became joined to England only when a King of Scotland came to succeed an English sovereign on the English throne. Bruce was finally established on the throne of Scotland after Bannockburn. On the battlefield, before the combat opened, he delivered the address to his army which Robert Burns set to immortal poetry, in those verses beginning—

"Scots wha hae wi' Wallace bled."

Now that times of peace had come, Bruce tried to put into practice some of the lofty hopes he had expressed in his battle speech. He gave great attention to the defence of the country and the administration of laws, to giving equal justice to rich and poor, and to giving it quickly. Above all, he passed a law bidding the people "nourish love and friendship with each other." Great as a warrior fighting his country's cause, he was great as a law-giver, for he was the father as well as the liberator of his country, and his people called him Robert the Good. He suffered terribly as he grew older; he, a king, suffered in those later years from the effects of starvation and privation he had undergone in the days of his exile. Leprosy attacked him and weakened him. But he bore it valiantly. He loved his garden, he enjoyed the folly of his court jester, and he kept a lion as a pet. He encouraged shipbuilding, and was the first man to recognise how important an industry that might become to Scotland.

When he felt that death was drawing near, Bruce called for his friend the gallant Lord James Douglas. He recalled how, in the day of his adversity, he had vowed to go on a crusade to the Holy Land.

THE LAST WISH OF ROBERT BRUCE FOR A QUIET CORNER OF THE EARTH

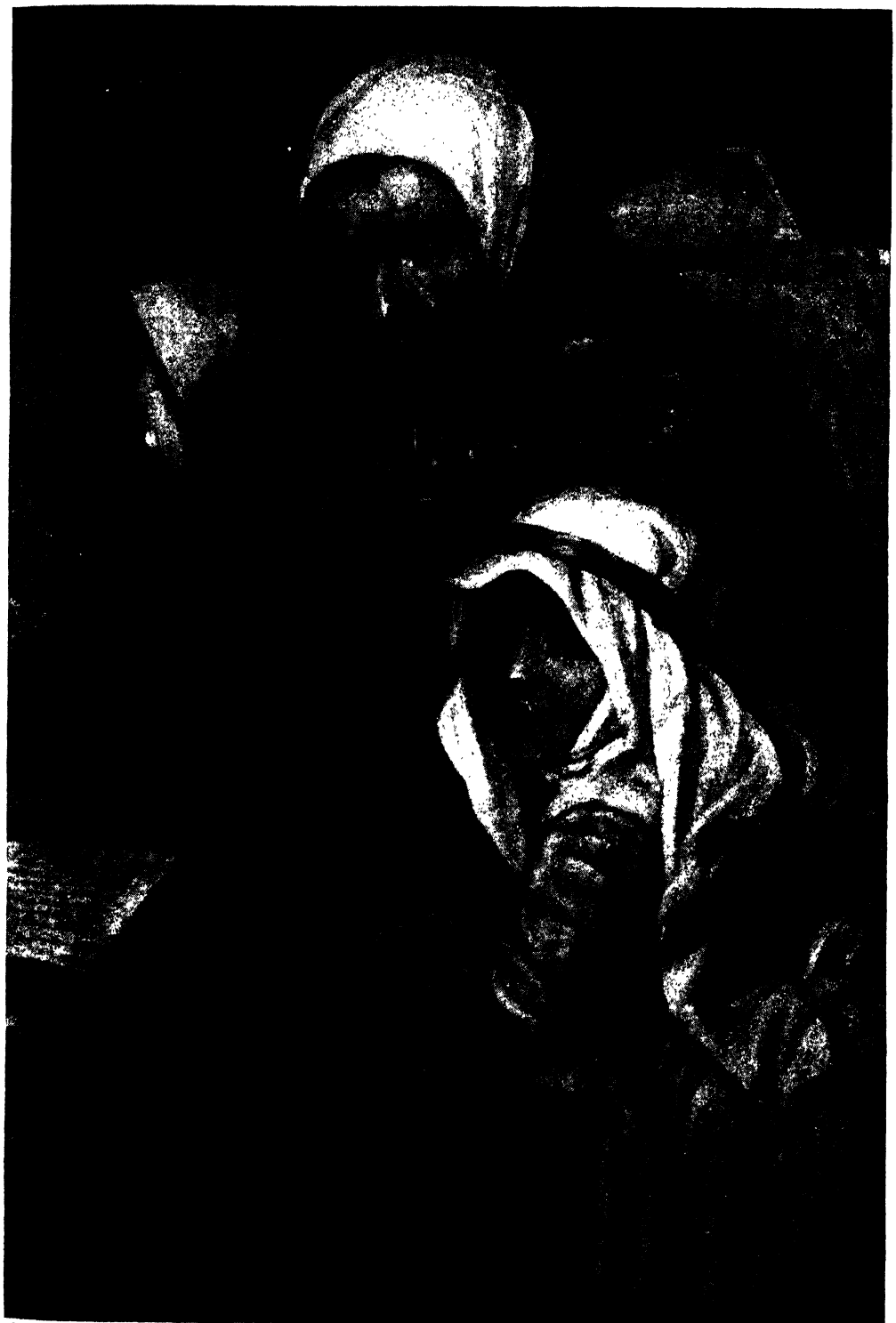
"But now," he said, "since my body cannot accomplish what my heart wishes, I will send my heart to fulfil my vow!"

And then Robert the Good made Douglas promise that when he was dead he would remove the king's heart, embalm it, carry it to the Holy Land, and there place it in the Holy Sepulchre. Douglas promised, but in carrying out his promise he himself fell fighting in Spain. A friend carried the heart back to Scotland, and in Scotland it was buried, with the body of Douglas in Melrose Abbey.

The blood of Bruce still flows in the veins of the Royal Family of Great Britain. His daughter Marjory, restored to him with his chilly-hearted queen after Bannockburn, married a nobleman, and from them descended the House of Stuart, which gave us James VI. of Scotland, who became James I. of England.

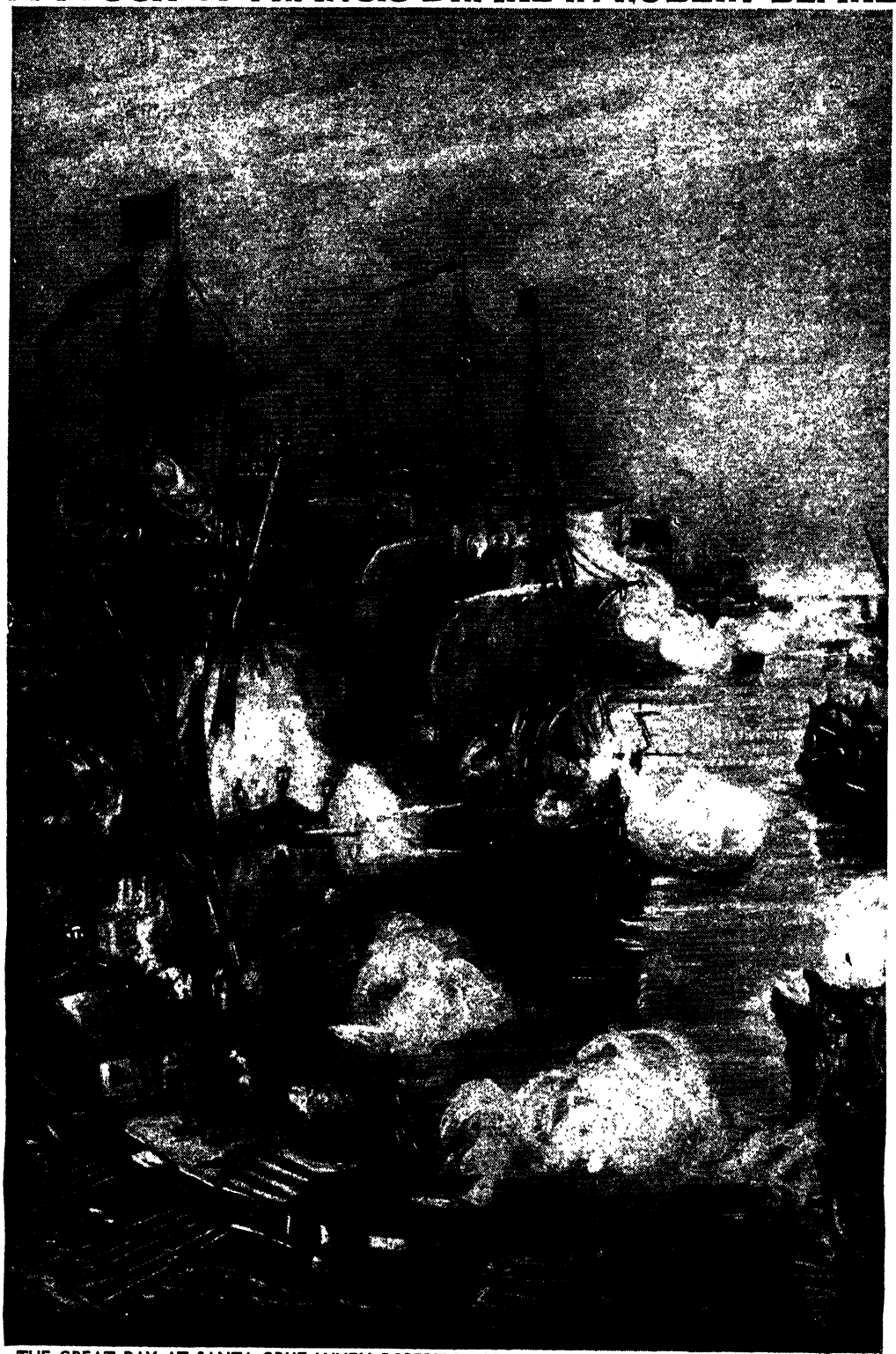
When the bones of Bruce were removed a hundred years ago, the breastbone was found sawn through for the removal of the heart, a pathetic evidence of the faithfulness of Douglas, and of the last sad wish of Robert Bruce, the warrior, that his heart should sleep in what should be the most restful corner of our earth.

ROBERT BRUCE PASSES FROM THE GREAT WORLD



This impressive picture of Robert Bruce, with his son's wife at his feet, shows the king at his parting from active public life. The figures are taken, by the artist's permission, from Mr. William Hole's fine painting of the last public act of Bruce—the presentation of a charter to the citizens of Edinburgh. Two other pictures by Mr. Hole appear on pages 60 and 61.

A TOUCH OF FRANCIS DRAKE IN ROBERT BLAKE



THE GREAT DAY AT SANTA CRUZ WHEN ROBERT BLAKE DESTROYED A SPANISH ARMADA WITHOUT THE LOSS OF A SINGLE SHIP

IMMORTAL ROBERT BLAKE

In the year before Shakespeare died there appeared at Oxford University an undergraduate who was built like a little oak-tree. He was short and stumpy; not a dwarf, but a thick-set, squarely fashioned little fellow, with a rare good head, a pair of shoulders like a giant's, and a neck like Caesar's. Built to wear was he, all his energies packed into little compass, like Nelson's and Napoleon's.

He was a good but slow scholar, for he was ten years at the University. He ripened slowly, but he ripened surely, and the time came when he was obviously fitted, so far as high character and scholarship went, for a Fellowship. He wanted it, but a sleek and symmetrical warden ran his eye over the tough-thewed youngster, decided that he did not look the part, and so let him go his way. So Merton College lost a promising Fellow, but history won a hero, for the tough and angular graduate was none other than that

> ever faithful, vigilant and brave,
> That bold asserter of Britannia's fame,
> Unconquerable Blake.

All our heroes present themselves in idealised form to the mind's eye. They have, in our vision of them, the beauty and balance of a Greek or Roman statue, or the splendid frame and god-like head of a Michael Angelo portrait, or at least the engaging arrogance or languid strength of one of Vandyck's men. But Blake was none of these. He was plain, small, with a frame of oak, a brain of fire, and a heart of sheer gold; and he was the greatest admiral we have ever had, Nelson alone excepted. Yet he never set foot on a warship till he was close on fifty! He was not a great navigator like Drake, but if he did not sail round the world, he did something more important still—he made the British flag feared and honoured and respected wherever ships could sail. He it was who made us a Naval Power; he it was who, snatching us from the position of a third-rate nation, placed us at the very head and forefront of Europe. He it was who defied and helped to beat a tyrannical English king, and then went forth to sea and dared all Europe, and "awed angry nations with the British name."

There was a houseful of Blakes where Robert came from; in the family home at Bridgwater where he was born, in August, 1599, there were twelve little Blakes, all boys, of whom Robert was the eldest. His father was a merchant shipowner, his mother a landed heiress. Robert went to the local grammar school which Queen Bess had founded and endowed half a century before. It was a good school, for they taught him, as well as Greek and Latin, something of navigation, shipbuilding, and the routine of sea duties, in which his father and his father's men were able to help him. It is assumed, from his remarkable knowledge of seacraft, that he may have made voyages with his father's ships; but his first bent was towards learning, and when he went up to Oxford he did exceedingly well, and to the end of his life he wrote Latin and Greek with ease.

While he was still at Oxford his father died, so that Robert had to return to organise the family affairs. He was a good son and a good brother. One other of the boys joined with him in running the family business, and between them they looked after the rest of the big family, and did it so well that Robert in a few years made enough money to leave the family in comfort for the rest of his life. But he was called to sterner matters than merchandise and private gain. He had to decide whether he would fight for a king who had determined to trample on the nation, or whether he would hazard his life and fortune for the people's cause. He risked all for the people and against the king. He

believed the righteous cause of the unmighty should be upheld against all the powers of wrong. He and Cromwell and Fairfax and Hampden had to decide then, as individual men, as Great Britain had to decide in 1914, that they would risk their very existence to secure that justice and mercy and truth should not perish from the earth.

The Ridiculous Ideas that Kings Used to Have About Themselves

It all arose, in reality, out of that monstrous and ridiculous doctrine which plunged Europe once more into bloodshed—the doctrine of the Divine Right of Kings. We have seen what the " divine rights " of the villainous kings of Prussia, Hungary, Bulgaria, and Greece have done for Europe. The same spirit which actuated these enemies of mankind animated the British throne in the days of Blake. He had seen it coming, and had prepared his mind for it while he was still a student. James I. was on the throne for over twenty years of Blake's youth, and with this wretched man the doctrine first became a national issue.

The first monarch to unite England, Scotland, and Ireland under one crown, James was such a jackanapes that under his sway we sank from the high place in Europe where Queen Elizabeth had left us, and became a third-rate State. He concentrated his attention on establishing the throne as above all law. The argument was that a king was absolute ; that God regarded hereditary monarchies with special favour ; that the rule of the succession of the sovereign's eldest son was a divine institution, older than Christianity, older than the laws of Moses ; that no human power, not even Parliament, could affect these rights. The laws of England, this doctrine held, were a gift from the king, to be taken away by him at his pleasure!

Robert Blake Turns Things and Kings Over in his Mind

But Robert Blake, like those who thought with him, turned these things over in his mind. Kings ? Why, was not the very first king of whom we hear given to the Israelites for their sins ? Blake pondered these things, and he looked at the king who professed himself the Lord's anointed, one whom the historian describes as exhibiting himself to the world as " stammering, slobbering, shedding unmanly tears, trembling at the sight of the sword of which he talked so much, and talking alternately in the style of a clown and a windy pedant." If such a man is to claim the rights and attributes of divine authority, then Blake was in favour of government of the people for the people by the people, and of putting all such kings in their rightful place. And so when James died, and his son Charles reigned, and by deceit and cruelty and every form of illegality tried to enforce this doctrine of his father, Robert Blake became one of the first to adventure his life in opposing him.

The Strong Man Whom They Could Neither Break nor Bend

The Civil War, which lasted four years, broke out in 1642, when Blake, merchant, country gentleman, university graduate, and ex-member of Parliament—for he sat in the Short Parliament of 1640—put his Bible into his knapsack and clapped a sword to his side, and set out to fight for his country against his king. We all know how badly the people's cause fared at the outset, how the Cavaliers, trained to arms, triumphed again and again over the undisciplined tradesmen and yeomen arrayed against them. But Blake was an Ironside before the Ironsides as such came into being. You could neither break him nor bend him. Middle-aged, with no gifts of oratory, he had simply enormous courage, adamant fortitude, and real ability as leader and organiser. He first revealed himself at Bristol, which a Parliamentary leader surrendered with undue haste to the Royalists. Blake, however, had charge of a post known as Prior's Hill, and there for 24 hours the Puritan fighter held out when all else was lost.

Prince Rupert, the German nephew of the king, was so enraged that he swore he would hang him. Following this, Blake, with a regiment of West-

ROBERT BLAKE CALLS ON OLIVER CROMWELL



THE LORD PROTECTOR GIVES BLAKE HIS COMMISSION AS GENERAL AT SEA

Country patriots, defended the little open fishing village of Lyme Regis against 6000 Royalists with a regular siege train. Nothing could shake him, not even bombardment by red-hot shot. He held on and held on, and kept his flag flying until the enemy was compelled to raise the siege. Matters were still going badly for his cause in the West when, by a daring move, he plunged into Taunton and snatched it from the Royalists. Taunton had a military importance only in the sense that it was the centre of an important series of converging lines of communications, and he determined to hold it. To the Cromwellians it was their Ypres or their Verdun.

The Parliamentarian campaign in the West had been almost fatally bungled; here was a chance for Blake to give his leaders time to re-establish their fortunes. Taunton was unfortified and unarmed, but Blake was a magazine of military arts and devices and a whole armoury of valour in himself. He defended the place as ingeniously as General Baden-Powell defended Mafeking. He fought an enemy without, he fought starvation and pestilence within. The internal enemy was always with him, but the external enemy, though he had 4000 foot and 5000 cavalry, and got actually to hand-fighting with him in the very streets, was always driven back. All that summer of 1645 Blake defied his foes, and, though there was hardly a building left standing, he kept it to the end. With the defeat of the besieging enemy, Charles Stuart's hopes vanished for ever in the West.



GENERAL BLAKE APPEARS BEFORE TUNIS AND BREAKS THE POWER OF THE PIRATES

Blake was now famous as a great soldier, but after these victories he rested. He took no part in the concluding movements of the land war, nor in the trial and sentence of the king. But when the axe had fallen at Whitehall, and peace had been momentarily established on land, then Cromwell bethought him of this strong, quiet man, and turned him into an admiral. So, at least, we should call him, though Cromwell named him General-at-Sea.

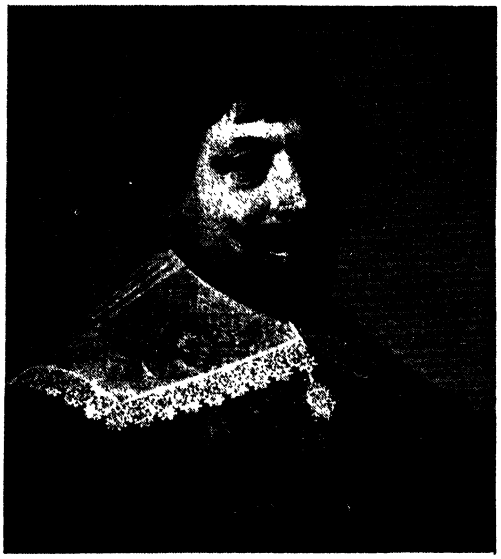
Blake was in his fiftieth year when he first set foot on a battleship. He had practically to create a navy; he had to build ships, he had to reform the Admiralty, to purge it of the corruption and incompetence of the Stuarts. His first mission at sea was to hunt down the man who had wanted to hang him—Prince Rupert. A certain part of the fleet had sided with the Royalists, and the German Rupert was now at their head, playing pirate. With headquarters at Kinsale, in Ireland, he was destroying British commerce by acting towards our non-combatant merchant navy as German submarines have since been acting. Blake, with his little fleet, first blockaded him, but was driven off by a storm, and Rupert and his ships escaped to Portugal, where the king befriended him. Blake demanded their surrender as pirates and murderers, but the Portuguese king would not hear of it until Blake seized nine of his rich treasure ships, as well as the fleet of argosies coming home from Brazil. Thereupon the king no longer hardened his heart, but besought the prince and his men to be gone. Prince Rupert and his ships were eventually chased off the seas, and the prince took refuge until after the death of Blake.

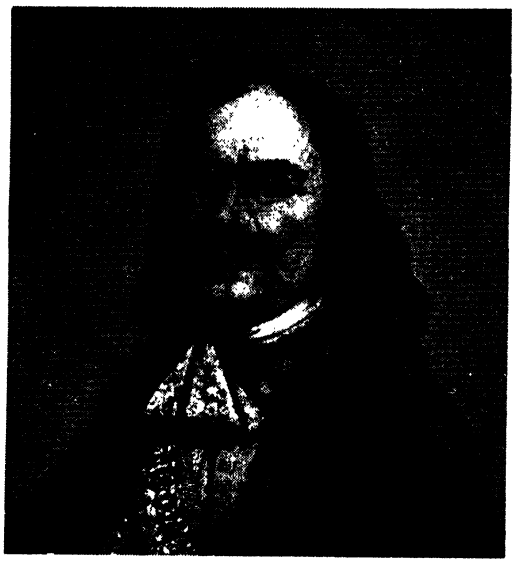


ROBERT BLAKE, THE GREATEST SEAMAN OF HIS TIME
From the painting by Mr. A. D. McCormick

In spite of the glorious deeds of

Drake and his fellows in Queen Elizabeth's days, which had resulted in the destruction of the naval power of Spain, our kings " by divine right," James and Charles, had allowed our Navy so to decline that Holland had by this time become the leading Naval Power of the world. Anybody, up to Blake's time, could flout us. Blake's fights with Rupert in Portuguese, Spanish, and French harbours had brought him in contact with all those nations, and they had been startled by the extraordinary directness and blunt daring of this strange apparition on the seas.





MARTIN TROMP THE GREAT DUTCH ADMIRALS OF BLAKE'S TIME DE RUYTER

But Holland was the Power against which he had now to turn. The Dutch were as good sailors and fighters as we were, but they had been encouraged to believe that they were to take pride of place at sea, and that we were to be dismissed with a word or a buffeting. We had for ages claimed the sovereignty of the Narrow Seas ; we had insisted that every Power should dip its flag to us there ; we claimed a tenth part of all fish caught in our waters ; and though Holland had agreed to pay us £30,000 a year in place of fish, she had calmly avoided her obligation under Stuart rule. But with the coming of Blake and the rise of Cromwell this could not continue. Holland had a better merchant fleet than ours and a much greater navy, and from little quarrels and large quarrels we drifted into war with her.

It was a serious and terrible war, with as much depending on it as depended on the Great War of our own time. Our imperial existence was at stake. The Dutch could not believe that we should seriously dare to challenge them. Until Blake appeared, no English admiral had been seen in the Mediterranean since the last Crusade ! The Dutch were the great sea-carriers of the world, with rich colonies overseas, where they forbade our sailors to appear. Cromwell and his Parliament insisted on the Dutch observing their obligations; they forbade the importation into or exportation from England of any goods save in English ships, and insisted that Dutch ships should be searched for contraband. This was a blow to the pride of Holland, for it meant the creation of a big British fleet. The chief sea-burden of the inevitable war fell on Blake, and he had a foeman worthy of his steel in Admiral Martin Tromp, who had the same measure of doggedness, skill, and unflagging bravery which we expect in an Englishman. Negotiations between the two coun-

tries were still proceeding when, on May 19, 1652, Tromp and Blake met in the Downs, and the thunderbolt fell. Tromp refused to salute our flag, but prepared for battle instead. Blake caused shots to be fired to draw his attention to the matter.

The Sailor Two Years at Sea Beats the Greatest Seaman of His Age

Tromp's answer was a broadside! Then the fleets fell to it, hammer and tongs, and fought till darkness came down, when Tromp had to retire with a loss of two ships. Blake, after two years at sea, had beaten the greatest admiral of the age. That, however, was only the beginning. Within a year he fought four great battles with the doughty Dutch. After the first he sailed up to the Orkneys to capture the Dutch fleet fishing in our waters. He caught them, destroyed the war vessels convoying them, and captured 600 fishing boats; but he sent every one of them back to Holland, without their cargoes, but unharmed. He did not make war on peaceful men as the Germans did. Tromp got wind of his movements, and followed him up north, but a storm kept them apart. The second great battle was fought with the Dutch fleet under two other famous men, De Ruyter and De Witt. They handled their ships finely, but Blake fought too hard for them, sank two ships, captured two more, and put the rest to flight. Then came his only reverse.

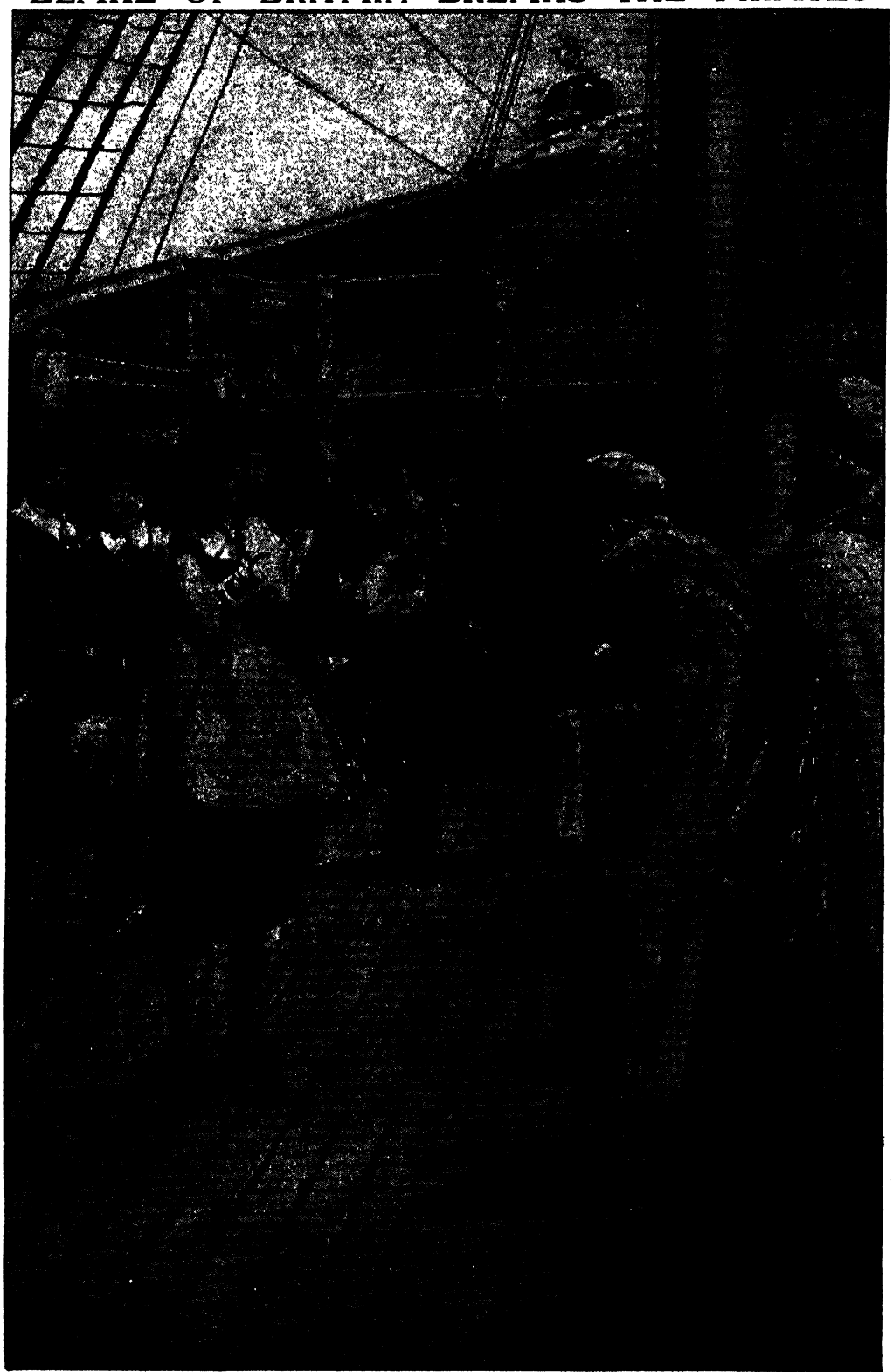
The Terrible Sight that Blake Saw, and the Stuart Traitors

Having twice defeated our redoubtable foe, Cromwell, if not Blake, thought the war was ended, and our fleet was scattered, so that when Tromp led out a great new Dutch fleet in the winter we were unprepared, and Blake was outnumbered by more than two to one in ships. He saw two of his ships captured after a fearful struggle, one burned, and three blown up; but what grieved him most was the fact that some of his captains deliberately kept out of the fight, because, as Blake believed, they had been corrupted with Stuart gold from Holland. Under cover of darkness, Blake drew back to Dover with his dead and maimed. Tromp, hoisting a broom at his masthead, as the legend runs, swept the Channel, which now became alive with Dutch ships that had long kept in their harbours, terror-stricken by Blake's success. It was our hero's only failure, and it taught the country a necessary lesson. He insisted on an inquiry into the conduct of those who had betrayed the country; he insisted on reform and reinforcement; he begged to be allowed to retire and end his days in prayer and meditation—but in the very letter which pleaded for retirement there was also a determination to be out and fighting again. Everything was granted save his resignation.

New ships were commissioned; bad officers were routed out; 1500 soldiers were put on board—the origin of our Marines—and within three months of his one defeat our woebegone champion had regained his sea-legs, and, at the head of over fourscore ships, was merrily scouring the seas in quest of the man with the broom at his masthead.

The Four Days' Battle and the Death of the Unconquerable Tromp

Such a battle there was when they met! It lasted four days, and the fighting was desperate. The Dutch were defeated and driven home. They prepared another fleet. Blake returned to port with a bad wound in the thigh, but in the next battle, ill as he was, and suffering sadly, he came up in time to complete the defeat already promised by his subordinate. Tromp's ship was in all the fighting, and, fearing capture, he exploded his magazine, but blew off only the deck. He himself escaped. Blake was dangerously ill when the final battle came, and in that the victory was won by General Monk. Brave, unconquerable Van Tromp fell dead in the midst of the conflict, so shattering the confidence of his men, who lost hope, and lost the battle, and lost also the naval supremacy of Holland in one and the same hour.



ROBERT BLAKE RECEIVES THE SURRENDER OF THE CORSAIR CHIEFS

The Dutch had lost 1700 ships of all sorts in the war, and, from being the leading naval nation of the world, they had to sue for peace and leave the supremacy to England.

Blake's name now rang through Europe as the first seaman of the world, but there were some who neither knew nor feared him. In spite of all he had done, in spite of all that Drake had done, pirates scourged the Mediterranean and our British seas. The Barbary corsairs, Turks, and Moors driven from Spain, and a host of outlaws of all nationalities seated along the northern shores of Africa, plundered, pillaged, murdered, and captured; they levied blood-money on every nation that sent a ship to sea. Their piracy lasted hundreds of years, and every nation paid them tribute, and subscribed great sums to redeem their captived subjects. They had Cervantes among their prisoners for years. They raided our shipping, the shipping of every people; they even raided our shores. Landing at Penzance, they carried off sixty men, women, and children, and burned British ships in sight of our own ports.

The Pirates Dare Blake to Do His Worst, and He Does It

Such things might pass unchecked in the time of James and Charles, but not in the time of Blake and Cromwell. Blake sailed into the Mediterranean and thundered up to the pirates' stronghold in Tunis and demanded the release of all English captives. The pirate prince sent back an insolent answer, and dared the Englishman to do his worst. Blake burst into the strongly guarded harbour, smashed the castle defences, and burned the pirates' fleet; then, proceeding to the fastness of another pirate gang in Algiers, he impressed him with such a wholesome horror of the English name that he was ready to do all that Blake demanded. In one single cruise this great Englishman mastered the pirates who had terrorised the seas for centuries. He died, but they revived, and the Barbary corsairs were the curse of Christendom long after we had won Trafalgar.

War with Spain followed Blake's other trials, and in this, after a memorable winter cruise, he won an action which alone would serve to make his name for ever glorious. He pursued a Spanish treasure fleet to Santa Cruz, in Teneriffe. The harbour was tremendously fortified, and war vessels guarded the treasure galleons. The Spaniards thought he would not dare to enter their stronghold to fight the fleet and the forts as well, but he did. He held that the British Navy would go anywhere and do anything. After prayer throughout the fleet, Blake stood in with a favouring wind, and took his chance of ever coming out again. There was a terrific fight against the armed castle, against the batteries, against the ships, but although Blake had practically only the same strength as the enemy had in ships alone, he smashed the forts, and sank or burned every Spanish vessel in the harbour. Then he returned to the open sea, *without the loss of a single ship*.

The Amazing Triumph with which Blake Crowned His Life

There had never been such an achievement as this in the whole history of naval warfare, and even a Royalist historian, who hated the Commonwealth and all its works, felt constrained to write: "The whole action was so miraculous that all men who know the place concluded that no sober man, with what courage soever endued, could ever undertake it; whilst the Spaniards comforted themselves with the belief that they were devils and not men who had destroyed them in such a manner."

It was Blake's crowning triumph. His work was ended, and he made his way homeward, the wonder-man of the world, whom even the bitter hearts of the English Royalists could not fail to cheer. But he was dying, worn out with disease and labour, and, praying that he might once more set foot on English soil, he died two hours before his ship reached Plymouth, on August 7, 1657. They carried his body in great state to London, and buried it nobly in Westminster Abbey, saying, in their loving pride:

Till she forget her old sea-fame,
Shall England honour him,
And keep the grass-grave from his name
Till her old eyes be dim.
And long as free waves, folding round,
Brimful with blessing break,
At heart she holds him, calm and crowned,
Immortal Robert Blake.

How the Ruffians at Court Treated the Hero of the Sea

It is well that he should be thus enshrined in history and song, for brutal hands tore his poor bones from their resting-place in the Abbey. The terrible toadies who crowded about the Court of Charles II. at the Restoration outraged this hero's grave, and pitched out of the Abbey the wasted body of the man who had died to make our nation mistress of the seas. Such things the Stuarts did, and such things did Robert Blake, the latchets of whose shoes these Stuart kings were not worthy to unloose.

THE MAN WHO SET THE SLAVES FREE



WILBERFORCE INTRODUCING INTO PARLIAMENT THE BILL FOR THE ABOLITION OF SLAVERY



WILBERFORCE DISCUSSING SLAVERY WITH WILLIAM PITT UNDER A TREE AT HOLWOOD



Men and women being sold by auction in the days of slavery

THE MAN WHO FREED THE SLAVES

WILLIAM WILBERFORCE AND A GREAT CRUSADE

Not many miles from London there stands, in a fine old park, an oak-tree whose fame draws people from afar to visit it. It is age-worn and damaged, needing the skill of man to keep it alive; and sheets of metal cover the wounds caused by the sawing off of many a big dead branch. Oaks were sacred in the time of the ancient Druids, but this oak in Holwood Park, in Kent, is sacred to all humanity.

Two men sat in its shade one day more than a hundred years ago, and talked of the frightful lot of the men and women and children who were in bondage in parts of the British Empire; who were snatched from their native homes in Africa, torn from friends and kindred, carried over the seas, bought and sold like cattle, and condemned to terrible lives. These two men were William Pitt, who was soon to become Prime Minister of England, and William Wilberforce, the great emancipator. The result of that conversation is recorded in the diary of Wilberforce, and these words from the diary have been carved on a stone seat under the oak:

> I well remember, after a conversation with Mr. Pitt, in the open air, on the root of an old tree at Holwood, just above the steep descent into the Vale of Keston, I resolved to give notice, on a fit occasion, to bring forth the abolition of the slave trade.

Holwood is a beautiful seat which Pitt used to visit as a boy, and which he came to own when he grew to manhood. But nothing ever happened in its long history to bring it greater renown than that conversation with William Wilberforce. A new era dawned that day for humanity. Under this tree Wilberforce converted the powerful statesman to the belief that it is vile and inhuman for men to enslave other men and women, to steal them from their homes, to sell them, and to treat them with greater brutality than cattle could bear. We all believe this to-day, but when William Wilberforce took up the cause of the slaves there were very few people who thought slavery wrong.

The capture and sale of slaves was a rich and organised industry, not always confined to negroes. Thousands of white men were sold into captivity. British subjects had been sold upon any pretext as slaves to the planters in the West Indies, and to the English and Spanish colonies in America. Pirates swept the coasts of Europe, carrying people into bondage. Cervantes, who wrote the immortal story of "Don Quixote," was for years a slave; so was St. Vincent de Paul, a man of beautiful character and noble deeds.

Slavery was generally supposed to have died out in England when Wilberforce was born, in the year 1759,

but it still persisted in Scotland, where every coal-miner and salter, down to the end of the eighteenth century, was as much the property of his master as were the horses and machinery of the mines.

But though slavery was supposed to be dead in England, it was not really so. There were still thousands of negro slaves in England, and it required a trial in the law courts to declare that slavery was not to be tolerated in this land. A negro who had escaped from slavery abroad made his way back to England, where he was caught and was about to be carried back to bondage. But a brave clerk who heard of the case brought the matter before a judge, and it was decided by the judge that, no matter what his condition had been abroad, once a human being set foot in England, he or she is *free*.

SIR JOHN HAWKYNS, A GREAT VILLAIN WHO IS CALLED A HERO

We often grumble about laws made by judges instead of by Parliament, but that is one of the most brilliant examples in all our history that judge-made law may sometimes be for the good of humanity. The decision was really not legal. The law was not as the great judge stated it to be, but it expressed the feelings of men, and has ever since held good. Unfortunately, the case did not apply to our colonies. We have a shameful history in slavery abroad, and William Wilberforce was born to redeem us from the disgrace.

Our share in the modern slave trade began with Sir John Hawkyns, whom we popularly regard as a national hero. He was a fine sailor and a great warrior, but England has seldom sent a greater villain from her shores. Spain possessed great colonies in America. Her representatives behaved with such frightful cruelty to the natives that they were unable to do the work their masters set them, so a cardinal suggested that negroes from Africa, being people of tougher make, should be sent.

HOW QUEEN ELIZABETH BLESSED THE SLAVE SHIPS AT THE DOCKS

The advice was acted upon. Hawkyns fitted out ships that he might share in the trade. He used to visit the coast of Africa, steal men and women, or buy them from those friends who were willing to sell them for rum or other articles, then carry them to America in horrible little ships, in which many of them died. On arrival, he sold them as if they had been cows or horses. So great were his profits that famous people in England joined in his ventures. Queen Elizabeth was base enough to lend him ships, and when these were about to set forth on their evil mission she would go down to the docks and bless them. We preached the Gospel at home and sent forth our ships to steal human beings and sell them to the agonies and shame of slavery. That horrible system had grown up through centuries, and was still in full force when Wilberforce appeared in the world.

In the century before Wilberforce was born we had carried to North America nearly three million negroes and sold them into slavery. It is known that in addition to these more than 250,000 had perished and been thrown overboard on the way, so terrible was the manner in which the slaves were carried and so cheap were their lives reckoned by their captors. And while Wilberforce was growing up, England was carrying 40,000 slaves every year across the Atlantic, one half of whom perished on the way or soon after landing.

THE MIGHTY HOSTS ARRAYED AGAINST ONE MAN

Wilberforce was stirred to the depths by these things. When he took up the agitation against slavery he was practically a rebel. The sovereigns and Parliaments of England had expressed approval of the slave trade in twenty-six Acts of Parliament. We had forced slavery upon what is now the United States of America, and George III.—the stupid, blundering king who lost us the United States—caused a letter to be written to the Governor of Virginia—which then belonged to England—saying that the governor, "upon pain of the highest displeasure," was not to assent to any law by which the importation of slaves should be in the least altered or limited. At the back of the king were most of the wealthy men of England, and members of many religious bodies. What was one to do against his king and the greater part of a nation? And what inspired that man to the task?

It was a providential chance which made William Wilberforce the great man that he became, and we shall better understand this by glancing at his life. He was the only son of wealthy parents, and was born at Hull, on August 24, 1759. The family name was really

PEACE AND GOODWILL TO ALL THE WORLD



THE TRUMPETER—FROM A PAINTING BY SIR JOHN GILBERT, R.A.

Wilberfoss, taken from the little township of Wilberfoss, near York, where his ancestors had long resided. The spelling of the name had, however, been altered long before William or his father was born. William, who was a tiny, delicate child, was placed, at the age of seven, at Hull Grammar School, but on the death of his father, two years later, was sent to Putney to an uncle, and put to a school where the system of education was unsatisfactory. It was not that, however, which caused his mother to remove him, but her fear that the boy was being brought up too seriously.

THE TERRIBLE EVILS OF SCHOOL LIFE IN THOSE DAYS

He was sent next to Pocklington Grammar School, in Yorkshire, and here he became a general favourite, not only on account of his charming manners, but thanks to his gifts as a singer. He was sufficiently advanced at seventeen to go to Cambridge University, where all the conditions which could conspire to ruin him were present. He was known to be heir to a large fortune, and that fact served to bring about him flatterers and toadies without number. College life was bad in its effects then and for many a year afterwards. Youths drank and gambled, ran themselves into debt, and unfitted themselves for life instead of preparing for it earnestly.

Wilberforce had sufficient strength of mind not to drift to the bad. He did play cards, it is true; he played cards in after life as a young man about town until one night he won £600 from men who, he realised, could not afford to lose the money, and this turned him for ever against all forms of gambling. But at college he played and drank like the other silly, fast young fellows around him. There was no one to point to another course.

HOW THE BOY WAS FATHER OF THE MAN IN WILBERFORCE

His tutors, who were miserable toadies, whispered to him that there was no need for a man of fortune to study. Study, they said, was for men without means. Besides, they added, his talents were so high that he could easily master subjects which other men must labour to acquire. But, in spite of such bad example and advice, Wilberforce managed to acquit himself with fair credit, and left the university to enter upon a life of pleasure, to enjoy the fortune which had come to him without his ever having had a business care or an hour of labour in his life.

But there was good in him. His heart had been stirred by the sufferings of the slaves while he was still a boy, and at the age of fourteen he wrote a letter to a Yorkshire paper protesting against the traffic in flesh and blood. This vein of earnestness manifested itself in this and other directions after his leaving college, for at twenty-one he determined not to follow a life of slothful leisure, but to enter Parliament. He was elected for Hull, and on going up to London was at once marked out as a society favourite. He became friendly with Pitt, a man of his own age, whom he had met at Cambridge, and four years after entering Parliament he was elected member for the whole county of Yorkshire, the biggest constituency in England. He was a good speaker, and soon made his mark.

In Parliament his life was at the cross-ways. There was just a chance of his receiving some post of honour under the Government. Had he done so, the whole course of history might have been changed. He did not receive an appointment, but, having some leisure, he went abroad with his mother and sister and a good man named Isaac Milner, who had been his teacher at Pocklington.

THE BEGINNING OF THE GREAT REVOLT AGAINST BUYING MEN

With this friend Wilberforce made a close study of religion, and at twenty-five he became a changed man. His whole outlook upon life and its duties was altered. He helped to found a society for the suppression of vice, and to set on foot several movements which have since had an enormous influence in uplifting mankind. He gave freely to all good objects, and he was so generous that in the end he outran his fortune, and at the close of his days had to depend for existence upon the affectionate generosity of his sons.

At about this time public opinion was much stirred over the slavery question. The idea of grappling with it did not originate with Wilberforce. Lord Macaulay's father was one of the first to move in it. Sent by his father to manage a slave estate in Jamaica, Macaulay returned sick at heart, unable to carry on work in such abominable conditions. His father, a God-fearing man, was amazed at the son's decision; he could not understand any person being against slavery. But there were other noble-hearted men pledged to the cause of the

slave, and Wilberforce became their spokesman in Parliament. His position and power at once made him the leader of the movement, and from that time forth, until his health broke down, he stood as the recognised head of the campaign which aimed at destroying this infamous trade.

To-day it would require but a whisper on the subject to set all our hearts aflame, but then the case was different. Men who owned estates in the colonies were nearly all slave-owners. If they did not possess slave estates themselves, they had money invested in them, or were related to people who had such interest. They quoted the Bible in support of their contention that it was right for the white man to steal the black man, or the black man's wife, or sister, or child, and sell them into slavery. The traffic had its advocates in the most unexpected quarters. Mr. Gladstone's father was a slave-owner, and Mr. Gladstone himself, as a young man, made a speech in Parliament which, though not favourable to slavery, pleaded for the men who owned slaves. He hated cruelty, he hated slavery, he said, yet he added, speaking of the slaves and their masters, "Are not Englishmen to retain a right to their own honestly and legally acquired property?" The "property" of which he spoke consisted, not of horses or cattle or dogs, but of human beings with immortal souls!



SELLING SLAVES FOR COWRIE SHELLS
Millions of men, women, and children were sold like this in olden days

A friendship that became dear to Wilberforce at the time of his taking up his crusade was that of John Newton, preacher and writer of hymns, and friend of the poet Cowper. All the world sings Newton's hymns to-day, especially the famous one beginning

Glorious things of thee
are spoken,
Zion, city of our God,

and another still more beloved—

How sweet the name of
Jesus sounds
In a believer's ear!

Well, this remarkable man had been for years and years engaged in the slave trade! He was engaged in the monstrous traffic before he became a preacher; he was engaged in it after he belonged to the Church. He had himself, as a young man, been servant to a slave-trader, at whose hands he was subjected to great cruelty. Then, after his conversion, he became master of a slave ship himself, and, though engaged in the foulest calling on earth, he used to hold religious services on Sunday on the deck of his ship, while slaves below were breaking their hearts and dying of pestilence. Happily, there were other friends to whom Wilberforce could look for counsel springing from untainted sources, and his campaign of mercy now began.

But, brave as he was, Wilberforce did not immediately demand the abolition of slavery; all that he dared at

first to hope for was the suppression of the traffic in slaves. He wished to prevent our ships from stealing men and women and children, and selling them. He said nothing at first about freeing those already in bondage. He struck first at the capture and carrying trade, and his resolve to attempt this was made in the conversation with Pitt under the famous oak in Holwood Park.

The first step gained was the appointment of a Government committee to take evidence as to the African slave trade. Wilberforce's labours on this committee were so heavy that his health broke down, and it was left to Pitt to move the first resolution in Parliament, imposing some restrictions on the traffic. All that that did was, not to lessen the volume of the slave trade, but to insist that the slaves should be treated with a little less cruelty on the voyage from their happy native homes to the scene of their misery and shame.

As soon as he recovered, Wilberforce set to work again, and he made a magnificent speech in Parliament. But all the interests were against him: The slave-owners strained every nerve to thwart him, and managed to cause delay. If they could not defeat him in the House of Commons, then they managed it in the House of Lords. To follow the course of the campaign would be wearisome, for it took nineteen years to gain this great triumph for humanity. Again and again defeated by the selfish men who benefited from the trade, Wilberforce kept unceasingly at work, though sometimes he was so downcast at his failure that he could neither eat nor sleep. The most joyous and affectionate of men, he became almost unknown to his family. His children once cried when brought into his presence, and the nurse excused them by saying, "They are afraid of strangers!" The saviour of millions of other lives was so engrossed in his noble work that he was a stranger to his own children!

Defeat after defeat followed as the campaign went on, and the conditions grew worse. Great wars led to extensive conquests by Great Britain, and the new colonies were speedily crowded with African slaves. All things seemed to conspire against the work. The French nation, steeped in the horrors of their frightful Revolution, declared that all slaves in French territory should be free. Here was an excuse to postpone reform in British possessions. Could England associate herself with a movement furthered by the infamous ruffians of bloodstained France?

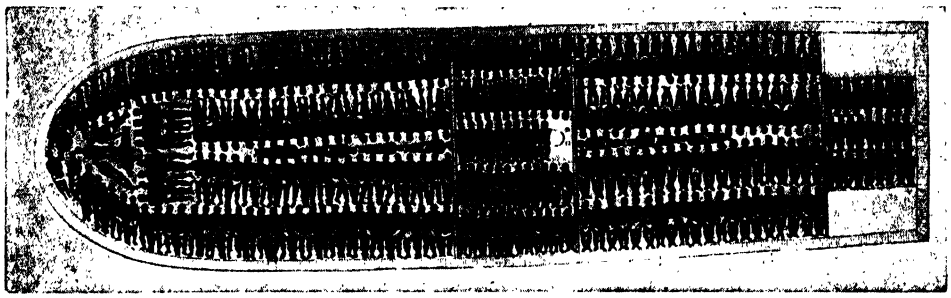


THE JOY OF THE SLAVES ON BEING SET FREE
A scene on Emancipation Day in Jamaica

But at last came the first advance—the passing of a resolution agreeing upon the *gradual* abolition of the slave trade; and after that the gloomy story ran to the end of its first chapter in 1805, when it was declared that no

more slaves should be taken to the new British colonies. In the following year it was further enacted that no British subject should take any part in the slave trade—another great triumph for Wilberforce. The profits on slaves became higher as slaves became fewer, and, to our lasting shame, it has to be said that many English ships, sailing under the flags of other nations, still carried slaves, only to throw the poor wretches overboard if threatened with capture by a British warship.

Wilberforce devoted the remainder of his days to abolishing slavery altogether in British possessions. Ill-health finally drove him out of Parliament, but the seeds of mercy he had sown were brought to harvest in the end. And *three days before his death*, in July, 1833, he heard the glorious news that Parliament had finally passed an Act abolishing slavery throughout the British dominions.



THE LOWER DECK OF A TYPICAL SLAVE SHIP, SHOWING HOW THE SLAVES WERE PACKED TOGETHER

This famous picture did much to shock public opinion and bring about the abolition of the slave trade. Packed in this close way, the law allowed the ship to carry 454 slaves, and she had actually carried 609 on one voyage.

So that the planters might not be the losers the nation paid them £20,000,000 in compensation. That was the happy message brought to Wilberforce as he lay dying. It eased the last hours of his good and noble life, and he laid down his burden happy and contented, poor, almost beggared in money, but rich in spirit and in record of achievement.

Of course, the evil that this country had wrought in forcing slaves on other lands could not soon be undone. Other countries followed suit in declaring that there should be no further trafficking in slaves; but millions of negroes were already in slavery in America, and these remained in bondage. They had been forced upon America against the will of the people; and when the laws of the land were being drawn up, after her separation from Great Britain, it was against the wishes of the best men that slavery was recognised as an institution in the land. But it *was* recognised, and remained to cause the most horrible war in human history. Slavery divided the United States into two divisions. The Northern States, where men of honest heart and noble purpose were in the ascendant, hated and despised slavery. In the Southern States were millions of enslaved negroes, whose labours brought vast prosperity to their cotton-growing masters. And we in this country, who had abandoned slavery, had the misery of knowing that every pound of cotton we bought of America was gained at the cost of misery and degradation to fellow-creatures in chains.

The great American Civil War was the direct result. It began in 1860, and lasted four years. The states which owned slaves wanted to keep them, and to do so they proposed to withdraw from the Union and become independent states. They had got four million slaves, worth from £250,000,000 to £800,000,000, and it was for the possession of these and the profits of their cheap labour that they were fighting. The war cost the United States a million men, who were either killed or made useless for life. But victory lay in the end with the North, and President Lincoln, before he died, had the glory of setting free every man, woman, and child who had been in bondage in America.

It was there that the work of Wilberforce found its crowning glory. He won the battle for the British Empire without bloodshed; but America paid toll for the wrong that we had done in the lives of some of the best and bravest of her sons. The men and women of America, after visiting their graves, pass, when they visit England, to the grand old oak where the scheme for the redemption of the slaves was planned.

RAPHAEL AND HIS PICTURES

FROM all over the world men go to Italy to see the pictures of Raphael, which have hung on the walls of churches and galleries for nearly 400 years; and for many times 400 years the pictures of Raphael will draw men unto them. He comes up to us from a wondrous age, one of a group of three towering men—Raphael himself; Michael Angelo, sculptor, painter, poet; and Leonardo da Vinci, the master painter who was also one of the greatest inventors of all time. These splendid figures, living in the same age, working together or in friendly rivalry, have never been equalled by any other group of artists who lived at one time. Art, which had languished from the time of Greece and Rome, was reborn with them, suddenly to reach a glory never witnessed before or since. What wonderful process of Nature brought these men into the world at such a time? In many respects Europe was poorer in art than the Europe the Greeks and Romans had known. Again and again the barbarians had overrun civilisation, and had destroyed learning and culture to a very great extent. Men had forgotten how to create the beautiful, and had sought only to be strong. Then, suddenly, these three men burst together upon the world, lifted her out of the mire of unloveliness, and raised her to the hill-top, on which they built her a shrine to Art.

We look at the pictures of Raphael and think, perhaps, they must have been given to a great and cultured age, but the age of Raphael was one of limited learning, of old superstitions and terrible ignorance. When Raphael was born the invention of printing was only thirty years old in Europe, and there were hardly any printed books in the world. People lived for the most part in little places like that at which Raphael was born—Urbino, in Italy, little towns under the tyranny or protection of dukes who acted as kings, dependent upon them for their very lives.

It was a small world. Columbus was still poring over his maps, for he had not yet sailed bravely out into the West to look for the East. Men still believed that the world had two flat halves, with water between. They thought the west coast-line of Africa went on for ever until it ended in sticky marshes in which demons dwelt. No one had ever seen the Pacific Ocean. America was not dreamed of, and nobody knew that there was a country called Australia. Men lived in their little towns and worked at whatever needed doing. If they wished to leave for another town, the journey was a thrilling adventure, whether on foot or on donkeys or mules, with bandits lurking in the hedges and silent ways. People were very poor, and for the most part ignorant.

It was out of such conditions as these there emerged these three marvellous men. Raphael, who was born at Urbino on a Good Friday, April 6, 1483, was a good example of the boy of the times. His father was a sort of artistic jack-of-all-trades. He would paint a portrait or a fresco in a church, or he would paint a wall or a door or a fence. He was a writer, too; he wrote a rhyming history of the Court of Urbino, a poem of over twenty thousand verses! He wrote, also, in a modest way about art and artists. Some of his paintings can still be traced at Urbino, where his house is preserved as a museum.

Shut up in these little towns, everybody was more or less interested in art. It was not good art, but it was the best that the men of these little places could produce, and it is a striking thing that the greatness of European art began in these towns, among the little men, before heroes such as Columbus and Magellan and Da Gama and Cortez set out to prove how great and rich and beautiful was the world that lay beyond the frontiers of Europe. Before the wealth of the ancient East and the teeming riches of the new-found West

were opened to the kings and merchants of Europe, art was cradled and grew to superb maturity. The dukes who ruled the cities and the petty principalities were the great patrons of art and learning. It was deemed more honourable to have a beautiful palace adorned with pictures than to fling away wealth upon the pleasures of the chase and sport, upon distant travel, or even upon sanitation and scientific house-building. They built little, narrow, crooked towns, unhealthy for large populations, but they made them beautiful. They were succeeded by men who built towns which were still unhealthy, but not beautiful.

THE TUTOR WHO FEARED THAT HIS PUPIL WOULD SOON BECOME HIS MASTER

In circumstances of this sort Raphael's father naturally wished that his boy should be an artist. The boy's brother and sister died, so that he was the only hope of his father. His mother died when he was eight, and the father, who married again in the following year, passed away when his son was only eleven. The boy had already received some few lessons in art, and had sat to his father as a model, so that we have a portrait of him as he then was, painted, like the only known portrait of Dante, on the wall of a church.

Raphael had, however, already shown surprising talent with brush and pencil, and he was at once put to work in a studio to study art. It was for long supposed that his first master was Perugino. And it is said that Perugino, agreeing to take him, remarked, "Let him be my pupil; he will soon become my master." That he did at one time work with Perugino is clearly known, but it is believed that another artist, one Timeoto Viti, was really his first master. There is no certain evidence on this point, but the paintings done by Raphael at about this time suggest the influence of Viti, inelegant feet and broad, fleshy hands appearing very noticeably in the work of both painters.

THE GREAT IDEAL THAT RAPHAEL STROVE FOR IN HIS YOUTH

This crude and unpleasant feature appears in a very famous work, "The Vision of a Knight," which Raphael painted certainly before he was seventeen. That picture is one of the treasures of our National Gallery. Although not one of his best, it is worth a small fortune, and is wonderful as the work of a boy who could not have had more than four or five years' training.

We know that Raphael was with Perugino by the time he was seventeen, and if we could only analyse Perugino's pictures of this period we should find in them perhaps as much of Raphael as of Perugino. The boy was like a mirror—he reflected every passing style; and as his master had quite a large following for the sort of work he could produce, of course the boy must imitate him. Raphael was not striving for a living, for his father had left enough money to support him, but he *was* striving to be a great artist. So far, however, he had not faith or knowledge enough to strike out a method for himself, but must model his work on the best examples available. The example for the time being was Perugino, and so in this stage we get the Perugino influence grafted upon that of Viti. The result, although it yielded pictures which are now world-famous, was not nearly the best that Raphael had to give the world, yet even at this time his work was splendid. The great painting of "The Marriage of the Virgin," which is now one of the treasured possessions of Milan, is dated 1504, showing that Raphael painted it in his twenty-first year.

HOW THREE IMMORTAL MEN CAME TOGETHER IN ONE SMALL CITY

There had been trouble in Raphael's birthplace since he left home. A very wicked man, Cæsar Borgia, whose equally wicked father was the Pope, had ravaged the land, and driven the reigning duke away; but now the tide had turned, the duke was recalled to his possessions, and Raphael, returning to Urbino to share in the rejoicings, was invited to court, and there met many famous people who were able to help him in his career. Now, Cæsar Borgia, though a wicked and brutal man, loved art, and was the patron of Leonardo da Vinci, whom Raphael was now to meet.

The great purpose of Raphael's visit to Florence was to see the work of Leonardo, and to gather inspiration also from the paintings of Michael Angelo. Artists travel today from all parts of the world to see the work of these two men; we can imagine with what rapture the impressionable young artist from the schools of Viti and Perugino would drink in the lessons they had to teach. He learned at once that there was more in art than he had realised, that in Michael Angelo there was more of strength and boldness than he had mastered, in Da Vinci a greater sweetness and purity of method than his own uncultivated genius had yet succeeded in producing.

Especially notable and interesting was the influence of Leonardo upon the portraits

THE SCENE THAT WILL NEVER FADE FROM THE WORLD



RAPHAEL, STRUCK BY THIS CHARMING SCENE OF A MOTHER AND HER BOYS AT A COTTAGE DOOR, SKETCHED THEM ON A BARREL LID, AND FROM THIS SKETCH PAINTED HIS IMMORTAL MADONNA

which Raphael now painted. There remain to us today very few of Leonardo's works. The greatest is his portrait called "Mona Lisa." This famous picture, which is reproduced on page 31 of this book, inspired Raphael in some of the noblest work he did at Florence. Without pride he felt his own power to do work as great as that of the masters he was studying, and he found in their work a challenge and a call to the best that was in him. In Michael Angelo he found gigantic power and force, and unerring insight into the correct outline of the human form in all its details; in Leonardo he found fire and strength, mellowed by grace. It fell to Raphael to combine the merits of both men, and to add to it the exquisite beauty, charm, and colour which sprang from his own inborn talent.

Leonardo was thirty-one years Raphael's senior, and Michael Angelo was eight years ahead of him, and these two giants had refined and uplifted the whole art of the period. All that was good and worthy in the methods of those about them, and in the work of those who had gone before, was focussed upon their canvases and kindled into splendour by their own imagination. And Raphael brought with him further refining and beautifying of painting.

Although the paintings by these two men were the noblest works he had ever seen, and although there was much in them to teach him, yet the finest qualities which these works embodied made him feel that he, too, had the almost divine touch of the master. A painter of feeble imagination in the presence of a great artist becomes merely a weak copyist; the genius is informed and inspired by what he sees. He derives instruction which becomes to him the raw material of his art, and converts it into treasure imperishable.

So it was with Raphael. In this period of work at Florence his style became nobler and grander, penetrated with lofty imagination. It was during this time that he painted that portrait of himself which all the world goes to see in the Uffizi Palace at Florence. It is a charming portrait, showing us the almost girlish beauty of a tender, poetic nature, with kindness and refinement in every feature, and with that gentleness of outlook which we know he had in life, a look which was a true index to his mind and soul. Everybody loved him; the very dogs in the street would turn and follow him as a protector and friend.



AN ANGRY MOB, BURSTING INTO RAPHAEL'S STUDIO, IS SUDDENLY CHECKED BY THE SIGHT OF HIS PICTURE OF THE MOTHER OF JESUS

We can believe all the stories of the extraordinary affection in which he was held when we gaze upon this portrait. How does the picture compare with the portrait of him which men drew in words? Here is the pen-picture of one who knew him when, summoned by the Pope, he went to Rome: "He was finely proportioned, his person pleasing and elegant, his features regular, his hair brown, his eyes of the same hue, and a sweet and modest expression. Captivating in manner, engaging in address, of a distinguished presence, his bearing was that of a finished, courtly gentleman."

When Raphael arrived in Rome, Donato Bramante, the talented architect, had, under the direction of Pope Julius II., begun the rebuilding of the great cathedral of St. Peter. Julius, although Pope, was a dashing soldier, and, insisting on having his portrait painted in some of the frescoes which were to adorn his building, he said to Michael Angelo, who was showing him with a book in his hand, "I am no scholar; show me sword in hand." He intended St. Peter's to be a monument to his own glory rather than to Christianity. The cathedral caused the break-up of the Christian faith, for the Pope who followed him, Leo X., sold "indulgences" for sin—that is to say, sold permissions by which a man might consider himself free to do wrong without punishment—until the term of his "indulgence" expired. That horrible practice called Martin Luther from his quiet life, and led to the Reformation and to Protestantism. But in the days when Raphael was called to Rome there was nothing of this in sight. The new St. Peter's was barely begun, and it was upon the Vatican, the palace of the Pope, that he was set to work.

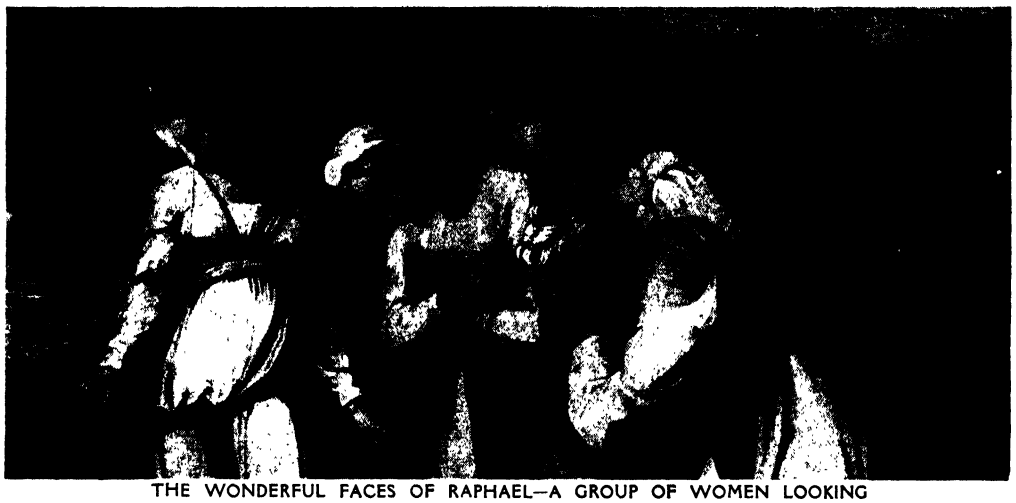


THE GLORIOUS KIND OF FIGURES WITH WHICH RAPHAEL COVERED THE WALLS OF THE VATICAN

Raphael was now reaching the perfection of his art. He was still influenced by

Michael Angelo and Leonardo, but all the time he was drawing farther and farther away from them and evolving a style inimitably his own. Michael Angelo was frankly jealous of him for a while, recognising that some of his own genius had gone to the making of the mighty works that the younger artist was producing. But the great man was magnificently fair, and Raphael once relied upon him at a time of need. He had done some work at a church in which a wealthy merchant was interested. The task consisted of four frescoes, and the sum agreed upon was to be paid in two instalments—500 scudi at the start, and the rest when the work was finished. A scudi would represent just about a dollar of our money. When his task was completed, Raphael claimed the balance due to him, but the merchant, artist was superior to the man, and not even a tinge of professional jealousy could make him decry the glories of Raphael's work. So the merchant said to his treasurer, " Pay Raphael 300 scudi more, and behave very politely to him, otherwise he may demand payment for the drapery as well as the heads, and utterly ruin me."

The last twelve years of Raphael's life were spent in Rome, and there his genius flowered with a splendour such as the world has not seen before or since. Pope Julius was greatly impressed with his work, and, comparing it with that which already decorated the walls of his palace, bade him destroy what had been done and cover the walls with his own creations. The tender heart of Raphael revolted at the thought of destroying the loving labour of other men, and where he was com-



THE WONDERFUL FACES OF RAPHAEL—A GROUP OF WOMEN LOOKING

feeling that he was master of the situation, as the paintings were finished, declared that the sum already paid was sufficient.

Now, Raphael was very modest in his demands, but he would not submit to the bullying of a rich cheat, and he suggested that the opinion of some independent person should be taken. " Very well, we will appeal to Michael Angelo," said the treasurer of the church, who knew that Michael Angelo had some feeling against Raphael. They did appeal to Michael Angelo, who went with the treasurer to see the paintings. The four represented a series of people of four different nations receiving the Gospel. The great artist glanced at one of the portraits. " Why, that head alone is worth a hundred scudi," he said, adding, after a while, " and the others are certainly not worth less." The pelled to obey orders he simply re-painted the old subjects, so that, though the work was his, the original design remained. Now, among the frescoes which he was ordered to replace were some by his old master, Perugino, and these Raphael refused to touch. They remain to this day upon the walls of the Vatican, a loving pupil's tribute of affectionate respect to a master who was vastly his inferior.

Probably no other man ever worked so splendidly and so hard as Raphael worked in these last twelve years of his life. The number and description of his paintings would fill a book. He put his whole strength into his labours, frescoes, altar-pieces, portraits, historical scenes, easel pictures, designs, and sketches without number. In addition to his work for the actual walls and ceilings of the Vatican,

and his portraits and pictures for noblemen's palaces, he designed a series of superb cartoons from which to make tapestries for the Vatican. There were eleven of them. Although only done on paper in distemper, they were so fine that a special factory was opened to work from them. By a remarkable chapter of romances seven of them afterwards became the property of the British nation, and so remain today. They had the most extraordinary adventures—were lost and found again; were in danger from the Puritans and were rescued by Oliver Cromwell; were lost again, and found once more after scores and scores of years; and finally were placed for safe keeping in the South Kensington Museum.

Hundreds of artists have drawn inspiration from these simple drawings, and the birth and rise of English art may fairly be said to have been closely associated with their coming to England.

Raphael's fame spread far and near, and artists in other parts of Italy could not believe the things they heard concerning his wonderful work. There was at Bologna at this time a worthy old artist named Francia, whose work was loyally championed by his fellow-citizens, no matter what the people at Rome might say about this youngster Raphael. Francia used to write to Raphael, and longed to see some of his work, and at last the opportunity came.

Somebody at Bologna thought he would give this Roman Raphael a chance, and ordered him to paint an altar-piece for a chapel. Raphael, when the work was done, wrote to Francia as a friend, asking him to see the picture put up, and, if he noticed any defect in the work, to correct it for him. That was typical of Raphael's modesty. The picture duly reached Bologna, and Francia took it carefully to the light, withdrew it from its covering, and then stood breathless before it. He placed it faithfully in the best light, but his heart was broken. At once he realised that the



RAPHAEL'S PICTURE OF THE ANGELS SETTING PETER FREE FROM PRISON

RAPHAEL'S LAST GREAT GIFT TO THE WORLD



THE FIGURE OF JESUS ASCENDING FROM THE MOUNT OF TRANSFIGURATION—FROM THE CANVAS ON WHICH RAPHAEL WAS AT WORK WHEN HE DIED

saying of the world was true: there was a greater artist than poor Francia, and his name was Raphael. Francia was not jealous or angry, but he was overwhelmed. He never painted again. He took to his bed, refusing to be comforted, and died in a few days.

THE DAYS WHEN RAPHAEL WAS TOILING LIKE A GIANT IN ROME

Raphael was toiling like a giant in Rome, for at the death of Bramante he was made chief architect of St. Peter's. Work flowed in upon him, and he had to start a school and train pupils to assist him. He had about him from time to time forty, fifty, and even more of the most promising young artists in Europe. Young as he was, he ruled his own little court. Whenever he appeared in the streets, a crowd of loving disciples would follow him. Princes, scientists, poets, and artists were his friends; he was a sort of uncrowned king of Rome. But success did not spoil either him or his work; he was always loving, gentle, modest. He absorbed the learning of his time, and expressed his knowledge in his pictures. His intercourse with princes of rank and mind revealed itself in the glory and richness of his work. But he really had more to do than any one man could accomplish. His pupils had to help him enormously, and did much of his work for him, leaving him to put in the finishing touches with a few of those marvellous strokes which gave genius, beauty, animation, and grace of colouring to the whole.

THE LAST GREAT PICTURE THAT RAPHAEL GAVE TO THE WORLD

In course of time his enormous output caused a few jealous people to say that not Raphael, but his students, were the creative geniuses, and this so stung poor Raphael that he set to work on what he designed to be his unaided masterpiece, a work which should show that his powers were not on the decline, but still in the bloom and freshness of health and vigour. The picture he painted for this purpose was his great "Transfiguration," which is now to be seen at the Vatican. Alone he worked at it with all his old ardour and loving enthusiasm; but he was not to finish it. One day, when it was near completion, he was called to see the Pope at the Vatican. He rushed away, intending to return to his studio at once; but he was kept waiting for the Pope in a draughty corridor, and caught a chill which sent him straight to bed. He felt that he was about to die. He summoned his friends, made his will, and within a fortnight he was dead. He died on the anniversary of his birth, Good Friday, April 6, 1520, so that he was only thirty-seven years old. His death was a terrible loss to the world. His career as an artist lasted only twenty years, yet in that time he painted about 120 pictures of Jesus and the mother of Jesus, about 80 portraits, nearly 200 easel pictures, about 600 studies and drawings, and over 100 frescoes and other works for the decoration of churches and other buildings. In addition to this he executed sculptures of exquisite grace, designed a series of noble buildings, was master architect for St. Peter's, and superintended the excavation of precious monuments buried in past ages, so that he made old Rome live again in her forgotten treasures, and decorated her as a bride.

STORIES OF GREAT RAPHAEL PICTURES NOW HANGING IN THE GALLERIES

His pictures are scattered all over Europe today. One, representing St. George, the patron saint of England, is still treasured as a holy relic, with a lamp burning before it night and day, in the hermitage of Peter the Great at St. Petersburg. Another was worshipped as a sacred, miracle-working altar, to which people went to pray for things that they desired.

A very famous picture is "Christ Bearing the Cross," now in the museum at Madrid. That was sent by ship to Palermo, where it was to be installed in a church. The ship was wrecked off Genoa, and every man on board was drowned, but the picture floated ashore in its case. Its discovery caused a great sensation, and the pious monks, realising its value, sent a deputation carrying it to their brethren at Palermo. One of Raphael's cartoons was so valuable that it was cut into sections for distribution among his heirs. One piece found its way to a London pawnbroker, and was ultimately hung in our National Gallery. When Napoleon invaded Italy he stole from her the majority of her most famous pictures. At his final overthrow these were found in Paris. England then did a very noble thing—she paid £30,000 towards the cost of restoring the stolen pictures to Italy.

The charming story of the events which led Raphael to paint the noble picture which became famous as "The Madonna of the Chair" has been told again and again. One work, of Mary and Jesus, deserves always to be remembered, for it was probably the means of saving his life. One day, while he was quietly at work in Florence, a frantic mob, inflamed by some foolish story that he was an enemy of the

Florentines, burst into Raphael's studio, evidently intending to kill him. They found him at his easel, and fell back repentant as their eyes fell on the lovely picture of Mary and the Child Jesus. They could not believe ill of a man engaged in such a work as this, and they left him quietly.

Crowds of people who had known and loved him passed through the chamber in has learned from Raphael, the boy of Urbino, who brought a new conception of art and loveliness into the world.

Raphael never married, but he was not without the love of good, pure women. The story is told of a simple girl named Margarita, almost a child, upon whom his affections centred. He did not woo her or ask her to marry him. He was content to



THE LAST DAYS OF RAPHAEL—CATCHING A CHILL WHILE WAITING FOR THE POPE IN A DRAUGHTY CORRIDOR, HE CAME HOME TO DIE

which Raphael died. Beside him stood his last canvas, "The Transfiguration," the picture at which he had been working when death for ever stayed his hand. It was carried in the great procession by which his body was escorted to the tomb in the Pantheon, the oldest complete building still standing in the world. All the world love her, not to harness her to the worries of a household. We may hope that this pretty story is true, but we do not know. What we do know is that Raphael actually was betrothed to a cardinal's daughter. They never married, however, for the cardinal's daughter died before him, and to this day she sleeps beside him in the Pantheon.

ARCHIMEDES THE GREAT

TWENTY years before Caesar sighted the white cliffs of Britain, his great but false friend Cicero was wandering amid the ruins of Syracuse, the ancient capital of Sicily. Amid a tangle of briars he came suddenly upon a sight which made his heart stand still.



HIERO OF SYRACUSE. KING & FRIEND OF ARCHIMEDES

Before him was a lowly tomb, and upon it a cylinder enclosing a sphere, with a verse honouring the man within the tomb for having calculated the exact measurement of a cylinder and a sphere. A wayside grave among relentless, obliterating weeds, with a tale of cranky calculations such as that—why should an orator and philosopher pause before this crazy relic? Only because of this—in that grave lay Archimedes, the most tremendous figure of his age.

Though the bones of Archimedes have for many a century been resolved into the dust, his spirit and learning and teaching are with us today; as long as language and literature endure they will never fade.

Every time a soldier brought his trench catapult into action for throwing a bomb to protect his lines from the enemy, he was unconsciously calling Archimedes to his aid. Every time the spiral pump is turned to draw water from the Nile, men are using the device of Archimedes; every time an endless screw revolves in the driving axle of a motor-car, or in a ship, or in machinery, Archimedes is *represented* there. Every time a submarine or battleship is planned, the law of Archimedes must be consulted. All the great discoveries revealing the mathematical laws of the universe trace back to his pioneer work. The fellah growing corn and sugar and cotton in Egypt, the miner bringing coal out of the bowels of the earth, the designer of battleships and merchant argosies, the astronomer measuring the distances of the stars and weighing their luminous bodies—every one of them owes reverence and devotion to the dead man in that tomb at Syracuse which hungry Time so long ago consumed.

Born about 287 years before Christ, slain and buried when he was 65, Archimedes, great and mighty as an intellectual force in that far-away day, remains among the most modern of men. His discoveries and inventions have become completely woven into the common knowledge of the world, and we do not know when we are utilising him. If there had not been this one sublime Archimedes, we should have needed whole academies of lesser men working through the ages to achieve his work. His work was fundamental. He can hardly have invented the lever, for the glorious architecture of his native Syracuse, and the dream-like splendour of Greece before it, show that the lever must have been in constant use. But who save he fully understood its laws and powers? "Give me somewhere to stand," he said to his king, "and I will move the earth." That is what he would do with his lever.

The giant minds of Greece had done wonders before his day in scientific work, but they had not gone far enough in figures for Archimedes; he added to the Greek numeration so that he was able to calculate how many grains of sand it would take to fill a sphere equal in radius to the distance between the earth and the stars. We all know that if a scale-beam balances unequally—long on one side, short on the other—we must have a heavy weight on the short side to balance a light weight at the end of the long side. It is a commonplace even to a child at school, but Archimedes was the first man to reveal it. He did it by mathematics, and his discovery enabled him to

carry out a brilliant series of investigations into the centre of gravity of different geometrical forms. In a thousand ways Archimedes is at our elbow every day. We work and think according to rules and laws which seem to be part of the nature of things, as natural to us as breathing; but Archimedes discovered them.

Where do we find him, in what epoch, in what company of men? We find him at Syracuse, the Greek colony which men from Corinth had founded. The blood of the line of Archimedes may have run in the veins of the Corinthians whom St. Paul knew in later days. He lived in the age of Euclid, two centuries before Hero of Alexandria, who invented the first steam turbine for his amusement. The great school at Alexandria was the intellectual centre of the world. Whether Archimedes was there as a student we do not know. It is possible, for we do know that he corresponded regularly with students of geometry there; and we know that he visited Egypt, from the fact that he invented the spiral pump, or the Archimedes screw, as it is called, for the use of the cultivators of the banks of the Nile. Who he was, of what family, we cannot tell, but it is supposed he was a kinsman of Hiero, the King of Syracuse. Syracuse, which was now 500 years old, had defeated Athens in a memorable war; she had little colonies of her own in different parts of Sicily; and after many different rulers, good, bad, and indifferent, she had Hiero in the days of Archimedes. A wise king he was, who encouraged learning with liberality, adorned his domains with noble buildings and schools, fostered a wide-spreading commerce, and gave the people good laws. Syracuse was at the pinnacle of its glory, one of the loveliest cities on earth, and she was crowned by the splendour of the mind of Archimedes. Her only fear was that she might be imperilled in the struggle for world-mastery which was now ripening between Carthage and Rome—the warring Powers which were set on the possession of Sicily, of which Syracuse formed part; and Syracuse wavered in her allegiance, leaning first to one Power and then to the other, until, when Archimedes was 24, the king concluded an alliance with Rome.



HOW THE ARCHIMEDES SCREW WORKS

All was peace and prosperity, and nothing fretted the smooth currrent of the life of our discoverer. He was free to carry the world along with him in his astounding calculations. We know how to measure the dimensions of spheres and cylinders now, because he taught us, but it was all new ground then, and his mind grappled with problems which had previously baffled the world.

The good king loved him, but could not understand his work. "Come down from the clouds," he would say. "Leave abstractions and come to realities." You see, it is the old story—the intolerance of pure science by the man in power. So Hiero argued with Archimedes: "Do something practical."

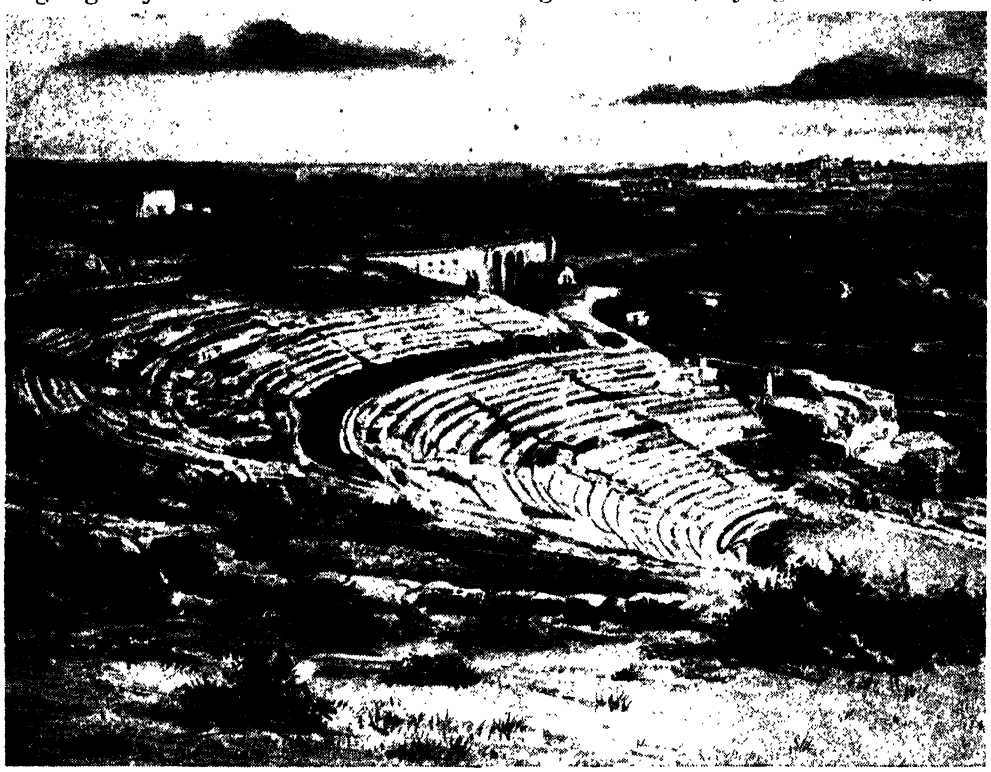
Archimedes hated such thought as ignoble and unworthy of science. He could invent things, he said, but the practical effects the king demanded—why, they were only the

ARCHIMEDES DEFENDS HIS THREATENED CITY



ARCHIMEDES DIRECTING THE WORKING OF HIS WONDERFUL DEFENCES OF SYRACUSE

amusements of geometry, not the serious things of life. Hiero challenged him to show what his science could do, and then it was that Archimedes declared that, if he could have another planet to stand on, he had command of power great enough to move our earth wherever he wished. " Give me proof," said the king ; " move something less than the earth ; move a great weight by a smaller power." And so the philosopher caused one of the king's galleys to be drawn on shore



A GREEK THEATRE IN WHICH ARCHIMEDES MUST HAVE WATCHED THE PLAY—WITH THE MODERN TOWN OF SYRACUSE IN THE DISTANCE

with many hands and much labour. Then he manned her, loaded her with cargo, and gave a demonstration of the powers of machinery. He attached a rope to the distant ship, wound what we may suppose to have been some sort of a windlass, and drew the ship up to him single-handed—in as smooth and gentle a manner, we are told, as if she had been gliding over the sea. One of geometry's amusements with a vengeance ! The king, having seen this, wanted more. Archimedes must devote himself to more practical things, he said. He must make engines of war for the defence of the city.

Archimedes complied, with a groan. He did make engines of war, such as nobody else had ever conceived. But he scorned it all. He preferred his studies. His friends would rally him, but he would only laugh at them. They must have loved him, for they would force him to eat the meals he neglected, and, laying firm but gentle hands on him, they would carry him off bodily to the baths and make him take rest and recreation. But as they anointed his body with fragrant oils, in the manner of the times, his mind would be far away, and, to their despair, he would suddenly dip his fingers in the sand and smear his body with diagrams, working out some problem upon which his mind was set. A desperate fellow was Archimedes.

But the bath to which they had to carry him so often for his good was

the scene of a mighty triumph for learning. The king had got a new crown, and he was suspicious that the goldsmith to whom it had been entrusted had robbed him by mixing silver with the gold. He submitted it to Archimedes, and Archimedes, full of the problem, went to his bath. The bath was so full that as he stepped in the water overflowed. A simple thing, we think, but Archimedes, as he leaped out, ran naked through the streets, crying " Eureka ! Eureka ! " " I have found it ! I have found it ! "

What had he found ? He had in that moment discovered *the law of specific gravity*, and found that a body plunged into a fluid will displace a bulk of fluid equal to its own bulk. That is to say, a pound of gold would displace a certain quantity of water; a pound of silver would displace a different quantity, because its density is different and the place it occupies in the water is, of course, different. Therefore gold mixed with silver would not displace the same quantity of water as the same weight of pure gold. Here, too, was a great law applying to all floating bodies. Our naval constructors, guided by this law, can build ships as big as they like, make them of wood or iron, or steel or concrete—they will all float buoyantly, provided that they are not heavier than the volume of water they displace.



THE TOMB OF ARCHIMEDES, BEFORE WHICH CICERO STOOD WITH WONDER

Good King Hiero died in 215 B.C., when the second Punic War was raging. Hannibal had crossed the Pyrenees and Alps into Italy, and Hiero, true to Rome, had furnished her with men and money. But after his death the government was swayed by two partisans of Hannibal, and succeeded in carrying Syracuse over to the side of Carthage, to make war against Rome. Rome sent Marcellus with an expedition to besiege the city by land and sea, and Marcellus arrived confident of victory. While his army attacked from the landward side, his fleet drew up before the sea walls. He had sixty galleys, each with five banks of oars, and filled with the latest Roman devices for siege warfare on water. Eight of his galleys were lashed together to form a platform for a mighty engine to be reared above the city walls, and he had many batteries of weapons to discharge stones and other missiles at his enemy.

Then the dead King Hiero was justified. The war engines he had persuaded Archimedes to erect in time of peace were brought into use in time of war. Archimedes treated the attacks of Marcellus with scorn. He placed his engines in position, and there followed the strangest battle ever seen. Out came his " amusements of geometry " ! The land forces, pressing to the assault in great numbers, were suddenly struck dumb with terror as great catapults appeared silently above the walls and shot out huge stones and masses of lead, of darts, spears, and other missiles. Engines such as they had never seen, massive, huge, and terrifying, smashed down their defences, mangled men and machines, and disappeared out of sight behind the walls, only to reappear and shoot forth violence with greater effect than before. The men on foot fled in horror.

But the galleys, the flaunting galleys with their multitudes of men and their masses of material—what of them ? They were faring more terribly than the infantry, for here Archimedes flung up his master " amusements."

Great machines suddenly reached over the walls. Huge beams plunged over the battlements, darted down on the galleys, and sank whatever they hit. Iron grapples were let down like thunderbolts. They gripped the galleys by prow or stern, held them, pulled them up endwise into the air, and then let go, flinging the ships nose-first or stern-first into the water, so that they sank like loaded darts to the bottom of the sea. Other galleys were seized by ropes and grapples, drawn towards the shore, and, after being whirled about with enormous power, were dashed upon the rocks projecting below the city walls and broken to pieces, with their crews destroyed. Some of the ships were lifted bodily into the air, twirled like floats on fishing lines, and swung about till the men were all thrown into the water. Then, on the engine letting go, the ships were dropped and dashed to fragments on the stones.



THE LAST HOUR OF ARCHIMEDES—THINKING OUT A PROBLEM WHEN THE ROMAN SOLDIER BURST UPON HIM WITH HIS SPEAR

A crushing defeat was inflicted on the Romans by sea and land. Marcellus, in great fear, drew off such galleys as had escaped destruction, ordered the retreat of the survivors of his land forces, and called a council of war. Never in all the battles of the world had there been anything like this. The engines of Archimedes were

new things, unimaginable by all but Archimedes, weapons seemingly too terrible to be made by men. The only thing possible for Rome was a siege ; assault was out of the question.

So a siege it became. The enemy dared not go near the walls, but they could cut off supplies. The galleys anchored, the men sat down—for three years they sat before the walls of Syracuse. What of Archimedes? Well, he had done his part. Geometry's amusements had had their share, and soundly trounced an enemy who presumed to interrupt a mathematician's studies. Now geometry was to come into her own again. He went back to his studies. How he fared during the years of privation we do not know. He comes before us again on a fatal day. The persistent Romans, aided by treachery, came into the city at last. Successful after three years of weary waiting, they rushed tumultuously through the city. Archimedes sat in his room, fathoms deep in thought, working out diagrams in the sand on the floor. An excited Roman soldier burst in upon him.

" Don't step on my circle ! " cried Archimedes, pointing to his diagram.

The soldier may not have known the man before him, for Marcellus had ordered that Archimedes should be spared. The common soldiers of the Roman army looked upon him as more than human, and we must imagine that the soldier did not know Archimedes. At any rate, caring neither for the man nor his diagrams, the soldier slew him with his sword.

So fell Archimedes, snatched in an instant from the work to which he had given almost his whole precious life. He had lived well, he died well, unmoved by danger as unmoved by praise. Marcellus mourned him and turned with horror from the soldier who had killed him. He was merciful and generous, and he would have delighted to save the greatest man of Syracuse. It must have been due to his clement action that the friends of Archimedes were able to bury him, as he wished to be buried, with the sculptured cylinder and sphere for his monument, and the little verse beneath. Nothing about his war engines, nothing about his unparalleled defences of the city. The engines were " geometry's amusements " to him. He left no record of them in his writings, and their history comes to us from other hands.

Now we understand why Cicero held his breath at stumbling across the lonely grave in the ruins of Syracuse. He was in the presence of all that remained on earth of one of its mightiest sons, Archimedes of Syracuse, Archimedes of the world, Archimedes of the ages.



THE NOBLE BUILDING IN SICILY THAT ARCHIMEDES SAW—A RUIN IN TAORMINA

THE LITTLE GIRL LORD NELSON LOVED



The portrait of his little daughter which Nelson had with him at Trafalgar



Nelson in his cabin on the eve of the battle of Trafalgar, where he died



NELSON'S FAREWELL TO HIS LITTLE DAUGHTER HORATIA



Where Nelson played as a boy: Burnham Thorpe Rectory, Norfolk, the birthplace of our greatest sailor

THE MAN WHO SAVED ENGLAND

LORD NELSON, THE LITTLE GIANT OF THE SEA

WHEN the artist paints his ideal of a hero, he presents some majestic figure, tall, broad, muscular, commanding, in which we recognise authority, power, and strength of mind and body. That is, perhaps, the sort of figure that creeps into our minds as we think of some hero of our own. When we think of Nelson, and remember that but for his genius and dauntless courage our land must have come under the heel of the greatest tyrant of modern history, do we not picture a giant, splendid yet terrible?

Yet, in truth, Lord Nelson was quite a tiny man, very short, very thin, and from early boyhood to manhood he hardly ever knew what it was to be well. He was one of the three giant warriors of his age, but both he and Napoleon, whose power at sea he utterly destroyed, were little men, and Nelson was the smaller of the two.

Yet Nelson did for us the greatest thing that a sailor has ever done. He saved our country from invasion, and, by preventing Napoleon coming to crush us, made it possible for the Duke of Wellington to carry the war into France, and finally to crush Napoleon. The ruler who was to invade *us* saw our forces invade *his* land. He had invaded every country in Europe but ours, had beaten every nation but ours, had marched as a conqueror through every capital but ours. The finest army he ever had was drawn up opposite our shores, ready to cross the Channel and overwhelm us; he would gladly have sacrificed almost everything to crush the stubborn islanders who so long defied him. He had two thousand little vessels ready in which to carry over his men. The one obstacle was Nelson and the British fleet.

With Nelson out of the way, nothing could possibly have prevented his victorious army from landing in England; nothing could have prevented that army from overrunning the land and laying waste the country. We had no army like Napoleon's. But the little, fragile Admiral Nelson could not be kept out of the way. The Army of Invasion, as the French force was called, never dared to leave its native land, for Nelson smashed the fleet which was to have guarded the ships in which the soldiers would have made the voyage. Nelson saved England, and paved the way for the saving of Europe from the tiger-emperor.

Horatio Nelson was born September 29, 1758, at Burnham Thorpe, Norfolk, where his father was rector. There were eleven children, of whom eight were living in 1767, when Nelson's

mother died. His uncle, Captain Maurice Suckling, who was in the Navy, promised that he would take one of the children, for the elder Nelson was a poor man. When the boy was only eleven, he learned that his uncle had been appointed to command a fine warship, so he persuaded his father to let him go to sea with his uncle. The captain, who had expected that one of the other boys, a big, strong lad, would be sent to him, was surprised when he heard that the tiny Horatio was the one selected.

HOW NELSON WENT TO SEA

"What has poor Horatio done," he asked, "that he, who is so weak, should, above all the rest, be sent to rough it out at sea?" That is what any one of us would have asked. But Horatio was the only one who wanted to go. "Let him come," said his uncle. "The first time we go into action, a cannon-ball may come and knock off his head, and provide for him at once."

The little boy's entry into the Navy could hardly have been more unfavourable. When he went down to his ship at Chatham, no uncle could he find. Nobody knew anything about him. The bluff, good-natured captain had not thought it worth while to mention that his tiny nephew was coming down, and he himself had not reached the ship when Horatio arrived. So the poor waif had to walk about the deck all that day, with nobody to take notice of him. This was bad for a boy leaving home for the first time, and, hero though he was, he felt almost heartbroken as he thought of home. Nelson, however, soon got over his home-sickness, and behaved as a young midshipman should, under the watchful eye of Captain Suckling.

A SICKLY BOY LOOKING FOR THE NORTH POLE

The captain was soon transferred to another vessel, which was to lie as guardship in the Thames, and as this was not the sort of life to give experience to a boy, he got Nelson a berth under one of his old shipmates, with whom he had served on the Dreadnought—for they had Dreadnoughts in those days, little wooden vessels, in which captains would scorn to carry cargo now.

Nelson now made a voyage to the West Indies, and the trip did wonders for him. Next, after having been in warm waters, he was shipped off to search for the North Pole—a strange occupation for a boy who had been ill from babyhood. But Nelson never complained, so long as he was seeing service and getting experience. The expedition to the Arctic achieved no fame worth remembering, but Nelson benefited in an unexpected way.

He mastered the secret of keeping men on good terms with each other during long terms of confinement on board. One of the little things he learned was a way in which to distil fresh water from salt water. The crew used to take their ordinary kettle, fill it with seawater, boil it, then catch the steam in a mop held over the spout. As the steam condensed, it formed fresh good water for drinking, and by this means they got about forty gallons of this precious fluid a day. Lessons like this were not lost on Nelson, who in after life was the most careful of all commanders for the health and comfort of his men. His kindness, no less than his courage, made men love him, and their devotion to him was one of the secrets of his wonderful victories. He could make a bad crew into a good crew. He believed that all his crews were the finest in the world, and the men simply tried to live up to the ideal he had formed of them.

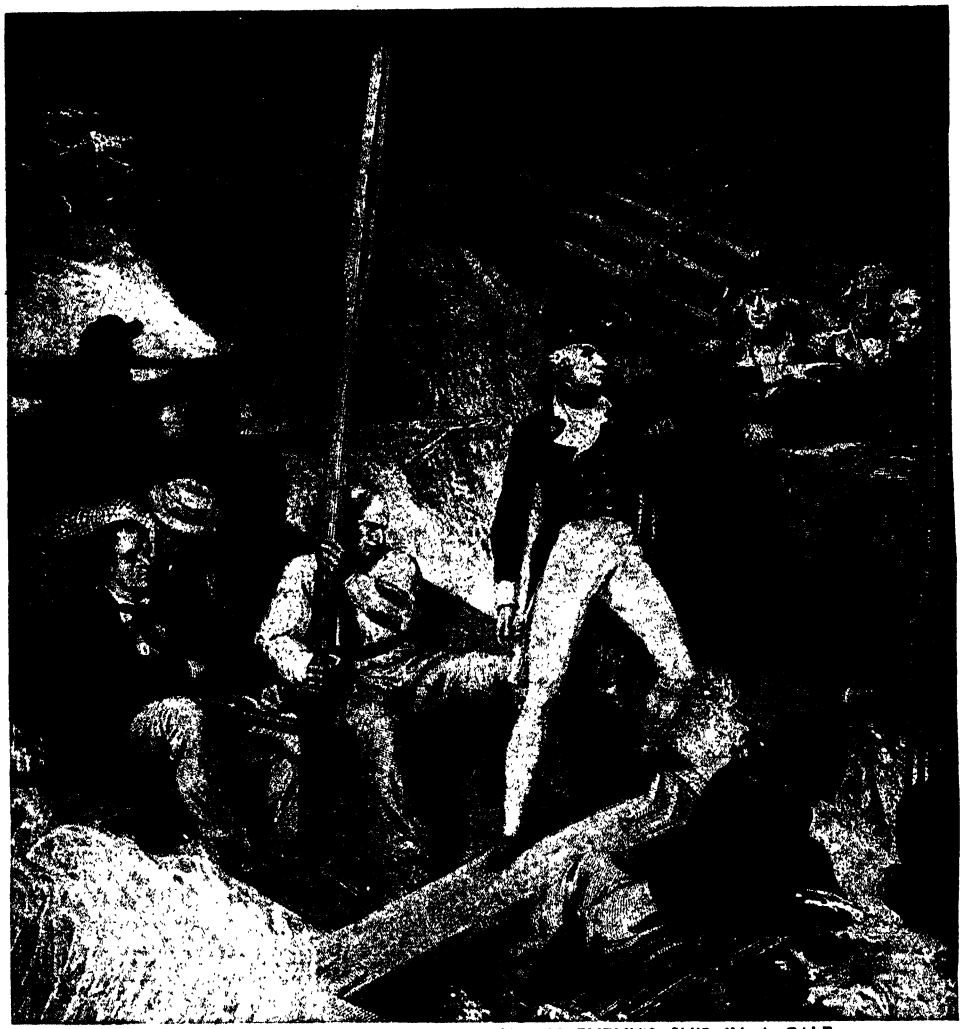
NELSON HIDING ON HIS SHIP

But he was a long way from commanding as yet. He went to the East Indies, where he became ill, and had to be sent home, but on returning to the sea he was made a second lieutenant, and in some fighting in the West Indies he was noticeable for his bravery and the eager way in which he discharged his duties. At twenty years he was given the command of a ship for the first time, but he was soon laid low with fever, and this fever, attacking an already weakened system, used to trouble him in later years. However, he was soon well enough to go out to the West Indies again, and he went in command of a ship. Here he seized five American vessels for illegal trading. Their owners began law actions against him, and wanted to have him arrested and tried; and there was the curious spectacle of the great commander having for six weeks practically to hide on his own ship. If he had set foot on shore, he would have been arrested. Years later, when Napoleon, at the end of his career,

was a prisoner on board an English ship —the first time he ever saw England— there was a lawyer prowling round the vessel in a boat with a writ in his pocket, waiting to arrest the man whom it had taken all Europe to capture!

While in the West Indies Nelson met a widow lady, and on returning to England they married. Napoleon, oddly enough, also married a widow from the West Indies—Josephine. Napoleon divorced his first wife and married again. Nelson and his wife did not agree, and they also parted. Nelson was afterwards very friendly with Lady Hamilton, the wife of Sir William Hamilton, an English ambassador, whom he first met at Naples, and in the end the Hamiltons and Nelson shared a house, until Sir William Hamilton died. Then Lady Hamilton still remained at the head of Nelson's home. She had been a famous beauty, whom Romney, the artist, had painted again and again, always calling her "the divine lady."

Now came the long war with France, and the movements of Napoleon began to be reflected in the life of Nelson. When the French army overran Italy, that drew Nelson to the Italian coast. When the French conquered Spain, the Spanish navy was added to the French, making a very powerful combination. In the battle of St. Vincent, fought to prevent these two hostile fleets from coming together, Nelson was ordered to join the general attack.



YOUNG NELSON OFFERING TO BOARD AN ENEMY'S SHIP IN A GALE

But Nelson disobeyed. He saw part of the Spanish fleet trying to escape, so, instead of following the rest of the British ships, he steered out of the line, sailed in a half-circle round those behind him, and made for the Spaniards. Five great vessels attacked him, and almost destroyed his ship. He ran calmly on, however, steered up to the side of a Spanish ship, led his men on board, fought the Spanish crew, conquered them, and passed over on to another ship, and captured that as well.

Leaving his own battered ship, he had conquered two of the biggest ships of the Spanish fleet. It was a dazzling day's work, and, though he had disobeyed, Nelson was publicly thanked by his admiral. He was made a rear-admiral, and was given the command of a land attack upon the Spaniards at Santa Cruz. The assault failed, through no fault of Nelson's, but owing to darkness and the strength of the enemy's position. Nelson himself was shot through the right elbow, and had to have the wounded arm removed.

"I have got my left arm left," he said, and in a few hours after the operation he was at work with his left hand writing an account of the battle.

HOW NELSON AND NAPOLEON PASSED UNSEEN

As soon as he was well again he was at sea, and was given the command of a small fleet, with which he was to search for Napoleon, who had set out to conquer Egypt. This was a romantic part of the career of both men. They never saw one another. It happened once that Napoleon, with two ships, was quite near the great Englishman, who was at sea off Malta, but the rival ships passed in a mist, and the two men never came together again, though the actions of the one were destined to keep the other engaged for the rest of his life.

Nelson, with his little fleet, scoured the seas in search of Napoleon, but could not find him. He arrived at Alexandria, but was two days too early. Not finding the enemy there, he returned, and lost them, and Napoleon, continuing on his way unchecked, reached the land of the Pharaohs and conquered it. His army was at this time called the Army of England. It was to be sent to invade England after his return. In the meantime he was to conquer Egypt, and, pushing on eastwards, was to strike at the British possessions in India. England was to be ruined; it was absolutely necessary, he said, for the good of the world, that the British power should be crushed.

HOW THE PRICK OF A PIN LED TO THE DEFEAT OF NAPOLEON

And now a wonderful thing happened. At this time there was at Naples Sir John Acton, commander-in-chief of the military forces there. His wife had a French maid, and one day, when Sir John was in his wife's dressing-room, he saw a letter put into the maid's hand. The maid gave such a start that she ran a pin into Lady Acton, whose hair she was dressing. Her mistress asked the cause of her agitation, and the maid replied that the letter was from her brother, a French sailor, from whom she had not heard for some time. Sir John offered to read the letter to her while she dressed her mistress's hair, and the maid consented. So he read the letter.

And it gave all the information that was necessary as to where Napoleon's fleet had gone! Sir John sent off information to Nelson. A Turk carried the news to one of the ships as it came near land, and Nelson immediately turned back to Egypt. All the way he was so anxious that he became quite ill. But as soon as he heard that the enemy's fleet had been sighted in the bay of Aboukir, near Alexandria, he went happily to dinner.

He attacked at once. The wind was in his favour, but against the French. He adopted an original plan of attack. He sailed down the French line and conquered one ship after another, so that nearly the entire fleet was demolished. It was a marvellous victory, and the chance to win it all turned upon that pin-prick in Lady Acton's room.

WHEN NELSON PUT THE TELESCOPE TO HIS BLIND EYE

When Napoleon returned from Egypt he left his army behind, and had only the two frigates which, as we have seen, escaped the eagle eye of Nelson, who rarely missed seeing anything with his one eye. The other he had lost near the birthplace of Napoleon. While he was conducting an attack on Calvi, in the island of Corsica, a piece of gravel, thrown up by a shot, entered his right eye and blinded him. But without his right eye

and without his right arm Nelson won the battle of Aboukir, and the battle of Copenhagen soon after. At Copenhagen his superior officer signalled to him to draw out of the fight, as the slaughter was so terrible, but when told of the signal Nelson put his telescope to his blind eye and said, "I cannot see it." He went on fighting and won.

For a little time after this there was peace, but war broke out again, and Napoleon massed an army of 150,000 men on the sands at Boulogne, once more intending to invade England. He had but to carry out this old dream to be master of Europe. He had got together a great fleet, his own and the fleet of Spain, but so long as Nelson was near he dared not trust his soldiers on the sea in the little vessels which would have to carry them. So he ordered his battleships to sail away to the West Indies to decoy Nelson away, and then to come back to Europe. The fleet carried out their instructions and sailed to the West. Nelson followed, but as soon as he found he had been tricked he sent his swiftest ship back to England to give warning. The warning came in time. Sir Robert Calder was sent out, met the enemy, gave them battle, and forced them to retreat.

THE FINAL BLOW WHICH DESTROYED NAPOLEON'S POWER

Now came the time for Nelson's last blow. He came back to Europe with all speed, and met the combined French and Spanish fleets at Trafalgar. He fought this battle as he had fought all others—according to his own plan. The battles of those days were supposed to be conducted on lines strictly laid down by the authorities at home. On meeting a fleet of the enemy drawn up in line, our commander was supposed to draw up his ships in corresponding line, and engage the enemy, ship against ship. Nelson did nothing of the sort. He turned at right angles to the enemy, and sailed right through their fleet. He broke up their stately line, he scattered them into fragments, so that he managed always to have three ships against one of the enemy's.

He fought his battles at sea just as Napoleon fought his battles on land—throwing his heaviest weight against the weakest part of the enemy. It was a wonderful victory, gained on October 21, 1805. Napoleon was not there. He had withdrawn his army of invasion from the coast at Boulogne the moment Sir Robert Calder checked his fleet, and, rushing his army inland, Napoleon had carried out a marvellous campaign against Austria, had reached Vienna, and was just entering the royal palace as conqueror, when he heard the fatal news of Trafalgar, where his fleet was destroyed.

The victory cost Nelson his life. He was shot down on the deck of his ship, the Victory, in the hour of triumph. "Kiss me, Hardy" were among the last words he uttered as he lay dying, and "Thank God I have done my duty."

THE MAN WHO DID HIS DUTY

He had done his duty indeed. He had saved England from a terrible enemy. Invasion was now utterly impossible, and has been impossible ever since. Another ten years were to pass away before Napoleon was finally crushed, but we may date his downfall from the day of Trafalgar. England, no longer fearing invasion, could send her troops to the Continent to begin the long struggle which ended at Waterloo.

So ended the life of Nelson. These two men, the victor and the vanquished of Trafalgar, were alike in their marvellous power to organise victory, but while Napoleon had the fierceness of the tiger, Nelson, though a famous fighter, had also something of the nature of a woman. He wept when he was appointed to a slow ship; he kissed his captain when he lay dying. Napoleon sacrificed others to save himself; Nelson risked his life for his men.

Nelson is best studied as a sailor, not as a man ashore. He was often disappointing in his private life, but as an heroic defender of his country and as a genius of war he is the greatest warrior that the sea has yet produced.

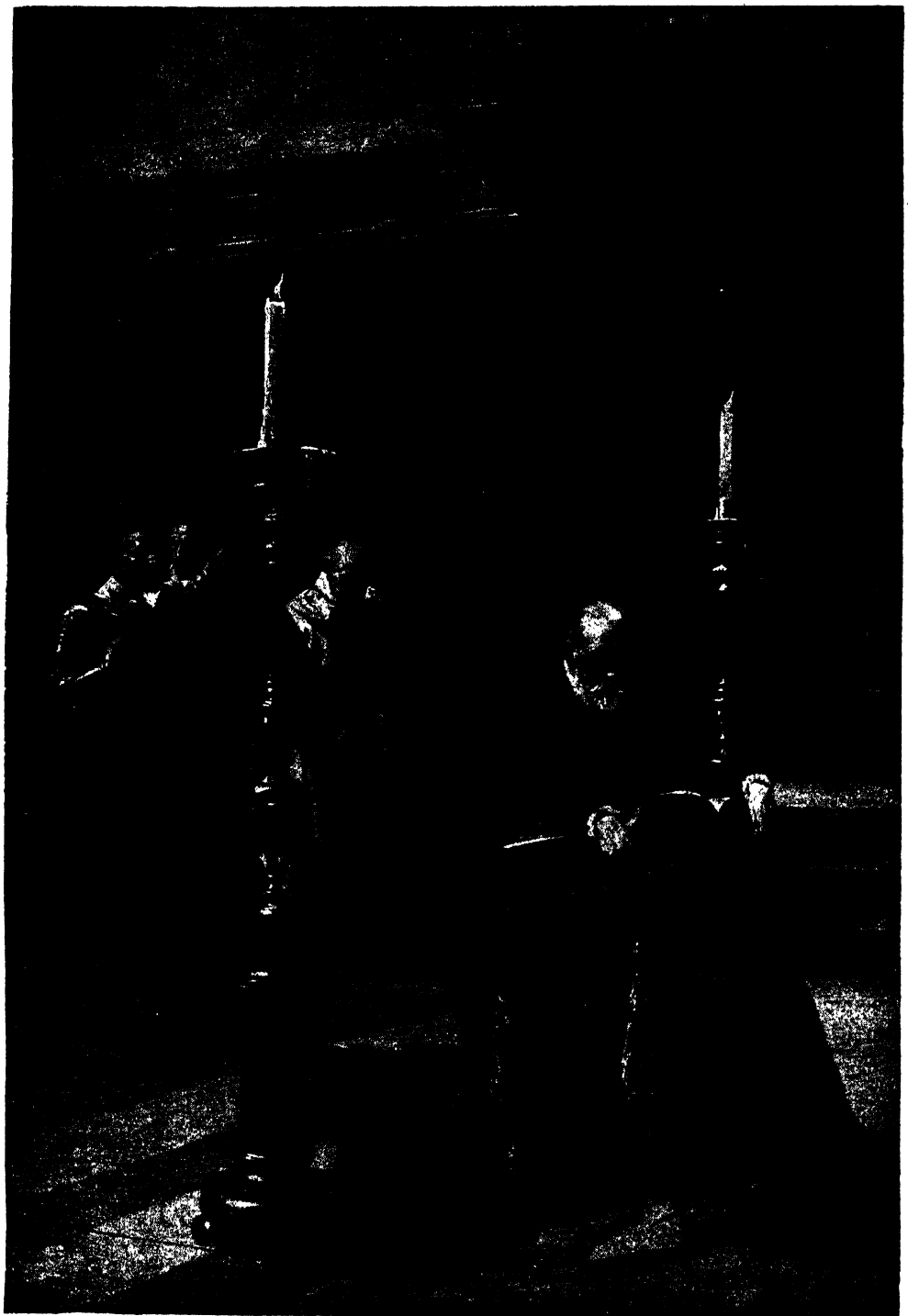
A STRANGE, QUAINT, THIN LITTLE HERO

No great sailor has been loved as Nelson was. Little, thin, shock-headed, undignified in appearance, always sea-sick when afloat, racked with a terrible cough, tormented with fever and pains, crippled, with one eye and one arm—was ever such a figure for a hero? Yet it is of him that we read:

Thine island loves thee well, thou famous man,
The greatest sailor since the world began.

Tennyson wrote that, and all the world agrees with him.

A TYRANT LISTENS TO THE NEWS OF HIS DOOM



PHILIP OF SPAIN IS HERE SEEN JUST AFTER HE HAD HEARD OF THE DESTRUCTION OF THE ARMADA. SO OVERCOME WAS HE THAT HE SHUT HIMSELF UP IN HIS PALACE AND NO MAN DARED TO SPEAK TO HIM

This picture is from the painting by Mr. Seymour Lucas, R.A. The pictures on page 112 and the top picture on page 114 are from Ruth Putnam's "William the Silent," published by G. P. Putnam's Sons

THE SILENT MAN

HOW WILLIAM OF ORANGE BROKE THE POWER OF SPAIN

Two men of a hunting party found themselves riding side by side one day in the forest of Vincennes. The older man was King Henry of France, the younger was Prince William of Orange. France and Spain had been at war ; William, as servant of King Philip of Spain, who ruled over the Netherlands as well, was in France to settle the terms of peace.

As they rode together, King Henry became jovial and expansive. He said that he desired peace as greatly as Spain desired it, as greatly as the Netherlands desired it, and for a holy purpose. He told the handsome young man at his side the nature of this holy purpose. Like the King of Spain, he was determined to stamp out the Protestants from his realms. A plot was afoot. Very shortly he would make such a bonfire of these " accursed vermin " as would warm the heart of Mother Church for all ages, and strike such universal terror into the soul of heresy that it would perish from the earth. This was why he longed for peace. He desired to sheath the sword that he might burn, murder, strangle, torture, and grind to powder the hosts of Protestantism.

The young man at his side was a Catholic. The king therefore spoke frankly and openly. He hid nothing ; he boasted and gloried in the details of his wicked plot. So delighted was his imagination in this evil work that he did not observe indignation on his companion's face nor the strange silence of that young man, henceforth to be known in history as William the Silent.

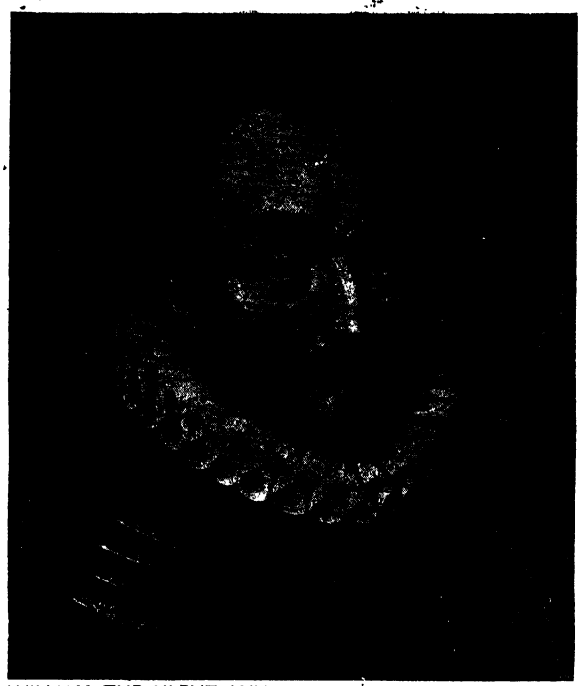
He was a handsome, dignified, and splendid figure. Possessed of great wealth, he lived with all the riotous glory of a royal prince in a land of merchants overflowing with prosperity. " He was disposed," says the historian Motley, " for an easy, joyous, luxurious, princely life." Banquets, masquerades, tournaments, the chase, occupied his thoughts. His palace was like a king's. We read that " his establishment was on so extensive a scale that upon one day twenty-eight master cooks were dismissed, for the purpose of diminishing the family expenses." His Court consisted, among others, of twenty-four noblemen and eighteen pages.

Hear what a great historian says of him : " Never did an arrogant or indiscreet word fall from his lips. He upon no occasion manifested anger to his servants, however much they might be in fault, but contented himself with admonishing them graciously, without menace or insult. He had a gentle and agreeable tongue. . . . He was beloved and honoured by the whole community." Motley, who wrote these words, adds also : " His manner was graceful, familiar, caressing, and yet dignified. He had the good breeding which comes from the heart, refined into an inexpressible charm from his constant intercourse, almost from his cradle, with mankind of all ranks." Such was the man destined to save Europe from tyranny, a man of everlasting glory and immortal honour, the man destined to stand alone and forsaken against the furious hate and world-wide power of one of the greatest monsters that ever lived.

When he got back from France he resumed his princely life, but watched and waited for events to shape themselves. It was not long before Philip showed his hand. Orders were issued for the execution of heretics. William, who had no taste for murder, though at that time he remained a Catholic, secretly warned his Protestant friends to escape. When the atrocities increased in violence, he openly protested against the Government. In common with the noblemen he withdrew from all share in State business, and addressed a letter of rebuke to Philip in Spain. For a long time there was peace. Then the spirit of evil entered into Philip, and he sent the Inquisition, and later the Duke of Alva with a great army, into the Netherlands, and from that moment it was as if all the powers of darkness had descended upon the earth.

The Inquisition roused the fury of the Dutch. "Do you love your wife and children?" demanded a Spanish Inquisitor of a Dutch schoolmaster accused of reading the Bible. "God knows that if the whole world were of gold, and my own," answered the poor father, "I would give it all only to have them with me, even had I to live on bread and water and in bondage."

The inquisitor counselled him for the sake of his family to renounce his faith. "Neither for wife, children, nor all the world, can I renounce my God and religious truth," was the answer. He was strangled and thrown to the flames. Another man was burned alive for copying hymns. Another Protestant was "hacked to death with seven blows of a rusty sword," in presence of his wife, who was so horror-stricken that she died on the spot before her husband. Many of the things that were done in Philip's name cannot be printed in this book, so cruel and horrible are they. The scenes of outrage, the frantic persecutions, says Motley, in his famous history of the "Rise of the Dutch Republic," were fast becoming too horrible to be looked upon by Catholic or Calvinist. The prisons swarmed with victims, the streets were thronged with processions to the stake. At last, thanks to William of Orange, the land rebelled.



WILLIAM THE SILENT, WHO BROKE THE POWER OF SPAIN

Then came the terrible Duke of Alva to crush the nation which had dared to question the right of Spain to rack, strangle, and burn human bodies for the welfare of immortal souls. "I have tamed people of iron," said the duke; "shall I not easily crush these men of butter?"

He began by arresting the leaders of revolution. Then he set up a secret tribunal known as the Council of Blood. Men were summoned before this secret Court, were robbed of their wealth, and committed to the flames in a few minutes. So swift and reckless was the Court that on one occasion a man was executed before his "trial." His papers subsequently proved him innocent. "No matter for that," said one of the judges; "if he has died innocent, it will be all the better for him when he takes his trial in the other world."

The whole country, says Motley, became a charnel-house. "The death-bell tolled hourly in every village; not a family but was called to mourn for its dearest relatives; while the survivors stalked listlessly about, the ghosts of their former selves, among the wrecks of their former homes." The spirit of the nation, he says, seemed hopelessly broken.

But one man was stirring—no man of butter, but a man of steel, the gracious and the noble Orange. Cited to appear before the Council of Blood, he contemptuously replied that he did not recognise its rights; and then proceeded to lift up the broken spirit of the Hollanders. Courage came back to them. Cities determined to stand firm. A wave of hope passed over the beaten fields of the Netherlands like a wind from God. It was the first movement of almost the smallest nation in the world to withstand the mightiest tyrant of Europe.

Then followed a thing unparalleled in the history of the world. Philip of Spain issued a sentence of death against *all the inhabitants* of the Netherlands! Only a few people, named for the purpose, were excepted from this ghastly doom. All the rest were to perish. The Duke of Alva announced that his Most Catholic Majesty would rather the whole land became an annihilated wilderness than that a single Protestant should exist within its territory. Women and children were to perish equally with men; the entire nation was to be crushed out of existence.

Orange, still a Catholic, rose up against this monstrous sentence of death pronounced by one man against a whole nation. He sold his plate, his furniture, almost all he possessed, and raised an army, and took the field against the terrible duke. His brothers joined him. As for the other Protestant nations of Europe, they hung back; they did nothing to help this champion of liberty, but for whom they would assuredly have perished under Philip's heel of blood.

Orange was alone. He confronted the military pomp of Spain and the spiritual power of Rome with only a few angry but hesitating burghers at his back. It was such an act as might have thrilled the very stones.

From the moment that he took the field his life was to be one of suffering and grief such as only the very bravest of men could endure. His brothers were defeated and slain, the people for whom he had drawn the sword refused to rise, his mercenary troops deserted, and a price was set upon his head by Philip of Spain which drew around him a network of spies and assassins.

He gained victories, brilliant victories, and at times the courage of the burghers rose almost to a fighting enthusiasm, but at the first touch of doubt, the first shadow of defeat, those who had promised to be faithful crept to their shops and whispered together of making peace with Spain. He was deserted. One might also say that he alone, this one brave man, stood between Europe and the absolute victory of remorseless tyranny.

And now a great change took place in his heart. Hitherto he had been a Catholic. He had inherited this form of religion from his father, but the beautiful character and pure spirit of his mother had prevented him from becoming a bigot or a murdering fanatic like Philip II. He was a Catholic without enthusiasm, taking his religion as he took the fashions or the cookery of the day—as things merely to be accepted, not bothered about. But now, solitary, and compassed about by the powers of darkness, this man turned his thoughts to God, and sought for strength from heaven, for guidance and enlightenment from the Creator of men. The light came. He abandoned the Roman Church, and became a Protestant. From that great hour in his life he stood for the holiest thing in the affairs of men—*freedom of conscience.*



PHILIP THE SECOND OF SPAIN
The tyrant who condemned a whole nation to death

There were Protestants ready and eager to persecute Papists. Some of the tortures and excesses of Protestants were as terrible as those of the Papists. But William the Silent stood for Liberty. He said that all men must be perfectly free to worship God as they would. He taught men to let the Papist do what he chose, so long as he did not interfere with the liberty of other men. And gradually there came from his pure soul into the darkness of Europe the great knowledge that Error dies when Truth is free and Liberty is absolute.

The Netherlands began to trust him. He was accepted as their head, and gathered a new army to fight against Spain. The unequal conflict raged for years, and did not end with his death. Of how he fought, of how he went hither and thither to the succour of beleaguered cities, we must read



THE ABDICATION OF THE EMPEROR CHARLES V., WHO IS SEEN LEANING ON WILLIAM'S ARM

in one of the greatest books ever written, Motley's " Rise of the Dutch Republic." We can only give here the barest outline of a most crowded and full glorious life.

William's one hope was to make an ally of France. Led to trust in France, he marched his army to the frontier, where he looked to effect a juncture with French troops. But scarcely had he arrived at his destination when news reached him of an event which has ever since earned the universal execration of men. The French king had gathered a vast body of Protestants into Paris for a conference. A royal wedding was to take place. All was happiness, confidence, and joy.

On the day of St. Bartholomew, when the hopes of an understanding were strong in the hearts of the Protestants, the king gave the signal for a massacre of these " heretics." Thousands were slain. Soldiers rushed into houses, butchering men, women, and children, and then plunged into the streets to slay any Protestant they encountered. The king, on the balcony of his palace, watched and took part in the massacre, clapping his hands for joy and laughing with rapture. The Pope of Rome, hearing the news, went in state to church and rendered thanks to God for this great mercy! The Queen of England put on mourning weeds, but did nothing to help William of Orange. As for that great man, he said he felt himself " struck to the earth with the blow of a sledge-hammer." Some people declare that one hundred thousand Huguenots were massacred that terrible day in the land of France.

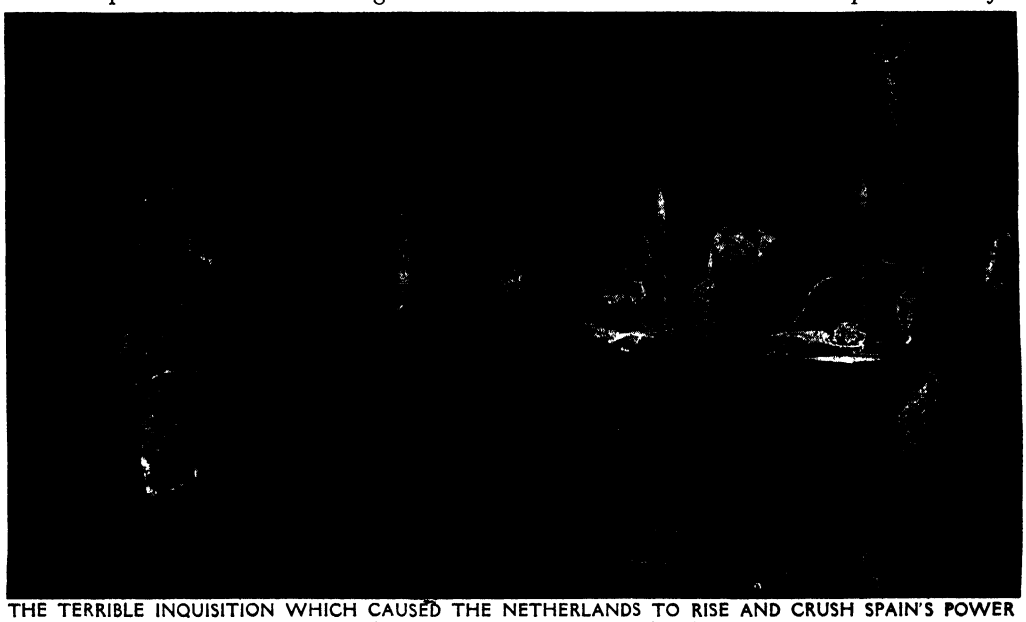
William retired to Holland, which he said should become his sepulchre. The tide of victory swept the Spaniards forward. They sacked cities in the Netherlands with all the malignant fury of evil spirits. Women and children were put to the sword. Men



WILLIAM THE SILENT DELIVERING HOLLAND FROM THE TERRIBLE SEA-MONSTER, SPAIN
In this picture, which was drawn during his lifetime, William is shown as Perseus and Holland as Andromeda.

were tortured and burned at the stake. Shops, houses, banks, markets, and halls were first plundered of their wealth and then given to the flames. The whole country was strewn with the ashes of the world's most beautiful and prosperous cities. It looked as if the Low Countries were to be burned off the face of the earth.

The proud and glorious city of Antwerp stood firm against the baseness of Spain. The burghers were determined to die rather than open the gates to the enemy. But the enemy advanced with a standard which bore on one side the image of the crucified Christ and on the other the figure of the Virgin Mary—" they were to smile from heaven upon this horrible thing." The



THE TERRIBLE INQUISITION WHICH CAUSED THE NETHERLANDS TO RISE AND CRUSH SPAIN'S POWER
This picture is from the painting by the Honourable John Collier

city was entered, and the streets ran with blood, literally ran with blood. Eight thousand people were murdered. But the fighting and taking of the city was not the worst. Drunk with wine, maddened by evil passion, and furious because the flames which they themselves had lighted were consuming the gold and merchandise of this rich city, the plundering soldiers blew in the doors of private houses with gunpowder, hanged, tortured, dishonoured, and mutilated their victims till the air rang with screams of terror and yells of agony, till men and women, driven mad, ran naked through the streets, and children were beaten at their mothers' knees. Such a sight as this had never been seen before, and it was called the " Spanish Fury," a name which exists to this day to express the utmost of barbarity, cruelty, and evil passion.

But the spirit of the Hollanders refused to be intimidated even by such frightful violence. Led by William, they fortified their little cities, armed their women and children, and determined to cut their dykes and admit the threatening sea to overwhelm their fatherland rather than fall into the hands of Spain. The cities of the Netherlands, perceiving that it was useless to hope for any justice or look for any honesty from Philip, afraid of the Spanish soldiers, and unable to prosecute their trade, at last realised the justice of everything William had ever said to them, and renewed the conflict. Philip in his royal palace became furious. The vermin refused to be stamped out! He gave orders for new methods and fresh diplomacy. From that moment he sheathed the sword and possessed himself of the assassin's dagger.

William resisted every overture for peace which did not grant absolute liberty for the conscience in religious matters. This was the one thing Philip would not grant. Anything else, but not that. He was pledged to God that no Protestant should live in his realm. Let the Dutch become humble and obedient Catholics, let them renounce wicked Protestantism, and he was ready, like a tender father, to forgive them all their sins in the past.

Some, of course, were for yielding. They felt it hopeless to contend against so

tremendous a foe. Better to give in, to dissimulate, to accept the hard condition, than exist in doubt and terror under the shadow of his reeking sword. But William and the faithful Hollanders said, Better death than such a life of dishonour and shame. And Philip, his cunning ministers, the awful powers of Rome, and all the watching kings, queens, and peoples of Europe realised that he had but one enemy in the world, but one stone in the path of his imperial and tyrannical progress, the man called William the Silent. Destroy him, and even Holland would submit.



THE PEOPLE PRESENTING A PETITION FOR JUSTICE
William the Silent is standing by the side of the Regent Margaret, Philip the Second's sister.

Only by the inspiration of his noble soul, by the cunning of his statesman's brain, and by the strength of his swift right arm was Holland, half flooded by the sea, able to withstand the tremendous armies of all-conquering Spain.

To destroy this one man became the whole object of Spain's policy. Think of it! Spain was the greatest power in the world. The little country of Holland defied it. The strength of the defiance was the courage, valour, and nobility of one man! Spain could do nothing till this one man was out of her path.

First of all calumny was set to work. This man who had sacrificed wealth, family, power, and royal ease to fight for liberty of conscience, whom no golden bribe of Philip had ever been able to buy, who had stood almost a beggar by the side of the poor and suffering of a dying land, was said to be an adventurer! Catholic writers of eminence spread tracts throughout the land accusing him of being a self-seeker! He was a rogue, an impostor, a swindler, an assassin, and a miscreant, seeking to obtain for himself the crown and revenue of the Netherlands.

These poor, pitiful tales failing to shake Dutch confidence in this heroic man, a new weapon was forged for his destruction. He was declared an outlaw. Criminals were tempted to murder him:

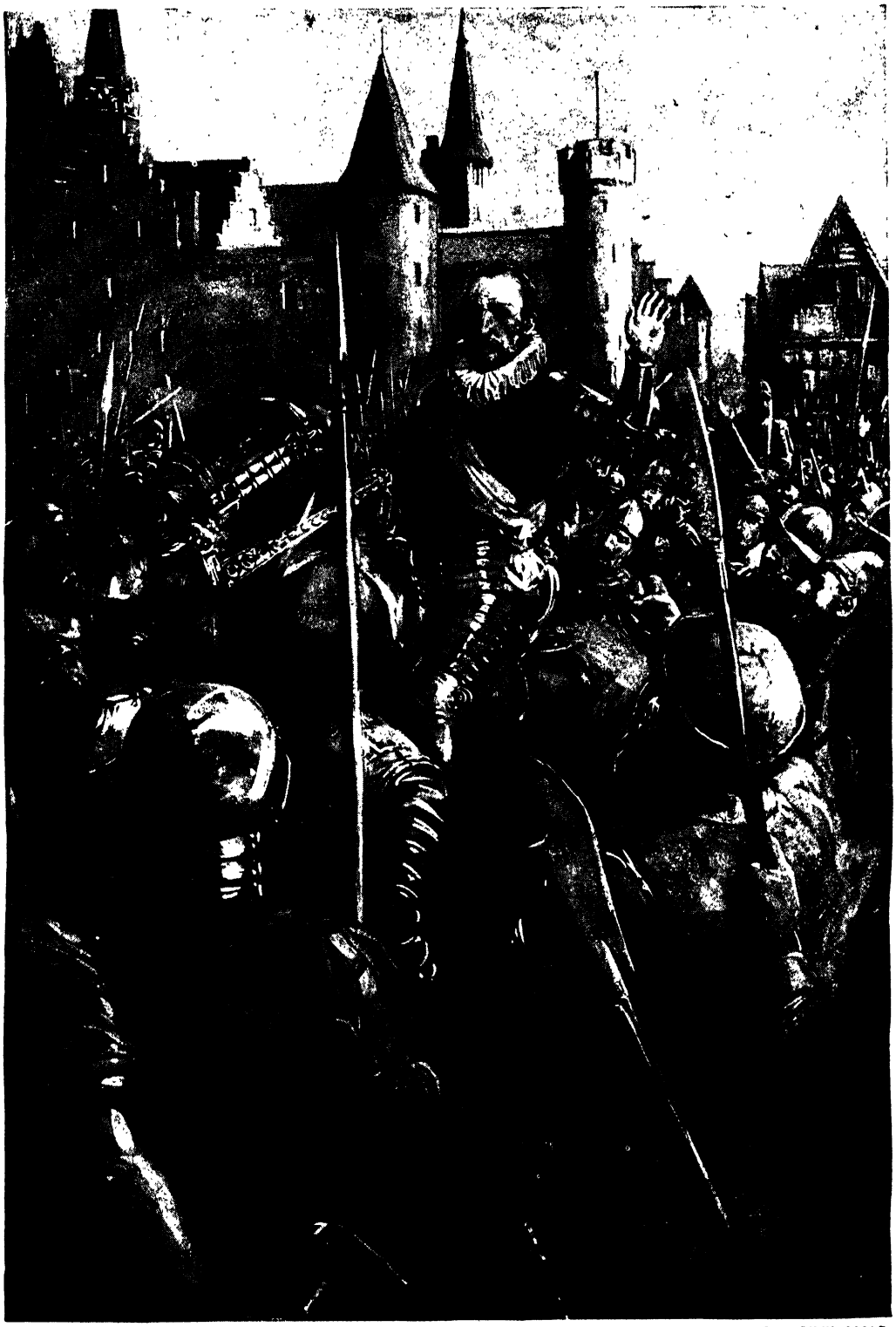
"We banish him perpetually from all our realms," the edict ran, "forbidding all our subjects, of whatever quality, to communicate with him openly or privately, or to administer to him victuals, drink, fire, or other necessaries. We allow all to injure him in property or life. . . . And if any one of our subjects or any stranger should be found sufficiently generous of heart to rid us of this pest, . . . we will cause to be furnished to him immediately after the deed . . . the sum of twenty-five thousand crowns in gold. If he had committed any crime, however heinous, we promise to pardon him, and if he be not noble, we will ennoble him for his valour."

In other words, here was an invitation made by the Most Catholic King of Spain to every murderer and scoundrel in Europe, "however heinous," an invitation to become enriched by twenty-five thousand crowns in gold, to become a duke of Spain, and to live ever after as a glorious nobleman, simply by killing a lonely man in Holland! William's noble and immortal answer to this abominable document is too long for quotation,



WILLIAM OF ORANGE RIDING WITH HIS FRIENDS AT THE HAGUE

WILLIAM SAVING ANTWERP FROM CIVIL WAR



DURING A TUMULT AT ANTWERP, WHEN THE PEOPLE WERE ON THE POINT OF BEGINNING A CIVIL WAR, WILLIAM, AT THE RISK OF HIS LIFE, RODE IN AMONG THEM AND AVERTED THE DISASTER

but we must give the final passage addressed to his fellow-countrymen :

" What reward can I hope," he wrote, " after my long services, and the almost total wreck of my earthly fortunes, if not the prize of having acquired, perhaps at the expense of my life, your liberty ? If then, my masters, you judge that my absence or my death can serve you, behold me ready to obey. Command me—send me to the ends of the earth—I will obey. Here is my head, over which no prince, no monarch, has power but yourselves. Dispose of it for your good, for the preservation of your republic, but if you judge that the moderate amount of experience and industry which is in me, if you judge that the remainder of my property and of my life can yet be a service to you, I dedicate them afresh to you and to the country."



THE DEATH OF WILLIAM THE SILENT, AFTER HE HAD BEEN SHOT BY A FANATIC AT PHILIP'S INSTIGATION

In the same year the united provinces publicly renounced their allegiance to Spain, declared themselves absolutely independent, and, after the most pressing persuasion, succeeded in getting William of Orange to take the countship of their threatened country. Such was the Dutch answer to the ban of Philip. William became the " Father of his People," adored from one end of the Netherlands to the other.

Not long afterwards a youth presented a petition to William, and, as the prince was reading it, fired a pistol at his head. The bullet entered the neck. Falling to the ground, William exclaimed, " Do not kill him ; I forgive him my death." Happily, the noble man recovered from the wound. He was able to work and fight for his country a little longer ; he was able to consolidate the union of the states, and influence them with a common patriotism. The whole country recognised in the prince a man from God, one raised up for the salvation of a stricken people. His popularity has never been equalled ; his power became absolute.

But ten years afterwards, as he was passing one night from dinner to his study, a young Frenchman named Balthazar Gérard, a Catholic fanatic, stepped out from a dark arch on the stairs, and fired three poisoned bullets into his body, one of which pierced his heart. He fell, exclaiming, " Oh, my God, have mercy upon my soul ! Oh, my God, have mercy upon this poor people ! "

The murderer was caught, tortured, and put to death. *The reward promised by Philip was paid to his heirs !* His parents were given large estates and raised to the rank of proud Spanish grandees.

But the great work of Orange was accomplished. All the wicked power of Spain, all the tyrant power of Rome, could not quench the torch which William had kindled at the flame of Liberty. For a little longer the armies of Philip might harass Holland, for a little longer those poor people might suffer terror and despair, but the end was soon to come. Helped at last by a too tardy England, the resolution and courage of little Holland at last broke the proud armaments of Spain, and the conscience of Europe was free.

THE MUSIC BOY

FOR a hundred and fifty years there has been a stream of remarkable child musicians who have excited much attention for a time and have then disappeared. A few have grown into fine players, but as a rule the infant prodigy is merely a pretty freak of education, who pays in after-life for the strain and excitement of his early triumphs.

But there has been one real infant prodigy in music—Wolfgang Mozart. He was not a Peter Pan of the piano, for he grew up. Instead of having a fine career *behind* him when he was a man, he had a still more glorious future before him. The early blossoming of his genius was a natural event. He was one of the angels of song, sent to gladden the earth with beautiful harmonies. His is among the loveliest music that ever came from the soul of man, and it seems as though, in recompense for the shortness of his life, he began to charm the ears of men with his strains when he was but a baby.

Wolfgang Mozart was born in 1756, in the picturesque little mountain town of Salzburg, which now belongs to Austria, but was then the centre of a little German principality ruled by a prince-archbishop. Mozart's father was a musician in the service of the archbishop—a painstaking, learned, and sensible man, lacking the divine fire of genius himself, but passionately fond of all the forms of musical art. His life was given entirely to music, and when he was not practising the violin, or the primitive kind of piano known as the harpsichord, he was either teaching others or composing music himself. He had a pretty daughter, Maria Anne, who was five years older than Wolfgang, and, as she was as clever as she was pretty, he thought he would make her an infant prodigy, and improve his position by the money she earned.

So, when she was eight years old, he began to teach her the harpsichord, and, naturally, little Wolfgang came into the room to listen. When his sister left the instrument, he climbed on the stool and sat down before the keyboard, and struck the notes at hazard, just as most babies of three would do. But, instead of tiring of this new game, he found he could strike two notes at the same time, and that some of the notes sounded harsh, while others were pleasant to hear.

After this great discovery of his own, Mozart used to sit at the instrument for hours at a time, taking the keenest pleasure in finding harmonious chords. His father thought it was only child's play, but to keep him in good humour he began to give him lessons in playing some simple dances. But the baby was more curious about music than his sister; he learnt his pieces more quickly than she did, and then continued to search out notes and chords of his own on the keyboard. At five he was inventing his own melodies, putting harmonies to them in the manner of a real composer.

There is nothing childish about the first composition of Mozart that has come down to us. The melody is simple, and so is the accompaniment, but the manner in which the melody is built out of an unusual number of phrases is masterly. Very few English song-writers of the present day show such a command of the resources of their art as Mozart possessed when he was five. The thing was pure genius. The child knew nothing about the grammar and the learned part of music. He merely made up his airs to satisfy and delight his own ear; he could not write down on paper the music he had invented—his father had to do that for him; but his inborn, God-given sense of intricate and exquisite design in melody was finer than his father's. He did not know that such and such a thing was right or that such and such a thing was wrong; he felt it. He was all feeling. When he was scarcely able to

walk, his first question to any friends who took him on their knee was, "Do you love me?" The answer "Yes" made his little face break into smiles of joy; but if anyone said "No," even in play, he would begin to weep. His heart was in everything he did, and whatever touched him made him throb through all his being. As soon as he was taught the first rules of arithmetic, he covered the walls and table of his bedroom with figures. Arithmetic pleased him because it could be connected with the theory of music.

The strange intensity of the child's emotions does not seem to have interfered with his health, but it made him very delicate in his tastes. He could not bear to lister to the archbishop's band when the players were not perfect in their parts. His ear could detect the slightest mistake, and a discord hurt him like a blow. He especially objected to the blare of a trumpet —a noise most children delight in. He said the sound was not musical, and should not be used except as an accompaniment to sweeter-sounding instruments. His father thought this a piece of affectation, and to cure his little son of his childishness he asked the trumpeter to his house and requested him to play before the boy. Wolfgang begged the man not to blow, and when the trumpet was sounded he fell down and almost had a serious illness. Not until he was ten was he able to bear the sound of a trumpet.



THE BIRTHPLACE OF MOZART

In the meantime he had become the most famous child in Europe, for at the age of six he had set out with his sister and father on a musical tour, and after playing at Munich the party went on to Vienna, where they received a glorious welcome. They were invited to the palace of the Emperor of Austria, who was amazed at "the little magician," as he called Wolfgang. To see if the child's genius was merely the result of a laborious system of training, the Emperor covered the keyboard of the harpsichord with a long strip of cloth, so that all the notes were hidden. Then he asked the little fellow if he could still play on the instrument. Wolfgang struck through the cloth at the hidden notes and played without making a single mistake, and the Emperor was so delighted that he ordered a hundred ducats to be paid to the boy's father. The Empress gave young Mozart a costly Court dress, and the little musician became the playmate of the princes and princesses of Austria. He was very fond of Marie Antoinette, who afterwards became Queen of France, and perished in the terrible revolution. "You are good. I will marry you," he said one day, when she helped him up after he had tumbled on the polished floor of the palace. What a different page in history the poor Queen's life would have been if the boy's saying had come true!

From Vienna, Mozart was taken to Paris to play before the Court. On the journey the carriage broke down, and a day was needed to repair it. To while away the time, the elder Mozart took his little son to a neighbouring church, where there was a fine organ, and began to tell him how the pedal was worked. "I can see how it goes," said the marvellous child, and, standing at the organ, he began to play the great

instrument as though he were a practised organist with long experience behind him.

So the astonished father, during the rest of the tour, exhibited his boy as an organ player as well as a composer and performer on the harpsichord. The King and Queen of France were as delighted with the Mozarts as the rulers of Austria had been. At table in the palace of Versailles the boy was placed by the Queen, and she fed him and played with him, and he composed for her, and then went to the Royal Chapel and played for an hour on the organ before King Louis and his courtiers. The French people took a great interest in the little musician, but his supreme triumph was in England. King George of England was very fond of music, and so was his Queen, and they went into raptures over the playing and compositions of the wonderful child. The Queen sang to the little lad's playing, and the King looked out the hardest pieces of music he could find and set them before him. The child performed them in a delightful way, and then, looking on the floor, Mozart saw an accompaniment written by Handel. Taking up a violin, he invented a melody as he played.



MOZART'S FIRST FIDDLE

The boy was like a singing bird. He could compose music as easily as he could speak; he could sit down and write a song much more quickly than he could make a speech. When he caught a cold in London and was not allowed to play any instrument, he passed the time away by composing his first symphonies for the orchestra. Always, when he fell unwell, he composed music; it did him more good than medicine, for he fretted if he could not pour out the melodies and harmonies that filled his little head. When he left England, at the age of nine, he gave a farewell concert, at which all the symphonies were composed by himself. Four years afterwards he travelled to Italy, and captivated the music-loving people of that sunny land.

On arriving at Rome he went straight to the Sistine Chapel to hear a famous psalm by a man called Allegri. Nowhere else in the world could this splendid piece of music be heard, for no one was allowed to make a copy of it, and the men who sang it were not permitted to take the parts home with them. Mozart listened to the work which was thus preserved so jealously, and in the evening he handed his father the full parts of Allegri's music. He had carried all the notes in his head and written them out after leaving the chapel. This is still one of the most wonderful feats of memory on record, and the fame of it spread through Europe. In Rome Mozart was treated like a prince, but in Naples there was an outcry that he was a sorcerer; he played so

wonderfully that the audience said it could only be done by witchcraft. Rising from their seats, they shouted, "Take that ring off your finger!" Nor would they be quiet until he took off the supposed magic ring and played the piece again with the same marvellous power.

He left Italy in a blaze of glory, having composed for the people of Milan a grand opera, "Mithridates," which was received with a great storm of applause.

Throughout his travels, Mozart studied with a passion for increasing his musical knowledge. From every country through which he passed he took some golden spoil—from France, its new dramatic music; from England, the grandeur and solidity of structure of Handel; from Italy, the emotional melody of the song-writers and the severe, scientific composition of the learned school of composers. Never did a child work as Mozart worked, but it was all happy and exciting play to him.

If Mozart had not had so strangely fortunate a childhood—with kings and queens to pet him, princesses to play with, and nations to applaud him—there would now be less joy in the world, less beauty and faerie charm. It was out of the golden memories of his early days that the great musician wove—in the sorrow, poverty, neglect, and suffering of his manhood—the lovely melodies that have won him immortality. For Mozart soon fell on evil days. He wished to settle in his native town, where, when nearly twelve, he had been made concert-master to the prince-archbishop; but the old ruler of Salzburg, who had been proud of the honours the boy had gained, died amid the grief of the people, and a harsh, ambitious, intriguing nobleman was appointed in his place. This man was angry that one of his dependants should have won fame throughout Europe, and though he only paid young Mozart the paltry salary of $5.25 a month, he would not let him give a public concert at Vienna. He exacted new compositions from the boy on every occasion, and yet sneeringly said that the young master knew nothing about the art of music. The archbishop was one of those jacks-in-office who are so puffed out with a sense of their official importance that they cannot bear the presence of really great people near to them.



MOZART THE BOY



MOZART THE MAN

When Mozart was twenty-four he was asked to write a grand opera for the Munich carnival, and he produced one of the finest works of the age. "No music has had such an effect on me; it is magnificent," said the ruler of Munich, and he treated the young genius like a friend. Mozart's master was angry that one of his young servants, now receiving only $200 a year, should enjoy such distinction, and summoned him to come at once with him to Vienna, where he made him take his meals with the house servants. Unfortunately, Mozart was invited out to play before the Emperor of Austria, and he pleased the great man, while the archbishop was disappointed

ıver some matter he had come to urge at ;ourt. The archbishop then roughly told Mozart to return at once to Salzburg, and vhen the musician came to his palace he ıad him actually kicked from the door.

Mozart returned to Vienna and set up as ı teacher of music, but in spite of his fame ıe remained poor. He was one of the first nen to break with the system of being the ıumble servant of some noble patron, and he people of Vienna began to look on him vith disfavour. He was too independent or them, and even the Emperor, though ıtill admiring his work, was very slow to lo anything for him. To add to Mozart's lifficulties, he found someone in a worse

even take part in a merry party and throw out jokes and carry on conversation while he was composing some work of immortal beauty. His mind seemed to be divided into two separate parts—the workaday part that worked very carelessly, and the musical part, a large, serene region of high imaginative beauty and deep splendour. He was a baby and an angel. What money he made he gave away to whomsoever asked for it. His great operas made the fortunes of other men; but he was too busy over some new work to care about the value of anything he had finished and done with.

But his privations undermined his strength, and the fury with which he worked.



THE IMMORTAL MOZART PASSES OUT OF THE WORLD WHILE COMPOSING AN IMMORTAL REQUIEM

position than himself. She was a poor girl with a bad mother and a miserable home, and to get her away from it the young man married her. It was poverty marrying hunger. But, though they were often in want, Mozart and his wife were not unhappy. A friend called on them one cold winter night and found them dancing together, and was told that, as they had no fuel, they were keeping warm by waltzing.

Mozart was never still. He was always strumming on something—his hat, his watch-chain, the table, or the chairs. He was always in a good humour, and nothing could disturb him. He worked in the midst of the loudest noise, and anywhere. He could

under his wonderfully continuous inspiration, further weakened his frame. One day, when he was feeling ill and depressed, a tall, haggard stranger in grey asked him in a mysterious manner if he would write a funeral service. Mozart started to compose the work—the greatest piece of music he produced—and the strange thought came over him that he was composing for his own funeral. Perhaps this was why he poured out the full force of his soul in this sublime Requiem. A terrible fever attacked him, and, leaving his masterpiece unfinished, the purest musical genius of our earth died at the age of thirty-five, and was laid to sleep in a pauper's grave.

THE MACHINE THAT LINKED TWO CONTINENTS



LORD KELVIN, IN HIS COAL-CELLAR AT GLASGOW, EXPLAINING HIS INVENTION OF THE SIPHON RECORDER, WHICH REVOLUTIONISED THE ATLANTIC CABLE

KELVIN AND HIS INVENTIONS

Where are our great men? we ask at times, as if their days were over. The answer is that they are with us now.

We have no Shakespeares now, no Miltons writing despatches for our Cromwells; but we have men among us whose names will be immortal with the names that shine in history.

Such a man was Lord Kelvin, who was teaching lads in a coal-cellar when our grandfathers were boys, and whose work on earth transformed human life in many ways for all of us.

A CURLY-HEADED boy sits before a looking-glass, regarding his own reflection with great satisfaction. "Pitty blue eyes Willie Thomson got," he is heard to say. Hopeless dandy—shall we bear him company further or leave him with his mirror? Well, take another step, and see what he is at when he comes upon the screen of the mind at four years old. He is still in petticoats, but this time, instead of surveying his own features, he is surveying the world from China to Peru: he is studying the globe, making himself master of the geography of the world. Bear with him until he is still a little older, and then he makes us wonder. He is creeping out of bed in the dark; he is tip-toeing on to the landing; he turns up the gas, squats on the floor, and begins scribbling figures on a slate. He works on until, with a whoop of delight, he runs downstairs, not to the larder, but to the room in which the family is sitting. He bursts in with a cry of triumph. He had set himself a mathematical problem which he could not answer, and had taken up a slate to bed and placed it beside his pillow in case the answer should come as he lay there. And the answer *had* come; it had come in his sleep, and he had worked it out on the slate. Not a mere dandy, after all.

This little blue-eyed Willie Thomson was the future Lord Kelvin. He was born at Belfast on June 24, 1824, the son of a splendid father and mother. The father came from a humble Irish home, but he had a grand brain, a golden heart, and a love of teaching, and he became in due season Professor of Mathematics in the University of Glasgow. There were two James Thomsons in the family, the father and Willie's elder brother, and the astonishing thing about these two and Willie is that they all held professorships in Glasgow University at one time. One generation of Thomsons occupy a tiny farm in the north of Ireland; the second and third generations fill three chairs at a university. James and Willie were wonderful boys, but Willie, though younger, was always ahead of James. They worked together and played together. They experimented in electricity together; they made and sailed boats and worked out scientific problems concerning their little craft. But at school Willie was always ahead of James, and nobody thought it strange, for Willie, though as human a boy as ever lived, loving play with all his might, was a phenomenon.

He was born a pioneer, like Newton and Kepler. He had wit and humour, love of sport, love of music and literature, but he had something else. He had one of those tremendous minds which, while rejoicing in the little, happy, trifling things of life, could wrestle with great problems and overcome them. At six years old he was attending his father's lectures in Belfast; at eight or nine he was making voltaic batteries and electrical machines with James; at ten he was a matriculated student of Glasgow University, and there, before he was 11, he had won the two chief prizes. In fact, there was no keeping him back from the prizes. Each year some prizes would be left for the class to vote on, and they voted for Willie.

They loved this wonderful lad. He went to Cambridge at 17, where he

entered Peterhouse College, and it was in mathematics that he chiefly excelled there. He devised problems of his own, worked them out, and published them, and one of the problems set for a Cambridge examination is that which he himself had evolved and published in this way. We cannot trace him through all his studies, but we can get a peep at him in his hours of leisure. He was no recluse. He could work hard enough for ten men, but he loved his life, he loved his friends and their pursuits. He was an ardent musician, a great swimmer, a fine oarsman, and rowed in his college boat.

When he left Cambridge there was not much left in England for him to learn, for from youth up he was the foremost physicist of his time. He went to Paris at 21, and spent a busy year there with a great scientist named Regnault, but then was summoned home to take the position of Professor of Natural Philosophy at his old University of Glasgow. Though he became famous as the greatest physicist of our time, and one of the world's most famous inventors, not until he was an old man did he quit that modest professorship. For 53 years he taught at Glasgow University, and during that time he wrote hundreds of great treatises which are text-books for all the world today; he devised appliances which made ocean telegraphy possible, he helped to lay cables, he acted as director of scientific business firms, he was honoured by every civilised nation as the foremost scientist of his day—yet he went on quietly teaching boys in Glasgow University. There is no parallel to that long lectureship.

He began with a few students in a coal-cellar, where his discourses must have been like the talks of Socrates or Dr. Johnson—full of learning, humour, and humanity, boiling over with enthusiasm, radiant with genius, revelation, and prophecy. He rarely prepared his lectures. He would enter his room throbbing with delight over some discovery he had traced upon his wide horizon, and he would talk to his students about it, work out his problems before them, and set them to help him and make them partners in his work. A few he banded to his heart as with hoops of steel; but to the many he was an intolerable enigma.

Boys who ought to have been learning their lessons with some dull disciplinarian were there, indulging in horseplay behind his back, and vanishing by a door at the back as soon as he turned to his blackboard. "There seems a gradual diminution of density in the upper part of the room," he would say, with a twinkle, as they vanished one by one, but he loved the few who stayed to listen and to learn. For more than half a century that sort of thing went on—one of the greatest men of all time lecturing to a few boys who could understand. Every teaching morning he was there, roaming the whole world of knowledge in his lectures. He took all physical knowledge for his province—and more. There was nothing of interest in life that he would not introduce if it would help his talks.

For a long time his pupils numbered only six or eight. They had no refined apparatus, not even a workshop. The grand experiments which were to revolutionise science were carried out in the coal-cellar and the room next door.

There the young lions and their leader made their apparatus and carried out their experiments. The coal was in the cellar, and so were the students; and then there was also a rascal of a boy who used to come in periodically to throw coal on the fire, and his habit was to smother professor and students and apparatus with dust at every operation. But they went on, and in that coal-cellar they brought out the splendid siphon-recorder for the submarine telegraph.

What a place for experiments the old room was! With wires and coils hanging about, and instruments scattered here and there, it resembled a blend of ship and alchemist's laboratory. Many a triumphal discovery in physics was achieved there by the leader and his little legion, and there

was many a disaster. Kelvin's mighty brain could see what he wanted for his inventions, he could instruct others how to do the work, and well and skilfully they did it; but when he came to use the instruments of his own devising he was too eager, too enthusiastic, too boisterous. Crash, under his trembling hands, would go some delicate instrument which loving care had wrought. Sometimes in his haste he would produce results which did not satisfy him, and, with that delightful way which always characterised him, he would say, "Faraday's result was so and so; mine is just the opposite. But Faraday, with inferior apparatus, *divined* the truth. Remember his result; not mine."



LORD KELVIN AS THE WORLD REMEMBERS HIM

Human and fallible was this great man. His failures were rare when he kept his pulsing fingers off the instruments. When the submarine cables were being laid Thomson had no official position, and we read of many names in connection with the work without realising that he was really the scientific head and front of the whole undertaking. He it was who, by the most refined calculations, worked out the theory of the transmission of electric impulses through the cable, but his position was not official. He was a director of a company representing the Scottish shareholders, and his advice was neglected.

The first cable was laid between Dover and Calais, and broke down, as he had said it would, because they tried to send too strong a current through. Kelvin found that currents of such strength destroyed the gutta-percha insulation and made electric sparks leap from the cable. Well, said his critics, what did he know about cable-laying, he who had never laid an inch of cable in his life? If his theory were correct, it would be impossible to lay a submarine cable at all. He replied that, instead of sending enormously strong currents through the cable, they must send weak currents to be picked up at the other end by extremely sensitive receivers.

Day after day he and his students were at work on schemes to prove his point, and often the Glasgow station-master would keep back a train in order that Kelvin, coming up at the last moment with a perfected instrument, might step into a carriage and be whirled away to London to show his latest device. His famous mirror galvanometer, for receiving weak currents over the cable, was his first completed telegraphic instrument. It was the most valuable instrument on board the ship which laid the cable,

but the professional electrician would not use it, substituting his own clumsy apparatus. This failed, and so he secretly used Kelvin's, pretending that the results were achieved by his own. Of course the fraud was discovered, and the man was dismissed by the company, but Kelvin pleaded for him to be retained. After the mirror galvanometer came the siphon-recorder, a still more beautiful contrivance, and the day was won. No longer did currents of immense voltage burst the cables; weaker currents, picked up by infinitely delicate receivers, were substituted and their signals automatically written down in ink. By their aid alone was the submarine cable established.

Nothing was too small or too great for this extraordinary man. He could make a scientific toy; he could pave the way for the demonstration of the grand problem of the constitution of matter; he could trace with his mind's eye a trackless path across the air through which wireless messages were to travel. He invented the standard thermometer used in thermo-dynamics. He was able to show that a thermometer on the top of a wall in a high wind registered a greater heat than actually existed, and he showed why—because the air, warmed by friction in striking the wall, becomes warmer than its surroundings, and influences the thermometer. And he explained a hundred wonderful things in Nature's secret processes.

He was asked to write a paper for a scientific journal on the mariner's compass. The mariner's compass is old. It was used thousands of years ago in China, and the Chinese, confident in its guidance, became bold exploring navigators. The Arabs, great scholars in their day, borrowed the mariner's compass from the Chinese, and themselves became mighty mariners, conquering many lands to which they were able to sail with its aid. We should never have had a great cotton industry in Lancashire had not these voyaging Arabs settled in Spain and sent their cotton products to us—to make wicks for our candles!

Well, after all these ages Kelvin was to describe the compass. He examined it, and found it so imperfect that he told his editor he must improve the compass before he could write about it, and he did. He invented an entirely new compass, used today on most merchant ships. This example of his conscientious thoroughness was characteristic of his life. He once set his students a problem, measuring the efficiency of frictional electrical machines. They brought him their result, and it did not satisfy him. "I cannot degrade a man by asking him to use his energies so wastefully; I must design something better." And he did, and the result was a new machine, known as the influence machine. Some of his most splendid work is to be found in minutely refined measuring machines for electricity, beautiful in design, masterly in conception, and possible only to a great mathematical mind. It is said that wireless telegraphy can be traced back to a calculation he made long years before wireless was thought of.

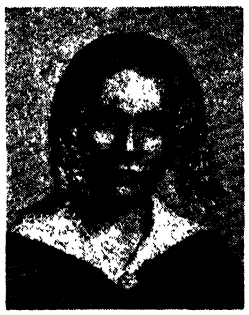
There is no branch of physics he did not touch. His devouring genius ranged through all fields. Lesser men are specialists, but his own many-sidedness made him impatient of conclusions derived from limited fields of study. One cannot but think that he would have been happiest in the company of giants such as Aristotle and Leonardo da Vinci.

Yet, universal man as he was, with all his visions and achievements, he remained one of the sweetest-natured and most tolerant men who ever lived. He begins as Willie Thomson, admiring his own pretty blue eyes; he developed into a towering figure with the humility of a saint; and he ended an unparalleled career with the word "failure" on his lips. "I know no more of electric and galvanic force, or of the relation between ether, electricity, and ponderable matter, or of chemical affinity," he said, "than I knew and tried to teach my students in my first session as professor." True greatness and humility are always allied, for the truly great man

is aware how small is his knowledge. Lord Kelvin was twice married, but though he adored children he was never blessed with any. His students took the place of children, and he was as a brother and father to them. There was something of Socrates in his methods with them. The poorest student was a prince in the kingdom of Kelvin if he would give his heart to learning. To the very end a bit of good, honest work by a student, carrying forward the studies master and pupil loved, would arouse in the veteran the same boyish delight as in younger days. Not even the great burden of years could damp his splendid ardour; he was an enthusiast to the end.



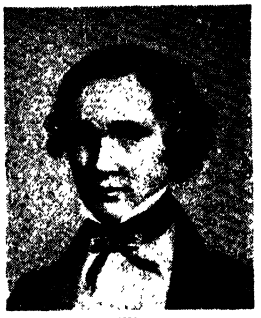
James



Elizabeth



Anna



William

BROTHERS AND SISTERS—LORD KELVIN IN HIS BOYHOOD, WITH HIS BROTHER AND SISTERS

He laid down his professorship when he was 75 years old, crowned with honours from every land. But he had another eight years to live, and he gave his time to completing books and treatises already begun in more strenuous days.

When he broke his leg, in 1860, and had to lie on his back, he could not be idle; he began a system of diaries which he never failed to complete. They were as rich in their way as the notebooks of Leonardo, and when old age drove him from his professor's chair he toiled quietly at his earlier work, and rounded off what he had begun. He, more than any other man, gave us the cable; he gave us the improved mariner's compass; he gave us a machine for sounding the depth of the sea from the deck of a fast-steaming vessel; he gave us a machine which, placed in the water, enables us to predict the tides. This machine, the product of brilliant mathematical calculations, indicates not only the time and height of high water, but the depth of water at any instant. It can be worked at such a speed that the tides for a whole year can be predicted in a few hours. The men who live and work with the help of his inventions may often not have heard of Kelvin, but men will know of him in ages yet to come. He was not only great himself, but he enabled other men in their turn to become great.



LORD KELVIN IN OLD AGE, WITH HIS BROTHER AND SISTER
From a chalk drawing by Agnes Gardner King in "Lord Kelvin's Early Home," published by Macmillan.

He vastly enriched the world by his inventions; he enriched the field of knowledge by his teaching; he enriched humanity by his precepts and his personal example. He died on December 17, 1907, and was buried in Westminster Abbey with the honours due to a prince of men, for he was greater than any king who lies beside him.

NASMYTH SKETCHES STEPHENSON'S ENGINE



ONE OF THE GREAT DAYS OF YOUNG NASMYTH'S LIFE WAS WHEN HE SAW GEORGE STEPHENSON'S ROCKET AND MADE A SKETCH OF IT IN HIS NOTEBOOK

THE HAMMER MAN

NASMYTH'S CLIMB UP THE LADDER

Long ago, in a rebellion, a strong and powerful Royalist took refuge in a smithy, and disguised himself as a hammerman. The rebels found him there, saw him make an awkward blow with his hammer, and captured him, crying, "Ye're nae smyth!"

Ever after that the valiant supporter of the king was called Nasmyth, and in the course of time there came in the line of the Nasmyth House another valiant hero who really was a hammerman. This is the story of Nasmyth and his Hammer.

AMONG the Nasymths were many people famous in history, but how varied their fortunes were is seen from the fact that while one became an Archbishop, another was burned as a witch because she kept four black cats, and read her Bible with two pairs of spectacles.

The most distinguished descendant of the original Naesmyth, however, was James Nasmyth, inventor of the steam-hammer, which can forge a mighty anchor or crack a nut without bruising the kernel. A well-known authority has described it as "one of the most perfect artificial machines and noblest triumphs of mind over matter that modern English engineers have yet developed"; and it is safe to say that without the steam-hammer few of the wonders of modern engineering could have been produced. Certainly no great engineering factory could exist for a day without its Nasmyth hammer.

Most of the great heroes of industry have originally been poor boys without influential friends, but James Nasmyth is a striking exception, for while his parents were not rich, they were quite comfortably off, and among their friends were such men as Robert Burns, Sir Walter Scott, Sir David Wilkie, Lord Brougham, and James Watt. James's father was a talented artist, whose fame is secure on account of the excellent portrait he painted of Burns, the best we have of him. James himself had the true artist's instinct, and had he not achieved fame in another sphere he might well have made a great reputation as a painter. His father, who was his teacher, used to throw down a number of bricks, and set him to sketch them. "Anyone who can make a correct drawing of such a group of objects," said he, "need not despair of making a good sketch of York Minster." James also owed something of his knowledge of art to his grandfather, Michael Nasmyth, a brilliant architect, who designed and built many of the finest homes of the Scottish nobility standing in the North today. Among other houses which he built was the one in which Sir Walter Scott spent his boyhood in Edinburgh; and he always prided himself on hanging his doors so that a mere puff of wind from a bellows would open or close them.

James's childhood was a very happy one. He and his father were great chums, and much of their spare time was spent together in a little garden workshop, fitted up with a lathe and other mechanical appliances. The elder Nasmyth was no mean mechanic, and he certainly had a vein of originality and inventiveness. When he was consulted by a friend, the Duke of Atholl, as to how a rocky and inaccessible crag could be planted with trees, he hit on a novel idea. Placing some seeds in canisters, he fired them up to the craggy summit from a small cannon. The canisters burst on the rock, and the seeds were scattered, and a few years later the duke was delighted to see trees flourishing luxuriantly in all the recesses of the cliff.

The child was taught to read by his eldest sister, and was then sent to a school in Edinburgh, where he had the only unhappy time of his life. It was in the bad old days, and the master was, as James Nasmyth tells us, both vicious and vindictive. On one occasion, for some apparent dulness,

he seized the boy by the ears and banged his head so violently against the wall that the poor little child fell to the ground stunned and bleeding. "The wretch might have ruined my brain for life," says Nasmyth. "I was carried home and put to bed, where I lay helpless for more than a week. My father threatened to summon the teacher before the magistrates, for what might have been a fatal assault on poor little me; but on making a humble apology for his brutal usage he was let off."

Sir Walter Scott Peeps Over James Nasmyth's Shoulder

Although his family was not poor, James was taught the value of thrift, and he always used to keep a penny-pig, a curious-looking animal made of earthenware, with a slit at the top, through which pennies were dropped until the pig was full. Then the money-box was smashed with a hammer.

There were no foreign stamps in those days, and so young James satisfied his collecting instinct by making a little collection of coins. He was sketching an old Roman coin one day, when Sir Walter Scott, calling on a visit, looked over the young artist's shoulder, and then asked to see his little store of treasures. The great man expressed his pleasure, and then, taking a beautiful silver coin from his waistcoat pocket, gave it to James, saying, "This is for my young brother antiquarian." The boy was delighted, for the coin proved to be a rare one belonging to the reign of Mary Queen of Scots.

How He Turned His Bedroom Into a Brass Foundry to Learn Engineering

In his father's workshop James learned the fundamental principles of engineering, and it was not long before he began to make little models. He started with tops, and no tops would spin better than his, the result being that all the boys wanted them, and sometimes he would get out of his lessons by giving a monitor a top or some other clever thing he had made.

He had two great chums at school, Jemmy Patterson, whose father owned one of the largest iron foundries in Edinburgh; and Tom Smith, whose father was a colour manufacturer and a skilful chemist. James spent a great deal of his time in the foundry, where he gained a practical knowledge of ironfounding, and from Tom and his father he learned the principles of chemistry in a laboratory attached to their house.

He was never idle; he was always making something. He turned his bedroom into a brass foundry. His furnace in the grate was made of four plates of stout sheet iron, lined with firebrick, and to get the draught he bricked up the front of the fireplace, leaving a hole at the back of the furnace for a short pipe to fit into. He used coke and cinders saved from his mother's kitchen, and in this curious furnace he was able to raise heat sufficient to melt six or eight pounds of brass in a crucible. Then he had a box of moulding sand, where the moulds were rammed in around the pattern previous to the casting.

The Little Steam-Engine that Many People Came to See

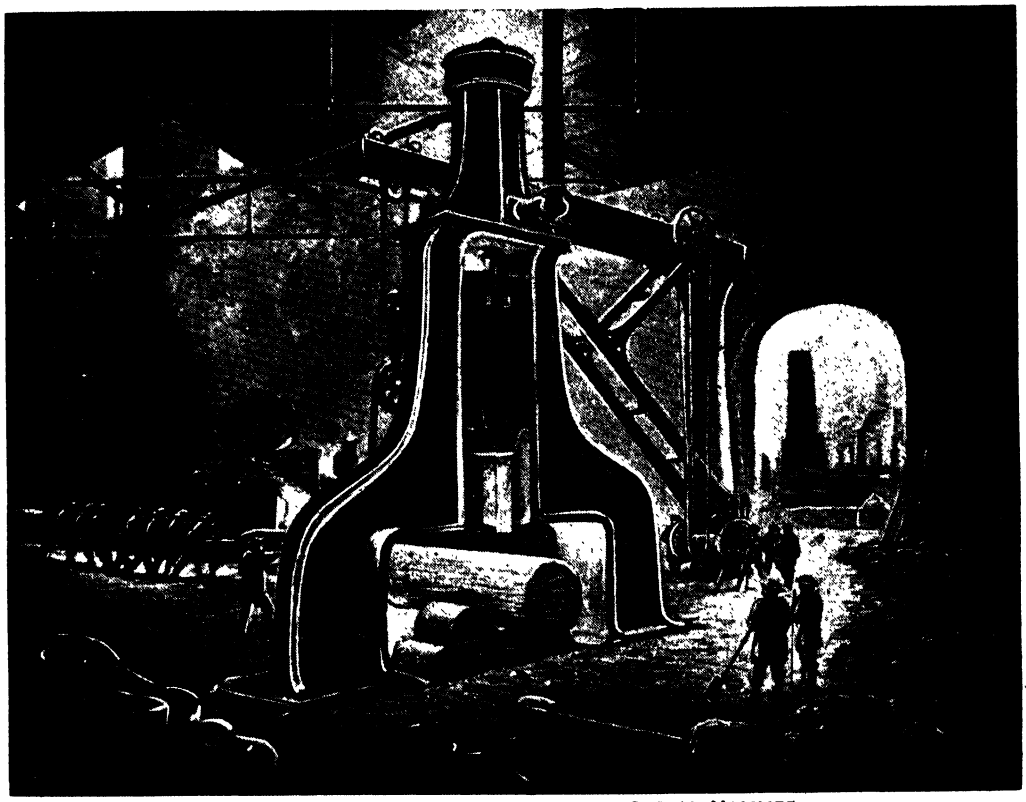
The brass used in this furnace he obtained from odds and ends in his father's workshop, and he hardened the soft metal by adding tin to it. His bedroom was over his father's, and often he would sit up late into the night, working at his brass foundry until his father knocked on the ceiling as a hint that he was to go to bed. It speaks well for his carefulness that, after he had done his casting and cleaned up the room, nobody would have known that foundry operations had been carried on there.

James now made a little working steam-engine to be used by his father in grinding his colours for painting, and the result was so satisfactory that many people came to see the engine working, and some ordered similar models, for which James charged £10 each. He had left school, and was now attending classes at Edinburgh University, and all his mechanical work was done in the early morning or late at night. About this time there was a great deal of talk regarding the possibility of running

steam-carriages on the roads, and many attempts had been made to construct a suitable machine. James tried his hand, and made such a successful model that the Scottish Society of Arts paid him £60 to build a full-sized carriage that would take six people. He set to work, and in four months made a steam motor-car that carried eight people four or five miles, and ran regularly for several months. The society was delighted, and made a present of the car to the inventor, who, needing money for further inventions, dismantled it and sold the engines and boiler for £67.

He was now anxious to do serious engineering work, and decided to try to get as an apprentice into the great London engineering works of Henry Maudslay. He has told us the story himself in his fascinating and modest Autobiography. On May 19, 1829, he set sail with his father from Leith, carrying with him to London some models and working drawings to show to Mr. Maudslay. Early one morning they set out for the great engineer's house, and were ushered in. "Well," said Mr. Maudslay, "I must frankly confess that my experience has been so unsatisfactory that we have determinded to discontinue to receive apprentices no matter at what premium."

This was a terrible blow for James. All his hopes seemed to be shattered, but he was delighted when Mr. Maudslay invited them to walk round the works. In one part there was a steam-engine at work, and James, seeing a man cleaning the ashes from the furnace, cried out to Mr. Maudslay, "Oh, if you would only permit me to do such work as that, I should consider myself most fortunate." "So you are one of that sort, are you?" said Mr. Maudslay, with a keen and kindly smile. Then the shy youth plucked up courage to tell the great man that he had brought with him



NASMYTH'S OWN DRAWING OF HIS GREAT STEAM HAMMER

from Edinburgh some working models of steam-engines and a number of drawings, and would be greatly honoured if he might show them.

" By all means," said Mr. Maudslay. " Bring them to me to-morrow at twelve o'clock."

James was now greatly elated, and the next day he took them on a hand-cart to the works. He was asked to wait while Henry Maudslay and his partner examined them. Then Mr. Maudslay came in, and, opening a door into his private workshop, said : " This is where I want you to work—beside me as my assistant. There is no need of an apprenticeship."



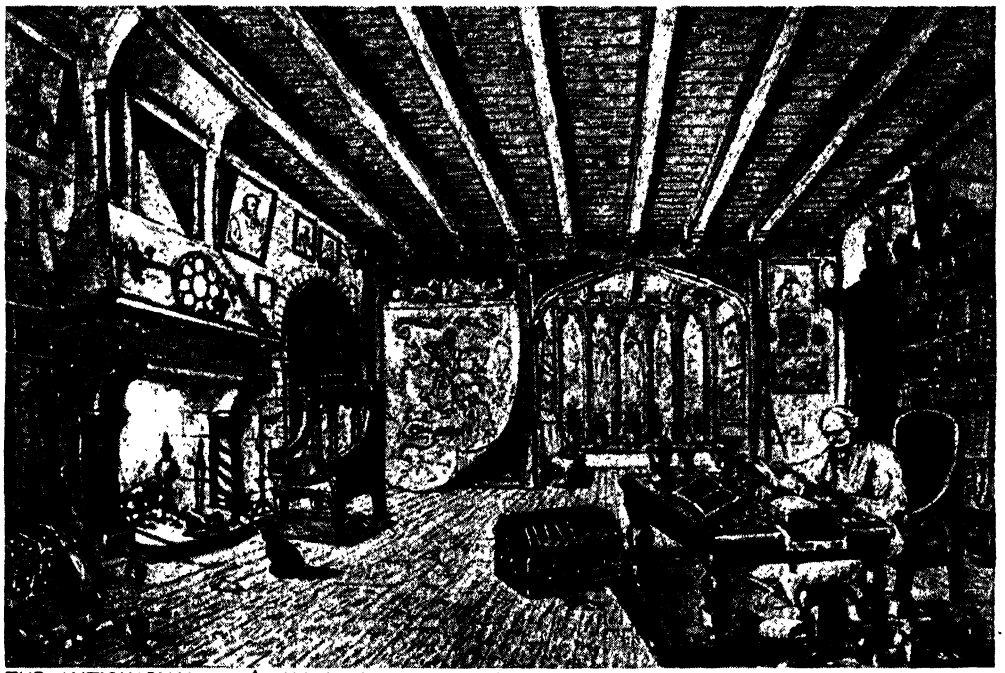
THE HAMMER MAN AND THE FAIRIES—JAMES NASMYTH'S QUAINT DRAWING OF A FAIRY REVEL

In that workshop was probably the finest collection of appliances in existence then, and young Nasmyth felt that he had reached the seventh heaven of delight. For about three hours Mr. Maudslay kept him in conversation, initiating him into the mysteries, then he told him to take a week's holiday and go round with his father seeing some of the sights of London. " James," said his father when they parted at last, " you will find that, though there are many dirty roads in life, if you use your judgment you will always be able to find a clean crossing."

James now had a very pleasant and busy time. His wages were ten shillings a week, and as he had determined to cost his father nothing he had to be very economical. To dine at an eating-house was too expensive, so he constructed a cooking apparatus consisting of a pan, an outer case, and an oil-lamp. Every morning he put into the pan a piece of meat and some vegetables with a little water, and left a small light burning beneath. At lunch-time he ran home for a moment to see that things were going well, and at night the dinner was cooked and waiting to be served. The whole cost of his dinner was 4½d. a day, his breakfast cost 4d., and his tea cost the same, and his weekly rent for one room amounted to 3s. 6d. After a year his wages were raised to fifteen shillings a week, and he then began to indulge in the luxury of butter with his bread. The little cooking apparatus James Nasmyth kept throughout his life, and he has left it on record that when

he tried it out of curiosity, after it had had a rest of fifty years, he found it yielded results quite equal to his grateful remembrance of its past services.

During his three years at the Maudslay foundry, Nasmyth worked hard. His time for leaving was six o'clock, but he would stay till eight to go about the works and learn all he could. When he was given a month's holiday, he spent it travelling in the great industrial centres, and, among other things, he saw the trial of George Stephenson's Rocket, with



THE ANTIQUARIAN—A DRAWING BY JAMES NASMYTH. THE ACCOMPLISHED JACK-OF-ALL-TRADES

The chief source of our knowledge of Nasmyth is the enthralling autobiography published by Mr. John Murray, from which most of these pictures are taken.

George driving and his son Robert acting as stoker, and he made a careful drawing of the locomotive while it stood at rest.

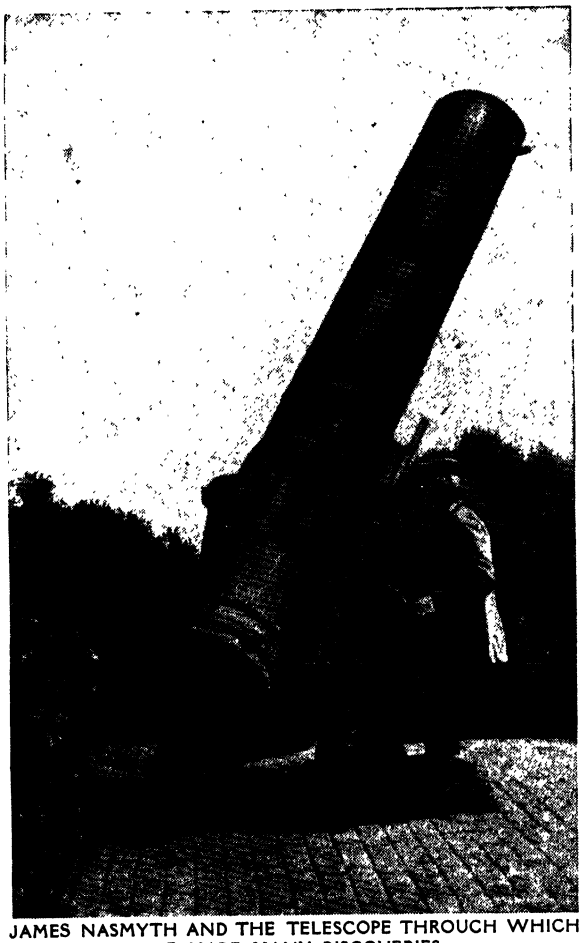
Nasmyth had long nursed the idea of being able to start in business for himself, and soon after the death of Henry Maudslay he decided to take the great step. Going to Edinburgh, he rented a small piece of land and built a little workshop 24 feet long by 16 feet wide, and here, in what was little more than an outhouse and with a single assistant, he began one of the greatest engineering businesses in the world. His little establishment was never intended to be more than a temporary resting-place, and Nasmyth soon began to look round for a place in which to settle. He decided on Manchester, where he rented the second floor in a disused cotton-mill, the space being 130 feet long by 27 feet wide, and the rent £1 a week. It was in Manchester that he met some very good friends, They were three brothers named Grant, who owned a cotton-mill, and they were the originals of the famous Cheeryble Brothers of Dickens's "Nicholas Nickleby." James was invited to dine with them, and, after listening to his plans and encouraging him to go on, one of the jolly old gentlemen patted him on the back and said, "Keep your heart up, and if ever you want any money on Saturday nights to pay wages or other expenses, you will find a credit for £500 at 3 per cent. at our office, and no security will be required."

What encouragement these kind words gave to the young engineer! He went ahead. He moved his

machinery to Manchester, and business poured in. But there were troubles to overcome. His workmen drank and idled, but this only led to the invention of more machinery. "The machines never got drunk," he says; "their hands never shook from excess; they were never absent from work; they were unfailing in their accuracy and regularity."

The tenant who had the floor beneath him was a glass-cutter, and before long he became greatly alarmed by seeing pieces of plaster fall from the ceiling. He thought the rafters were giving way, and expected that before long the machinery would come through and crash upon his cut-glass ware. And, unfortunately, the poor man was not far out in his forebodings.

One day James Nasmyth received an order for a high-pressure steam-engine of twenty-horse power. At first he feared he could not undertake the business, for the size of the engine was too great for the height of his workshop. Suddenly the bright idea struck him to build the engine on its side, and it was not long before he set his men to work. The engine was built in this curious position, and then the workmen began to take it to pieces for despatch to its destination. Suddenly a beam crashed through the floor, scattering lath and plaster and dust, and scaring the poor glass-cutter almost out of his life. He rushed off for the landlord, who came, and told Nasmyth very kindly but firmly that he had better look out for other premises or the whole building would collapse. "Besides," said he, "you must have more convenient premises for your rapidly extending business."



JAMES NASMYTH AND THE TELESCOPE THROUCH WHICH HE MADE MANY DISCOVERIES

Some time before, Nasmyth had noticed a piece of land at Patricroft, covering about six acres, with the Bridgewater Canal on one side, the Liverpool and Manchester Railway on another, and a good road on a third side. He took a 999 years' lease of it, set to work exploring, discovered a fine bed of clay, and with it made bricks for his buildings, so that the factory may be said literally to have risen out of the ground. A small cottage close by was rented at £15 a year, and this modest place became his home until he retired from business. One of his first inventions at the new factory was a safety ladle for pouring out white-hot metal. Up to then the ladle was turned by means of cross handles, and terrible accidents happened to the workmen. Nasmyth devised an arrangement of screws and wheels by which one man could with perfect safety handle a ladle, and turn it at will. This invention was a great one for the iron industry, and with

true generosity he gave it and another safety invention for the ladle to his countrymen freely.

Now came the greatest of all his inventions, one of the greatest engineering inventions of the nineteenth century. This was the steam-hammer, and its story is a very curious one.

The Great Western Railway Company decided to build what was then a very large Atlantic liner to ply between Bristol and New York, to be called the Great Britain. The engineer visited the Bridgewater Foundry, as Nasmyth's factory was called, to consult with Nasmyth about special tools, and the tools were made, but when the time came to forge the great wrought-iron paddle-shaft, larger than anything of its kind previously made, it was found that there was not in the whole of England or Scotland a forge-hammer powerful enough for the work.

The Sketch in a Notebook that Gave the World the First Steam-Hammer

"What am I to do?" asked the despairing engineer. Up to this time forge-hammers had worked on the see-saw principle, but no great range of action could be given to them, and the result was that if large masses of iron were placed under the hammer very little space was left above for the hammer to move in, and the blows were feeble. What could be done? James began to think furiously.

The obvious remedy, he said, was to contrive a method by which a ponderous block of iron should be lifted high above the object on which it was desired to strike a blow, and then to let the block fall down on the forging, guiding it in its descent by such simple means as should give the required precision in the action of the falling mass. Following up this idea, he took out his "Scheme Book," and in half an hour he had sketched out his steam-hammer. Nasmyth wrote to the engineer of the Great Western Company and sent a sketch of his hammer, but just at this time screw propellers were taking the place of paddle-wheels, and it was decided to make the Great Britain a screw steamer. This led to the shelving of the steam-hammer, which remained a mere sketch on paper.

Some time afterwards Nasmyth happened to be in France, and visited the famous Schneider works at Creusot, the Woolwich Arsenal of France. Schneiders had been good customers of the Bridgewater Foundry, and had purchased a number of machines from them. Going round with one of the partners, Nasmyth saw a wonderful marine engine-crank of great size that had been forged with a remarkable degree of exactness.

How Nasmyth was Astonished to See His Steam-Hammer Working

"How was that crank forged?" he asked with astonishment.

"By your steam-hammer," was the cool reply.

"My steam-hammer!" exclaimed the bewildered Nasmyth. "What do you mean?" He did not know that, during the visit of one of the Schneiders to the Bridgewater Foundry, he had been shown the sketch of the proposed steam-hammer. The Frenchman had immediately gone back, made a hammer, and patented it in France in his own name. This was now explained to James, and he asked to see the hammer. He was delighted with its wonderful working capacity, but became greatly alarmed lest he should lose the benefits of his invention. To secure a patent in those days cost nearly £500, but he hastened home, borrowed the money, and patented the steam-hammer.

The Lords of the British Admiralty Wake Up in a Shower of Sparks

A boom in the iron trade at this time led to a demand for the new appliance, and orders flowed in. Nasmyth's fame became world-wide, and foreign admiralties hastened to obtain steam-hammers. The British Admiralty, however, were asleep; they would have nothing to do with such a new-fangled notion for a long time; but at last, after appointing a committee of investigation, they ordered one for Devonport Dockyard. Nasmyth went down to see to its erection, and while he was there the Lords of the Admiralty arrived for their annual

inspection. Having come late, however, they could not go all round, so they asked the superintending admiral if there was anything specially interesting that they could look at.

"Mr. Nasmyth's hammer is just being started," said he, and off they went to see it. Nasmyth himself gave a demonstration of its power. First of all he made the hammer crack an eggshell in a wineglass without injuring the glass. "It was as neatly effected by the two-and-a-half-ton hammer," says Nasmyth, "as if it had been done by an egg-spoon." Then he had a great mass of white-hot iron swung out of the furnace upon the anvil-block, and the hammer rained down a quick succession of ponderous blows, sending showers of sparks in all directions, and scattering the Lords of the Admiralty.

The Great Pile-Driving Race and How Nasmyth Won It

Nasmyth now determined to adapt his hammer to pile-driving. This idea was laughed at as ridiculous, and a contest was arranged at Devonport Docks, where a great scheme of extension was in progress. Thousands of enormous piles had to be driven deep down into the silt of the shore, and by the old system of tilt hammers a very long time would be occupied in this. Nasmyth made two machines, and when these had been placed in position the competition began.

Two piles of logs of equal size and length were provided, and Nasmyth in one place, and the men who were to work according to the old method in another place, set to work. Who would win the race? Opinion was very much divided till Nasmyth's machine began. Then the people rubbed their eyes in absolute amazement, for apparently a miracle was taking place. The four-ton hammer showered down blows at the rate of eighty a minute, and in four and a half minutes the first pile was driven down to its depth. It was unbelievable. The men working with the old-fashioned machinery took more than twelve hours to complete the driving of one similar pile. There was no doubt now; it was the greatest triumph of Nasmyth's life, and orders for hammers and pile-drivers came in from all parts of the world.

The Wonders of the Heavens that Drew Nasmyth from His Foundry

By 1856, when he was 48 years old, Nasmyth had made a substantial fortune, and he then retired from business, bought a beautiful house in Kent, and settled down to study. From childhood he had been keenly interested in astronomy, and at 19 had built his first telescope. At the British Association one year he lectured before the Physical Section on the moon's surface, and illustrated his remarks with models of the lunar landscape made by himself. Such a stir and interest did the lecture create that he was asked to repeat it later before the whole association.

Astronomy, which had been the hobby of his early life, became the chief study of his later years. He built a new and powerful telescope from his own designs, on a novel principle, and had the spindle on which it turned made hollow to admit of the eye-piece, a device which Sir David Brewster praised. Through this telescope Nasmyth made a special study of the sun's surface, and he was the first to draw attention to the fact that the surface of the sun is mottled. He described the appearance as "willow leaves," though astronomers now generally speak of this phenomenon as "rice grains."

A Great Jack-of-All-Trades and a Master of Many

Nasmyth also interested himself in archæology and paintings, and it was not without reason that in his childhood he was called by his friends "Little Jack of All Trades." He proved, however, an exception to the rule by being really master of many.

He cared nothing for money for its own sake. He was one of the kindest of men in all his relationships, and his bright, cheerful disposition in every kind of circumstance was infectious. He died in London in 1890, leaving a name that men will not forget.

LUDWIG BEETHOVEN

What a humiliation, when anyone standing beside me could hear at a distance a flute that I could not hear, or when anyone heard the shepherd singing, and I could not distinguish a sound!

WHAT heart is not stirred by this cry of despair from Beethoven, from the heart of a man who gave the world some of its noblest music. Was there ever a greater, sadder irony than that Beethoven, king of composers, never heard a sound of the grandest works of his later life, that third period of his career in which he wrote the wonderful compositions which were described as being of unearthly beauty? His harmonies fill our hearts with happiness, yet he himself was so utterly deprived of hearing that, when he conducted his works in public, his friends had to take him by the shoulders and gently turn him round so that he might face the audience and *see* the signs of their rapture, of which his stricken ears could not inform him.

Loving his music as we all must, we value and treasure it the more when we know something of the career of the man who wrote it. The story of Beethoven's life is tinged throughout with sorrow, but so brave was its hero that after this lapse of time we may read the story without distress, and receive a fine message of inspiration from its pages. Ludwig, or Louis, van Beethoven was born at Bonn, in Prussia, in December, 1770. The town possesses a well-known university and a cathedral church, which has an interest for us, as it was founded by Helena, the empress-saint, mother of Constantine the Great, who is supposed to have been the daughter of a Yorkshire tavern-keeper.

Ludwig's father was a tenor singer, who gained his living as a chorister in the church at Bonn, the Archbishop-Elector of which, in those days a high dignitary of the Church and a prince of the German Empire, ruled both church and city. In the same choir was Ludwig's grandfather, a fine old man, who was still singing bass when the boy was born. He died when Ludwig was only four, but the child loved him and never forgot him. Little did the old man dream that the baby boy would make him immortal, but so it was. When Ludwig became famous, men who had known son, father, and grandfather wrote down their recollections of the kind old man; and to-day, nearly a century and a half after that cheery old singer's death, we are able to describe him, to tell of his active, happy ways, and his keen, bright eyes. Little Ludwig inherited eyes like his grandfather's, and the same short, active, powerful figure. Nearly all musicians are remarkable for their eyes, just as was Beethoven. His eyes were small but piercing; he could look terribly fierce and alarming, but when he was happy and broke out into one of his jokes, his eyes simply danced with fun, and lighted up his stern and eager face.

John Beethoven, Ludwig's father, was a poor type of man. He was very intemperate; he was harsh, grasping, and cruel. He was always poor, for his salary was small, and he made himself still more poor by his wretched habits. Ludwig's mother had been a cook, and, before meeting John Beethoven, had married a valet, who had died. She was a woman of kindly nature but weak character, who meant well, but could do little for her children. But little Ludwig loved her, and when she died, while he was still a youth, he wrote a letter concerning her full of tenderness and charm. But though he loved his father, too, "my poor, dear father," as he afterwards wrote, the relations between these two were very different from those of mother and son.

Mozart was fourteen when Ludwig was born, and he was the talk of musical Europe. He had made a tour, giving concerts, when only six years of age. Now, thought John Beethoven, if little Mozart could do this, then little Beethoven must be trained to do the same; the boy should become in time a money-making machine to keep his father

in luxury and idleness. This would be better than John's having to sing for thirty pounds a year, which was, in our money, the sum that the drunken chorister received in wages. So, when Ludwig was little more than four years of age, his father set him to work at music, teaching him to play both the violin and harpsichord.

HOW LITTLE LUDWIG HAD TO BE WHIPPED BEFORE HE WOULD PRACTISE

Perhaps it was on account of his father's methods, or perhaps it was because his genius had not yet ripened, but, at any rate, little Ludwig did not take readily to music. He had many a whipping to make him practise, and he did not equal Mozart and other child marvels by performing in public at six ; to the disgust of his father, he was a great grown-up fellow of seven before he played at his first concert.

The elder Beethoven must have thought himself a most unfortunate man. Ludwig received little schooling of the ordinary sort, for he had said good-bye for ever to the class-room by the time that he was thirteen. His father's lessons ceased when the boy was nine, for by that time Ludwig knew all that his parent could teach him. Other men in the choir, however, gave the bright boy lessons, and one of them taught him French and Latin and Italian. But it is a good thing that Ludwig mastered his music better than his foreign languages, for when he tried to write French, as a grown man, the result was very amusing.

An important step in his education came when, at eleven years of age, he was appointed assistant organist at the Court chapel, where, in the absence of his master, he was left in charge, and did so well that the master reported that the boy would make a second Mozart, and deserved assistance to travel. Soon afterwards the boy was given an appointment in the orchestra of the Court theatre, and though he was not paid either for this or for the organ-playing, he gained experience and practice which were of great value to him.

THE BOY WHO WAS TO "MAKE A NOISE IN THE WORLD"

He had already begun to compose music. His first composition that can be traced, published when he was thirteen, was said to have been written when he was ten. When Ludwig was fourteen he was given a salary of fifteen pounds a year, and three years later some friend, it is supposed, paid for him to go to Vienna. He went to see the hero of his dreams, Mozart, who at thirty-two was at the height of his fame as a composer, and was within three years of his miserable death.

The boy asked to be allowed to play to the great genius, and Mozart, who was full of trouble at the time, consented. Thinking that the piece which the boy played had been carefully prepared, he did not pay much attention to it. The lad was quick to notice the effect, and begged that Mozart would himself suggest a theme on which he should play. This Mozart did, and Ludwig played with such wonderful skill that the composer, stepping softly into an adjoining room where his friends were, said, "Pay attention to this boy, for he will make a noise in the world some day or other."

But the day had not yet come, for Beethoven had to borrow money to pay his way back to Bonn, where his mother was dying. The outlook was now very sad and gloomy, but at this time Ludwig made the acquaintance of a delightful family named Breuning —a widowed lady, with three young sons and a daughter, with whom he remained on terms of friendship till his life's end.

HOW NAPOLEON'S ARMY FRIGHTENED AWAY BEETHOVEN'S FRIEND

The Breunings arranged for him to give lessons to two of the children; they had him up at their house, took him out visiting, introduced him to people of influence, made him read good books, and generally brightened his life and opened new avenues of knowledge and happiness to him. The Breunings understood the talented youth, and, without letting him have all his own way, made allowances for the moodiness and fits of temper which had already begun to show themselves in a genius who had had no proper training at home.

Ludwig's position improved, but that of his father became worse. The elder man's habits were becoming still more deplorable, and his voice was becoming less and less valuable to the choir, and the son, at nineteen years of age, became the chief bread-winner of the family. By 1792 his employer, the Elector, was brought to realise that young Beethoven really was a genius, and that he ought to go to Vienna to complete his musical education. So to Vienna he went, arriving there when he was nearly twenty-two. Two months later his father died, leaving two younger brothers practically dependent on him. Whatever allowance Beethoven may have received stopped in 1794, for in that year Napoleon's army entered Bonn, and the Elector fled.

Beethoven went to Haydn, who, after the death of Mozart, reigned as the greatest

composer of the age. The young man did not understand the elder, and it is certain that Haydn did not realise the splendid talents of Beethoven, so that the two were never very friendly. It is believed, however, that Haydn befriended Beethoven by mentioning him favourably to people of influence. Beethoven managed to obtain lessons in other quarters, but his instruction was slight when we consider the wonderful use to which he put it. His talent as composer and pianoforte player was now asserting itself. He was a marvellous pianist, the greatest of his day. It was not merely that he could play perfectly the most difficult of nobility, so they welcomed him, apart from his talents, as one of themselves.

They found him a trial, however. He was nervous and sensitive, and full of ill-humours. His nerves must have been affected, even at this time, for he behaved in the most extraordinary way even to his best friends and well-wishers. On the least excuse he would storm and rave and insult his host and hostess and their guests, and stamp out of the room. He would suddenly leave houses at which he was afforded free residence, to betake himself to mean lodgings. He quarrelled with everybody, to his own great injury. Few people understood him



BEETHOVEN, AS A BOY OF SEVENTEEN, PLAYING IN THE HOUSE OF MOZART AT VIENNA

music at sight—many players could do that—but he could extemporise, or compose music at the piano, on the spur of the moment as no other man could.

He sat at the piano and composed as he played, evolving masterpieces of creative genius and beauty such as no other musician could equal. He became famous, and society courted him; Beethoven became the rage, as we say, in the houses of the rich. He was helped by an accident. His name was *van* Beethoven. It meant nothing in his case, for his family was poor and of no account; but the great people of the Austrian capital thought that the *van* meant a title the Breunings did, and there was one generous nobleman who did, and when the composer had run away in his ill-humour he would say, "Leave his room as it is; Beethoven will come back." And he would go back after a time, then flare up and depart again.

He was always changing his lodgings, when absent from the houses of his friends. At one place the other lodgers could not put up with the noise that he made. He had a loud, harsh voice, and when he was composing he used to "roar" his tunes, beginning at half-past five in the morning. He scribbled his music all over the walls,

and upon everything that he could lay his hands on. He would pause when washing, a melody having struck him, and while he fixed the tune by "roaring" it, he would pour the water from the jug over his hands, and let it run all over the floor, to the ruin of the ceiling beneath. He was terribly untidy in his habits, and lost to everything but his music. Entering a restaurant for dinner, he would sit down and write music on the menu, forgetting all about food, then jump up, and offer to pay for his meal, only to find that he had had nothing to eat. His servants were a constant trouble to him, as he must have been to them. They worried him in all sorts of ways. He retaliated by pouring soup over one, by throwing eggs at another, and by other unamiable tricks.

Such was his life while he was composing music that was to live for ever. But when he was twenty-six he found that deafness was beginning to steal upon him. It attacked first one ear, then the other. He was greatly grieved, but he kept it secret as a proud man keeps secret the knowledge of a deadly ailment.

THE TERRIBLE DAY WHEN BEETHOVEN PASSED FROM THE WORLD OF SOUND

But as time went on, his friends noticed that Beethoven, who had always been so still when playing the piano, now began to stoop a little over the keys; that was in order to catch the sound of the notes that he played. But he would not confess what ailed him, though he tried doctor after doctor and quack after quack. He knew that his hearing was leaving him, and the thought almost drove him wild. Noises distressed him. People calling unexpectedly upon him found him dressed in a rough, ragged old suit, with his ears plugged with wadding. They thought it one of his peculiarities; they did not understand that he was trying to spare his ears from all sounds which he thought would hurt them.

Napoleon was striding at this time across Europe, laying the cities waste, and presently his army came thundering at the walls of Vienna, and the poor composer hid in a cellar. It was not that he was a coward, or that he feared to lose his life; he was terrified lest the sound of the cannon should shatter the last remnants of his hearing, that the man whom he had once worshipped should complete his ruin. For he at one time regarded Napoleon as a great hero, and wrote one of his finest works in his honour. He dedicated it, "To Napoleon Bonaparte, from Louis van Beethoven." Napoleon was at the time only a great general. Soon afterwards he was made emperor, and this enraged the composer, who thought that Napoleon should not have accepted any such position, so he immediately tore up the dedication.

THE FINAL BLOW WHICH SHUT OFF A GREAT MAN FROM THE LIVING WORLD

While his deafness was growing upon him, Beethoven's life became increasingly sad. He grew more and more irritable and quarrelsome, for it seemed to him that his lot was too hard to bear. He knew how he pained and grieved his friends and admirers, but he knew also that they did not understand how great were his sufferings. He was too proud to tell them, too proud to seek their sympathy, but let himself be considered a bore and half a maniac. The hearing entirely left one ear, and he used a trumpet for the other, in order that he might hear the band when he conducted. But conducting became a tragedy. In a soft passage he would crouch down at his desk so as hardly to be seen, and when he wished the band gradually to swell out in tone he would slowly rise on tiptoe and then spring into the air, as if to force from the musicians the effect that he sought. And it would happen that in so conducting he would lose his place on the score, and would be reading one part of the composition while the band was really playing another, so that his antics made a comic tragedy.

At last his condition became so bad that he could not hear at all. He had to give up conducting; he could not even converse with his friends by word of mouth, but had to get them to write down on paper what they would say to him. He was shut off from the living world, and it was then that he wrote the bitter cry with which this story begins.

HOW THE SOUL OF BEETHOVEN FELT THE MUSIC HIS EARS COULD NOT HEAR

And he wrote a piteous letter to his brothers, which he intended to be read after his death, telling them of his sufferings, how his heart had yearned for friendship and love, but how his illness had shut him out from society to pass his time in seclusion. He had once had such acute hearing, he said, he could not say to people, "Speak louder—bawl, for I am deaf!" And the letter goes on, "O God, Thou lookest down upon my misery, Thou knowest that it is accompanied with love of my fellow-creatures and a disposition to do good. O men, when ye shall read this,

think that ye have wronged me; and let the child of affliction take comfort in finding one like himself, who, in spite of all the impediments of nature, yet did all in his power. . . . I go to meet Death with joy. If he comes before I have had the chance to develop all my abilities, he will come too soon for me, in spite of all my hard fate, and I should wish that he had delayed his arrival. But even then I am content, for he will release me from my sufferings."

But his work was not done, nor were his sufferings ended, when that letter was written. Indeed, his most glorious compositions follow that letter. He could no longer hear by mortal means; shall we say that he developed a spiritual hearing? He *felt* the music that he wrote. It was of no use his roaring or crashing at the piano; not a note was to reach his brain again in life; but in his heart the music echoed, and all the glories of his later work are from a deaf man's soul. But new sorrows crowded upon him.

THE BOY FOR WHOM BEETHOVEN LIVED AND LOVED AND SUFFERED

He had two brothers, unworthy men, and one of these at his death committed the care of his only son to Ludwig. The composer never married, but he lavished all the affection of his great loving heart upon his nephew Carl. For the boy's sake he reduced himself to poverty. He invested all his money and set it aside for the boy. He underwent serious privation at times, for though he was never without money, yet, owing to the horrible war, Austria had practically no gold money; she had to issue banknotes, and these became reduced in value, so that five shillings became worth only one, while food and all the other necessaries of life enormously increased in price. But the hero suffered poverty rather than draw upon the sum which he had saved for his nephew.

He spent a large sum in getting possession of the child. Carl's mother was not, in the composer's belief—and he seems to have been right—worthy to have charge of the bringing up of the boy, so they fought numerous law actions before Beethoven obtained control of the boy. And then it was clear that Carl inherited all the weaknesses of the family, and none of the virtues. He was a failure at school because he would not try. He failed at college, he failed even when set to learn a trade, and brought himself into such disgrace that he was ordered by the police to leave Vienna and never return. He proved himself thoroughly heartless, cruel, mean, and grasping, without a spark of affection for his devoted uncle, seeking only to get all he could without making the least return. For a long time Beethoven shut his eyes to his nephew's faults, but at last was forced to recognise them. He blazed out one day in his wrath, as was his way, then immediately set to work and wrote a will leaving the scamp everything he possessed.

A GREAT MAN'S LAST PRAYER THAT GOD WOULD BLESS THE ENGLISH PEOPLE

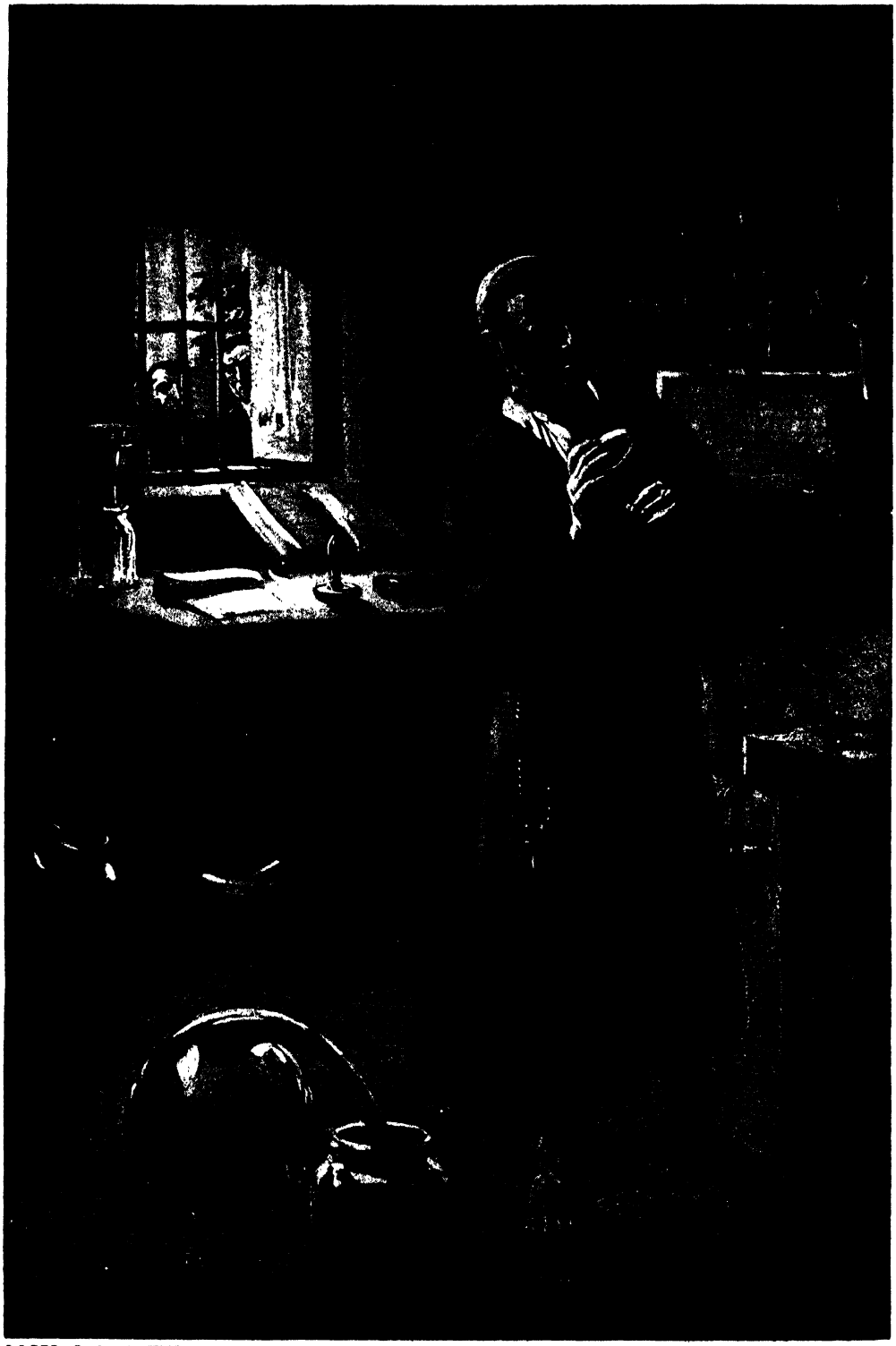
When Carl was ordered out of Vienna, the composer went away with him, to a village fifty miles away, to stay with his other brother. There he remained for a couple of months. The niggardly brother would not let the composer have a fire in his room during the bitter weather of December, so Ludwig, taking his nephew with him, and braving the terrors of the police, set out to drive back to Vienna. He had to perform part of the journey in an open carriage, and caught a violent cold. He took to his bed on reaching home, and never again left it alive.

In his last illness all his thoughts were for his nephew. Rather than touch the money which had been invested for him, he wrote to the Philharmonic Society in London asking them to arrange a concert in England for his benefit. The society agreed to do so, and sent £100 in advance. This reached him nine days before he died, and on the day of his death he was talking of the Philharmonic Society and of the English nation generally. "God bless them!" he said, and those were almost the last words that he spoke. He died on March 26, 1827, in his 57th year.

THE "FEW NOTES" WHICH WILL BE HEARD AS LONG AS MUSIC LASTS

In that hour music lost her greatest son. He did not develop quickly, like Mozart and Mendelssohn; his growth was slow, and his work was not hurried. Although he was always composing, he did not publish all that he composed, nor a tithe of it. When an idea came he jotted it down, but he so altered and improved that, if his old notebooks did not exist, we should never believe from what simple beginnings his masterpieces were evolved. Never has a man possessed more glorious genius, but never has a man taken greater pains. What would he have given to have heard the full glory of his own creations in those darkened years when first playing, then conducting, then hearing itself were denied him!

A MODERN MAN WHO LIVED IN ANCIENT TIMES



ROGER BACON, THE MAN OF MAGIC AND MYSTERY, AT WORK IN HIS CELL, THINKING OUT THE IDEAS OF THE FUTURE

ASTONISHING ROGER BACON

WONDER MAN OF THE MIDDLE AGES

OUT of the murk and terror of the Dark Ages looms a towering figure—not a king, not a warrior, but a plain man. Roger Bacon was only a friar, a member of the Franciscan Order, sworn to poverty, brought at times to the verge of starvation; yet he was one of the most glorious figures of his age, a man of eagle vision among the bat-like scholars of those days. With a twentieth-century mind lighting up a night of gloom, this valiant hero braved the terrors of persecution and thundered against the ignorance, folly, and superstition of the world about him. Bacon was a sort of intellectual steam-engine; he took all knowledge for fuel, the good with the bad, the false with the true, and converted it into a tremendous driving force for learning. His own studies led him frequently into errors, and he made blunders, here and there, at which even the youngest scholar may smile today; but for every mistake he made he corrected a legion. And, in spite of all, he was the true founder of modern science. The most mysterious and romantic figure of his age, he was feared, hated, and distrusted then, but he built up his life so that he is beloved by scholars today more than any other man of his time.

Roger Bacon was born in the neighbourhood of Ilchester, Somersetshire, in or about 1214, of a wealthy family, whose fortunes had been broken in the wars of the time. He came into the world when England had reached a crisis in her history. King John was on the throne, and Magna Charta, the foundation of our national liberties, had not been signed. It did not come into existence until the year after Bacon's birth. Robin Hood and his bold foresters were in the woods, as were thousands of other desperate men, driven out of civilisation by tyranny and injustice. The bulk of the people were serfs. The Saxons and their Norman conquerors were not yet amalgamated into one nation. Learning was at its lowest ebb in England, as in other countries. The age across which the torchlight of Roger Bacon was to flash was steeped in ignorance, of which rich and poor alike were the victims, the rich from choice, the poor because there was none to teach them. There were a few good men, mainly priests and monks, who sought knowledge, and to whom did they have to turn for the source of learning? To the Arabs! To the sons of the deserts, the ancestors of the poor, ignorant fanatics with whom Italy once went to war in Tripoli.

The Arabs were the great masters of scholarship in the times to which Roger Bacon was born. They kept learning alive when, but for them, it would utterly have died out in the Western world; and our great scholar, our ardent Christian monk, became the pupil of these followers of Mohammed, who considered every Christian an unbelieving dog. It is a marvellous story.

The Arabs rose to power as the strength of Europe declined. Constantine had transferred the capital of the Roman Empire to Constantinople, and Rome and the rest of Europe fell slowly into barbarism. Charlemagne, who died in 814, was the last great emperor to reign in Rome. At his death his empire crumbled away into provinces and petty kingdoms, where each lawless lord governed according to his will. Most of the learning of Europe was imprisoned in Constantinople, sealed within a citadel. European society became divided into castes of warriors, monks, peasants, and serfs. City life on a great scale ceased; churches and monasteries and abbeys were built, but not public edifices, nor bridges, nor roads. Cultivated lands became waste, and parts of Italy, the Italy of the Roman conquerors of the world, degenerated into wilderness and savage forest. Travelling was difficult and dangerous; there were few avenues by which learning could march. Latin, which had been common throughout



Europe, became the language of a few scholars only. New languages sprang up; there was no longer a common speech, it was as if the fate of the builders of the Tower of Babel had descended upon Europe.

While these deplorable things were happening in Europe, the Arab power arose. At first it was a military power. After the conversion of the nation by Mohammed, early in the seventh century, the Arabs spread far and near, sword in hand, killing or converting all with whom they came in contact. They established themselves in Persia, Palestine, and Mesopotamia, in Egypt and the north of Africa, and throughout Spain and other parts of Europe. Then they gave themselves up for five hundred years to scholarship. They gathered to themselves the wreckage of the civilisation and culture which were falling to ruin around them. They rescued the written works of the great scientists and philosophers of Greece and Rome; they translated them. They made independent studies of their own; they became teachers of the world in medicine and surgery, in chemistry, in geography. They established noble schools and libraries; and, whereas a monastery was considered extraordinarily rich if it possessed three hundred volumes, one of the Arabian rulers had over six hundred thousand written volumes in his library.



THE MAGIC OF THE MIDDLE AGES—A WIZARD BEING CONSULTED IN HIS MAGIC CIRCLE

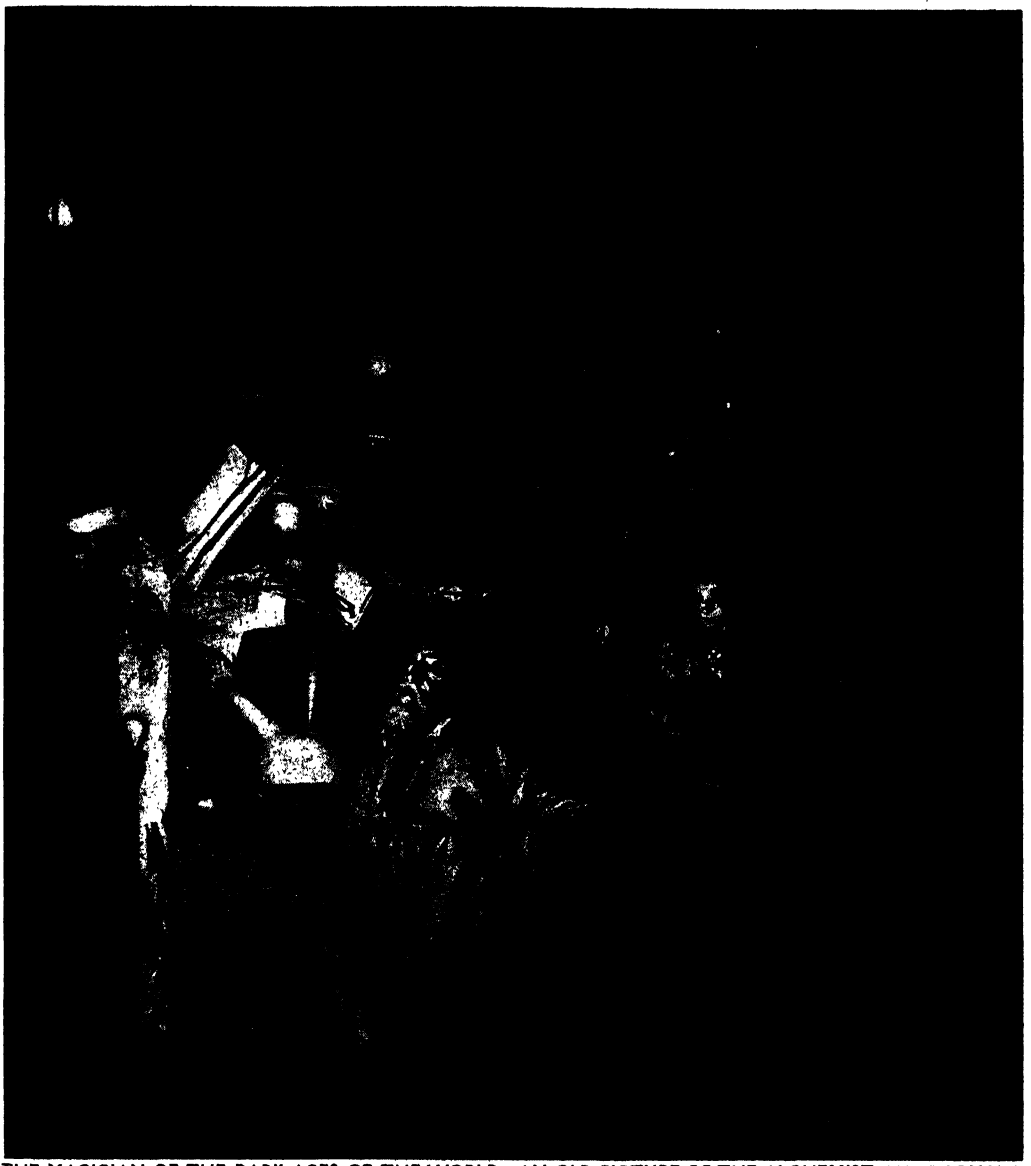
When Europe had reached its lowest depths, Arabian culture was at its highest level. The figures we use in our arithmetic are Arabian; we still call stars by the names the Arabs gave them; and such words of theirs as alkali, amalgam, algebra, alcohol, borax, azimuth, nadir, and elixir are among those that remain in our language to tell us of the influence they had in spreading learning. They gave us such things as buckwheat, asparagus, hemp, flax, saffron, rice, the mulberry, palm, lemon, orange, coffee, cotton, and sugar-cane; they introduced into Europe such manufactures as linen, damask, morocco leather, muslin, gauze, and gold-embroidered silks. It is hard to believe that these splendid scholars and craftsmen were the ancestors of the poor Arabs of our day, yet such men they were, and they were the masters in learning of our wonderful friar. Their power perished with the rising of the Turks.

To complete our picture of the time in which Bacon lived, let us glance at England —" merrie England," as we wrongly call it.



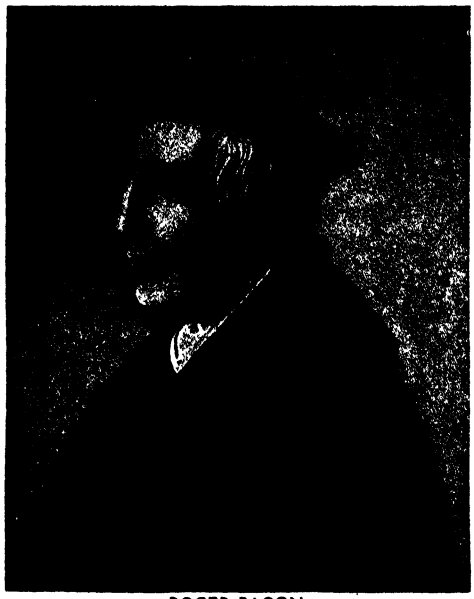
This picture and the companion picture above are representations of magic from manuscript books of the dark ages

Magna Charta was won for us by the barons of Bacon's day. What manner of men were they who did this great thing? They were, for the most part, in spite of this one glorious act, among the most ignorant tyrants who ever harried a country. Let the historian tell us of their mode of living. "They grievously oppressed the poor people by building castles, and when these were built they filled them with wicked men, who seized both men and women who they imagined had money, threw them into these prisons, and put them to more cruel torture than the martyrs ever endured. They suffocated some in mud, and suspended others by the feet, or the head, or the thumbs, kindling fires below them. They squeezed the heads of some with knotted cords, while they threw others into dungeons swarming with serpents and toads." All this to wring from the unhappy prisoners confessions of treasure which they were said to possess. That was Roger Bacon's world. Yet so poor was he, and so unoffending, that he lived at peace with all save his enemies of the Church.



THE MAGICIAN OF THE DARK AGES OF THE WORLD—AN OLD PICTURE OF THE ALCHEMIST, WHO SOUGHT TO TURN BASE METALS INTO GOLD

There is no great scholar of whose youth we know less than that of Bacon, and the fascination of his career is increased by the mystery surrounding it. Oxford University first became a national educational institution in his childhood, and we know that he went there. His tutor was a worthy man named Robert Greathead, who afterwards became Bishop of Lincoln, and was one of the first of Englishmen to seek to read the riddle of Nature in place of giving all his time and intellect to the study of useless problems. Bacon tells us that in his day there were not four men in Christendom who knew Greek or Hebrew, much less Arabic, while Latin was so imperfectly understood that there was scarcely a living writer who could express himself in it with any degree of elegance or purity. Nor were the scholars in mathematics more numerous. Those who sought to learn took Latin as the most serviceable language, but the translations were so bad as to seem almost without reason. Books written in Greek were first translated into Arabic, with many fanciful and nonsensical additions by the translators, and from that were translated into Latin by third-rate scholars. The position of the student was truly desperate, and Bacon, as soon as his course at Oxford was finished, hurried off to Paris, whose university was at that time the most famous in Europe. There he studied science and languages, especially Arabic.



ROGER BACON
From the portrait now hanging at Knole House, Sevenoaks

It is commonly stated that Bacon reached great fame in Paris as a teacher, and it is certain that when he returned to England, in about 1250, he was very famous, and became known as the Admirable Doctor. He went back to Oxford to teach, and there he made a false step. He became a friar, a member of the Franciscan Order, one of four religious bodies which had been created to purify the Church from the abuses that had crept into religious life. Bacon did not enter a monastery, but continued to teach and study. His admirers subscribed funds to enable him to carry out experiments and researches in which he was engaged, for here was a man who was thrusting himself valiantly into unknown dominions of scholarship. He did not bother with the silly subtleties to which the great men of the age found it necessary to give their lives. The learned men of those days were called scholiasts, and the brightest brains in Europe were devoted to discussing such problems as this: "When a hog is carried to market with a rope tied about its neck, which is held at the other end by a man, is the hog carried to market by the rope or by the man?" "How many angels could dance at one time upon the point of a pin without jostling each other?" was another. The great Thomas Aquinas, who lived in Bacon's time, devoted essays to such subjects as the "orders, nature, substance, habits, duties, and offices of angels," discussing each topic with as much gravity and suggestion of knowledge as if he himself had been an angel.

Bacon brushed aside all this twaddle, and applied himself to chemistry and physiology, to mathematics and the study of things that really matter. His practical researches extended over twenty years, and in that time he was able, thanks to the generosity of his friends, to spend, in pursuit of his objects, several thousands of pounds.

What did he achieve? He gained no immediate triumph, but he sowed the seed for a harvest which did not ripen until two or three centuries had passed. He worked over the whole kingdom of knowledge, and saw that the old scholastic method, the twiddling with mere intellectual guesswork, could not carry the world farther. He denounced such methods as vain and futile. He pointed out the true path of learning, and flung open the door. He directed the minds of his age to science, by which alone he saw true advancement could come. He invented the magnifying glass; he understood—if he did not use—

the telescope. It is believed that he invented gunpowder, and that in so doing he made important discoveries in chemistry. He realised that the calendar was wrong, and prepared a corrected one. He investigated and explained the rainbow. He carried his studies far in mathematics, and showed that the study of science could not be extended without their aid—a fact which men were slow to recognise.

Now, this was remarkable work for such an age as that. Bacon was dealing with the telescope in the thirteenth century, yet the instrument did not come into use until four hundred years later. That he understood its principles we are certain from his writings. To what but the telescope can he refer in this striking passage, taken from his "Secret Works of Nature and Art":

"Transparent bodies may be so figured that things at the greatest distances may appear to be the nearest, and the contrary, so that from an incredible distance we may read the smallest letters, and number things, however minute. For thus it is thought that Julius Cæsar, on the coast of Gaul, discerned by or through very large glasses the position of the camps and cities of Great Britain." It is clearly the action of a telescope that Bacon describes, though he was wrong in assuming that Julius Cæsar saw the cities of England before quitting the coast of France.

His writings make it plain, also, that he was accustomed to the use of the magnifying glass. Some scholars, indeed, believe that he invented a microscope. He must have had glasses capable of powerful magnification, or he could not have carried out his experiments in chemistry. Many of his discoveries he applied in ways quite new to learning, and one outstanding chemical discovery he made in regard to gunpowder. We do not know whether he actually invented gunpowder for English use, or whether he read the secret in an Arabian work. All we learn is that he made the first gunpowder known in England. Not until a century later was it made to serve as a means for throwing shot; but Bacon realised its danger, and in describing the manner of making gunpowder he hid the secret in the form of an anagram, so that none but scholars might learn how to make it. It was a most important discovery for this country, for without gunpowder for blasting we could not have had mines, railways, artificial harbours, canals, and so on.



THE FOUNDER OF THE FRANCISCAN ORDER, TO WHICH ROGER BACON BELONGED—St. Francis of Assisi is on the left, with St. Dominic on the right

We may imagine that the great secret was discovered when Bacon was conducting his experiments in search of the philosopher's stone. All the scholars of his time believed that there existed in the world some substance which was superior to all other metals, and that this, being perfect, would convert any other metal into gold. This mysterious substance they called the philosopher's stone, and they imagined that by its use men would banish disease, old age, and even death. The men who sought this impossible charm were known as alchemists. Their lives and works extended over hundreds of years, and the story is one of the most amazing romances of science. For, wrong-headed and hopeless as was their search, they were often learned men, and discovered many highly valuable secrets in medicine and chemistry. We must not, then, feel that, because our learned friar sought that which does not exist, he was either foolish or mad. Everybody

believed as he believed. More than a century after the death of Bacon, an Act of Parliament was passed in England—still famous as the shortest in existence, consisting of only twenty-nine words—forbidding the alchemists to make gold or silver. No one ever committed an offence under that Act, for no one has ever made either metal, though many men went mad, or killed themselves, or brought themselves and their patrons to beggary, by trying to make them. Roger Bacon was spared this unhappy fate, although he firmly believed in the philosopher's stone.

He believed also in astrology. Alchemy and astrology were twin delusions. Alchemy is dead, but astrology is rampant still in India and other countries. Swindlers in Great Britain have, within recent years, grown prosperous on the profits of this fraudulent practice. They profess what Bacon and all his school believed—that a man's or woman's career is determined, not by his or her own exertions and talents, but by the stars and planets which held a certain position in the heavens at the time of their birth. They did not realise that many people in various parts of the world are born at the same hour, and that what would apply to one would apply to all so born, but thought that there was a predestined path and end for each, fixed by the position of the stars at a given moment. Bacon thought that astrology governed medicine and surgery, and so his learned fellows thought. The man who was wise enough to correct the calendar by the movements of the heavenly bodies was so misguided as to imagine that the human heart was governed by one planet, the head by a second, the chest by a third, the arms and legs and feet by others. Temperament and character, too, he thought, were regulated by the planets, and he believed that if we could read the secrets of the skies we should know all about our life and fate.



LEARNING IN THE DARK AGES—MATTHEW PARIS, A CHRONICLER OF THE DAYS OF ROGER BACON

Such were the errors common to the period in which Roger Bacon lived. The errors were not of Bacon's making, they had come down to him from the ages whose learning he was laboriously mastering. But these examples of foggy reasoning did not prevent him from grasping new and glorious truths. If he sometimes floundered in the depths of ignorance and superstition, his mind was capable of scaling the shining peaks of learning. And there lay the great peril of his life. He was hundreds of years ahead of his time. He had a mind in many ways worthy of the present century, and when he carried on experiments which others could not understand, and declared truths which had no meaning for others, those about him declared that he was a magician. When he denounced men for their stupid opposition to learning, they cried out against him, and one powerful enemy got Bacon removed from Oxford University and sent to Paris, where for ten years the scholar was kept a close prisoner. He was not allowed to read or write, and all his instruments were taken from him, so that he could not carry on his strange experiments.

A charming thing occurred in 1265, when Bacon was just over fifty. During the friar's happier days, the Pope had been represented in England by Guy de Folques, who must have been a very open-minded, liberal-spirited man. He heard of the wonderful friar, and was not afraid of his learning. Then, in 1265, he was made Pope Clement IV., and, remembering the unhappy friar who was a wretched prisoner in Paris, he wrote to him. He bade him write out for him his views on learning, and tell him of his discoveries, and it is interesting to remember, as showing how powerful were the great monastic orders of that time, that Clement IV. had to send his letter to Bacon in secret. Bacon had nothing ready, but his mighty mind was stored,

as a reservoir, with glowing theories and information, and, in spite of the long time that had passed since he had done any intellectual work, he sat down and wrote out what would make a volume, and a marvellous volume, too—a work surveying the whole field of learning. It declared to the Pope his knowledge and beliefs as to science—philosophy, metaphysics, mathematics, astronomy, music, grammar, and so on—and outlined such a suggestion for study as the world had never known before. A second and third work followed, but only the first reached this good Pope, who died at the end of 1268, and so could not act upon Bacon's great scheme for spreading knowledge.

THE UNMOURNED DEATH OF THE MAN WHOSE FAME WAS TO COME IN AFTER AGES

Bacon now enjoyed some years of freedom, but disaster came again. A pious but narrow-minded man, who meant well but did ill, gained great power as General of the Franciscan Order, and held an inquiry into the doings of certain men accused of heresy; and poor Bacon was one of the men who were placed on their trial. He was judged guilty of magic, of doing things by the aid of Satan, and of sinning against the Church, and he was sent to prison again.

We do not know exactly when Bacon died. It is believed that he passed away at Oxford in 1294, and that he was buried in the city he so loved, from which the thunders of his mighty voice first awakened England from her sloth and stupor. Few mourned his death. He was a man of terror to his age. He was represented as a sorcerer, and a great body of legend and myth collected about his name. For ages stories were told of his evil deeds, and there went forth a story of a brass head he was said to have made, into which he put a spirit, so that the brass head talked! And everybody, exalted and lowly, believed such things of this strange, wonderful man.

THE CLEARING OF THE MEMORY OF THE GREATEST ENGLISHMAN OF HIS AGE

His writings were suppressed. Nobody was allowed to read what he had written, and for five hundred years the name of this glorious character lay under a foul stigma. One of the truest ministers of knowledge, he was depicted as an active servant of Satan, and men who came to know of his works claimed his discoveries as their own.

But in the end his memory was brilliantly cleared of calumny and injustice. As the knowledge of his works became more widespread, the world came to realise that this supposed impostor was in reality the greatest genius of his type who had then been born in England. He had done for the thirteenth-century world what Francis Bacon did for the seventeenth. Even today the full scope of his great mind has not been wholly revealed, for his writings have never been fully published.

Think of the age in which he lived, of the ignorance, brutality, lawlessness, and superstition of it, and then reflect what this lonely scholar knew and taught. He showed that ignorance and error arose from the stupidity of those in power, from custom, from common prejudice, and from self-conceit. He made the fathers of the Church shudder with wrath and indignation by declaring that, because they said a thing, it was not necessarily right; that men in the Church could make mistakes as well as men out of it; that they had kept the world in ignorance by neglecting the teaching of the great masters of antiquity; that learning was as much part of the providence of God as the teaching of the Bible.

THE NOBLE SOUL THAT WAS ENGULFED IN THE MISTS OF SUPERSTITION

He showed that only by the study of languages could the secrets of knowledge be mastered; that the gateways to knowledge could only be opened by mathematics; that mere human reasoning and pondering was not enough, but that theory must be tried and proved by experiment. And then, in chapters which were simply dazzling, he dealt with such subjects as the nature of light and vision and optics, the brain and the senses, chemistry and physiology, and ended with a grave and stately warning against the sins of pride, envy, and anger, by which the soul is defiled. His treatises would be comprehensive even for a thinker of our present age, but, remembering the age in which he lived, they seem to us now stupendous, gifted and inspired almost beyond belief.

There was no other man in the world at the time fit to compare with this man who is denounced as an agent of Satan, and there have been few in the world's history. He may have believed in the power of man to convert base metal into gold, and in the power of the astrologer to foretell a man's life from the stars under which he was born; but, in spite of these errors, in spite of the mist and murk of superstition in which his noble soul was engulfed, Roger Bacon had glorious glimpses of the truth of life: "he saw the vision of the world and all the wonders that should be."

MAGELLAN SITS IN HIS LITTLE BOAT



A PICTURE OF MAGELLAN ON BOARD HIS SHIP, DRAWN BY A MAN OF HIS OWN TIME

MIGHTY MAGELLAN

FERDINAND MAGELLAN, the great master of communications, was born to open the sea route to the East by sailing round the world and approaching it from the West. The diver, panting in the oozy depths of salt seas, depends for breath upon his life-line. Cut it, and he perishes. The life-line of nations is their communications. Cut them, suspend them, fling a barrier across them, and, though they do not die, whole nations suffer unthinkable inconvenience, stopping of commerce, and the upsetting of the entire economy of life.

In the Great War the communications of the Allies were interrupted on land and sea. We could not link hands with the massed millions of Russia; we could not take our stand by the side of Serbia, Montenegro, or Rumania, simply because of impeded communications. The Turks kept us from reaching the Black Sea; they stood astride the path of the civilised Powers and enormously complicated the task of the West in reaching the East. Armies and guns barred the land routes; submarines lurked to work destruction in the depths of the seas. What would we not have given for a new route, by earth or land or ocean, could one be opened up?

If we had been able to run through the Dardanelles, or take the nearest cut into the Baltic, the war would have ended like a nightmare.

Well, civilisation is old and has had to face these things before. Once the sea was deemed impassable, not because of submarines, for they did not exist, but for other reasons; the land was made impassable, and then, as in the Great War, it was by the Turk. Europe was shut off from the East at a time when she knew no West; when Europe, Africa, and Asia were the only known continents. The Chinese Empire to which Marco Polo went overthrew her Mongol dynasty, shut out all foreigners, wrapped herself, as it were, in a mantle of invisibility, and went to sleep, so far as the rest of mankind was concerned, for a hundred years. She ceased, with all her wealth and learning, to be a goal for travellers. The nearer East, with its spices and silks and gems and precious metals, remained the great attraction; and thither the toiling adventurers went, until the Turks burst out of Asia Minor, seized Constantinople, dashed across Europe, and barred the path of the continent into Asia.

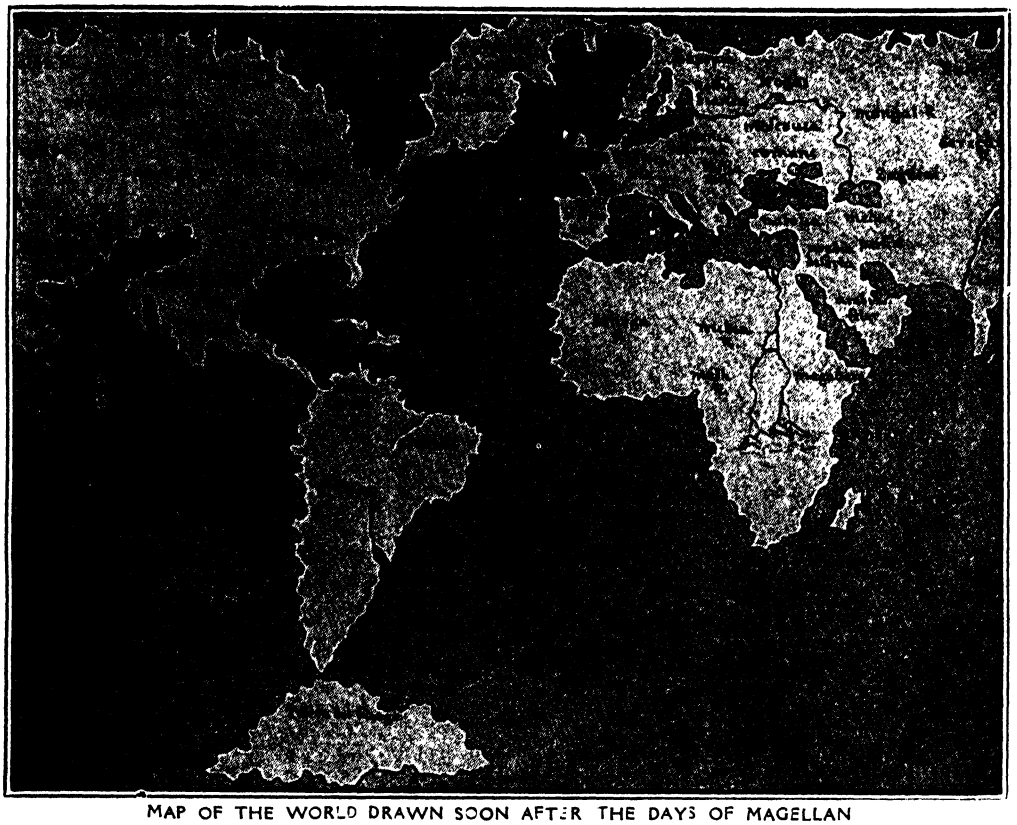
They must have some purpose in life, these warring Turks. By their very cruelties they frightened learning from cloistered Constantinople, and so lit a thousand torches of knowledge all over Europe. By their fierce opposition to the peaceful travel of commerce across Europe they raised out of dreamy ease and contentment the towering figures of Columbus, Diaz, Da Gama, Magellan, and Francis Drake, with all his mighty brood. These men would not be shut up in landlocked compartments. They had to get to the East, where riches and beauty and romance lay waiting; and as they could not go by land they went out into impossible seas and braved overwhelming terrors. The obstruction of these ignorant and fanatical Turks brought about the discovery of most of the physical world.

From 1275, when Marco Polo reached the Court of Kubla Khan, not a single vital discovery was made until 1486, when Diaz, determined to find the sea-way to the East, sailed beyond the equator, where demons and intolerable fire regions were said to exist, and discovered that Africa has an end, and that it can be rounded at the Cape of Good Hope. Six years later the peerless Columbus, barred by land to the East, set out to the West to find it by sea. Six years after that Da Gama reached India by water, and

Portugal could snap her fingers at the Turk. She colonised India; she sailed to the extreme limit of China, and did not know that it was the land Marco Polo had described as Cathay. Columbus died believing he had discovered in America the western shores of Asia.

Now, Magellan was the first man in the world who was sure that these far eastern lands which Portugal was visiting and conquering could still be reached by sailing round by the west. Columbus thought he had done so; Magellan was sure Columbus had not. But Magellan's faith was such that, if it could not remove mountains, it made him sure he could carry his ships through a continent which all other men believed to stretch as a barrier from Pole to Pole, blocking the way from East to West. But why should Magellan want to do so extravagant a thing when the East was already reached by sailing to the East? As a tough old Yorkshire alderman of our own would say: "It's like going down a coal-pit to climb a tree." Why go from London to John o' Groat's to get to the Isle of Wight?

The answer lies in one of the almost incredible absurdities of actual history. It is the story of two little European nations, Spain and Portugal, sitting down to divide the world between them, with the Pope as mediator. The Pope drew an imaginary line from the North Pole to the South Pole, and awarded to Spain all the new land in the world lying 370 degrees west of the Azores, while Portugal was to take all to the east. This gave all America to Spain, and to Portugal all Malaysia, Papua, even Australasia! It is a long story, but that is how it eventually worked out.



MAP OF THE WORLD DRAWN SOON AFTER THE DAYS OF MAGELLAN

The first man really to upset settled notions on the subject was this audacious Magellan, for he, a noble Portuguese, in defiance of Pope and Portugal, roundly declared that on this very

scheme it could be proved that the Moluccas, the islands of pepper and cloves and all the coveted spices, came into the Spanish half, eastward though they lie. "The King of Portugal may declare they lie within his limit," he said, "but no one understands this matter as I understand it." He was flying in the face of the Pope and of his own king. But Magellan, the most heroic soul of Portugal, became the most hated man who ever lived in Portugal, because he quarrelled with an unjust sovereign, took his hopes and his sword to Spain and became a Spaniard, and did for Spain almost the mightiest thing ever done by mortal man. He could not approach the Moluccas by the front door, for that would mean immediate war with Portugal; he would go round the world and come in at the back door.



FERDINAND MAGELLAN

Ferdinand Magellan was born about 1480, at Sabrosa, in the wild and rugged province of Traz-os-Montes, Portugal. He was of an ancient family, about twenty years younger than Columbus, and was about twelve when Columbus touched land on the western side of the mysterious Atlantic. He was born into that glorious current of exploration which in thirty years revealed secrets of the shape and size of the world unknown to man from the beginning of time. He seems to have had three sisters and one brother, but we are not to trace them far. His father died while Ferdinand was a youth. Ferdinand married, but neither of his two children lived long, and with the death of the great man himself the male line of the family became extinct.

Ferdinand was sent to Court as a boy. He became page to the widowed queen, and afterwards passed into the service of King Dom Manoel, who followed up with consuming zeal the work which Henry the Navigator had begun to establish an Eastern Empire for Portugal.

It was a great age. The Turks stood across the overland route to the East, but Portuguese ships, manned under the eyes of young Magellan, went out and discovered India by sea; and a man starting for India to the East found himself surprisingly anchoring in the West, off the shores of Brazil! Ferdinand studied navigation and geography and the practical side of war and seacraft with all his ardour, and at 24 set out for India as a volunteer in one of the great fleets of Portuguese ships. Part of Magellan's expedition went on to the Molucca Islands, the treasury of the spices. We do not know that Magellan himself went there, but it

is clear that he obtained information as to the position and value of the islands, and a great idea took possession of his mind. It did not at once come to fruit, for before returning to Portugal he shared in an expedition to Morocco. The Saracen power had at last been broken in Europe, and now, instead of fighting the Saracens at home, the Portuguese were following them up and punishing them in their native Morocco. Foremost in the fighting, Magellan sustained a wound which lamed him

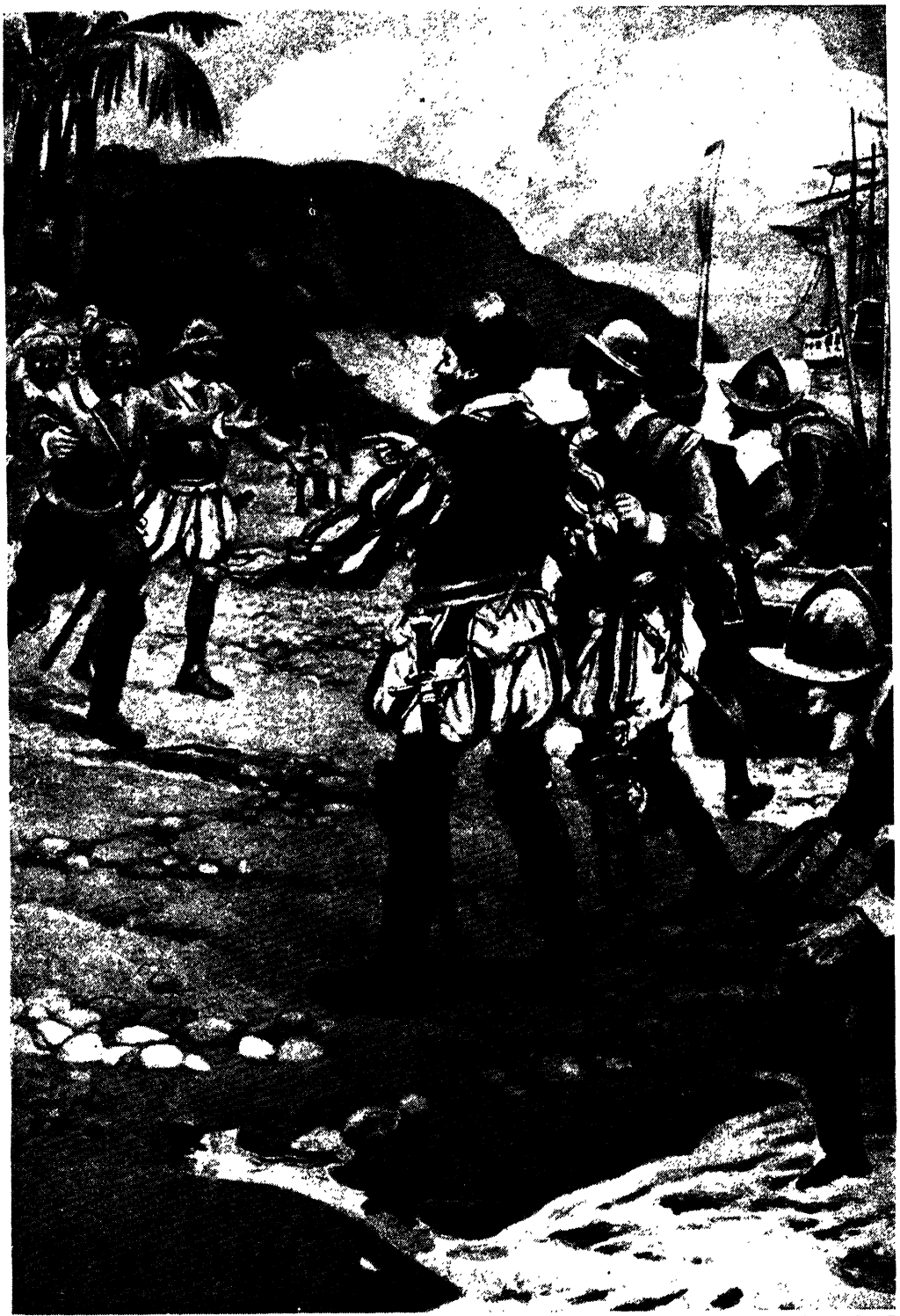


MAGELLAN'S SHIPS PASSING THROUGH THE STRAITS THAT BEAR HIS NAME TODAY. From the painting by Mr. J. Fraser, by courtesy of Mr. A. H. E. Wood

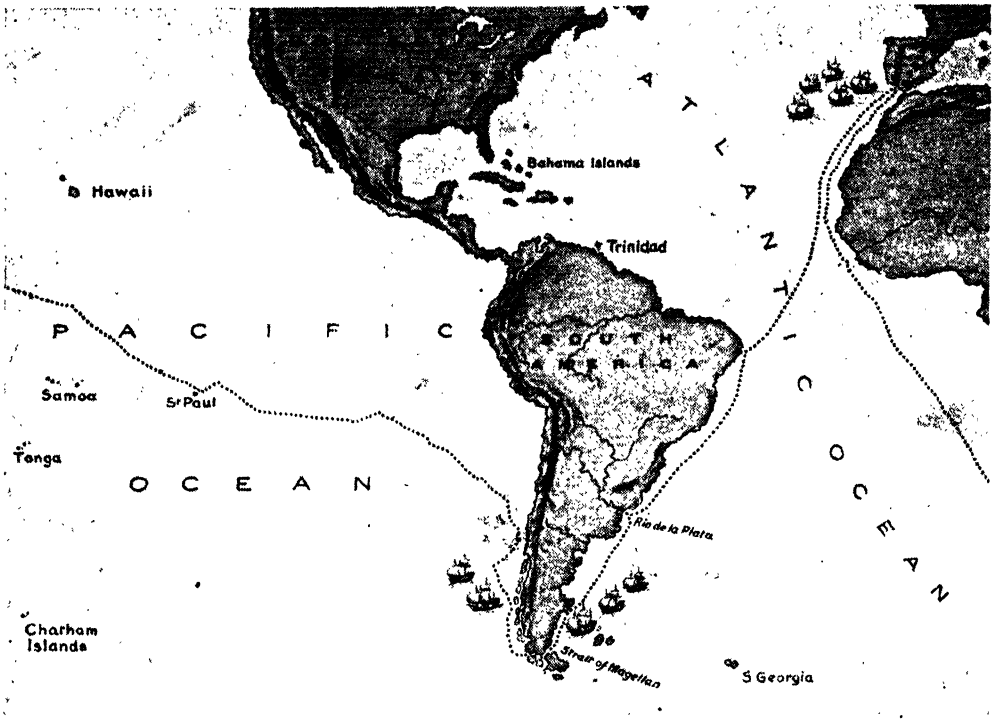
permanently ; and this injury, coupled with an unjust quarrel thrust upon him by a superior, caused him to return in anger to the Court, where he was coldly received by the king.

Then it was that Magellan, his high pride mortally wounded by his treatment, shook the dust of Portugal off his feet, carried his sword and compasses to the Court of Spain, became a naturalised Spaniard, and took service with Charles V. To his new sovereign Ferdinand expounded his secret. No one, he said, understood the fabulously wealthy Molucca Islands as he did. The Papal Bull dividing the world, he declared, really brought the Spice Islands within the dominions of Spain, and not of Portugal, as everyone else believed. He would lead out an expedition to the West, sail round the world, and, without infringing Portuguese interests, come by that route to the islands in the East.

The king was willing, but there were many dragons in the path. There was the difficulty of getting an expedition together ; there was the fear of provoking war with Portugal, whose monarch was about to marry into the Spanish Royal Family. There was deep and subtle influence at work against Magellan; there were open attempts to assassinate him by Portuguese agents; there were secret endeavours to get him back to Portugal ; but it was all in vain. Magellan got five ships, two of 120 tons each and three smaller ones, manned them, and loaded and provisioned them. They were wretched little craft, " very old and patched, with ribs as soft as butter,"



MAGELLAN'S CREW FROM THE EAST GREET THE EXPLORERS FROM THE WEST—THE MEETING OF EASTWARD AND WESTWARD TRAVELLERS IN THE ISLAND OF TIDOR, WHICH FIRST PROVED BY ACTUAL EXPERIENCE THAT THE WORLD IS ROUND

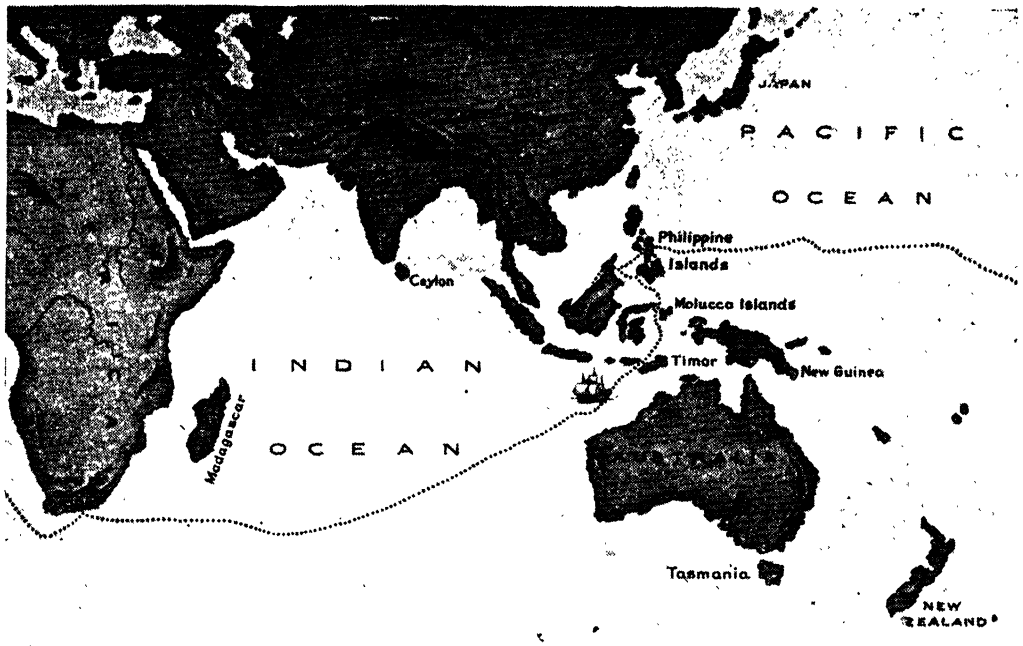


THE WAY MAGELLAN WENT—THE ROUTE OF THE LITTLE

but they were the best that could be had. The men believed that one of the chiefs of the expedition was guided by a demon; a second was an astrologer who read the stars to tell the fortunes of the fleet from day to day. They believed in imps and mermaids, and were horrified at the first sight of a seal, which they took to be a wolf of the deeps. But, with all their fears and credulities, their hopes and brave resolutions, they went forth, out into the great unknown, on September 20, 1519, 250 men in five crazy little ships, to attempt what today would seem impossible.

Magellan soon found that he had enemies aboard, Spaniards who loved not a Portuguese and wanted to depose him. Chief of the malcontents was an influential scoundrel, Juan de Carthagena, his second in command, who was captain of the largest, though not the fleetest, ship. The rancorous opposition of this man reached a head when he openly defied and insulted his leader. Magellan had already borne much, but he now seized this man in his powerful arms, with "You are my prisoner!" and deposed him from his command. Carthagena was at first manacled, but later the good-hearted Magellan gave him conditional liberty, though having him guarded.

The New World was reached on November 29, and the little armada turned south to examine the coast for a way through. They took in such food supplies as were obtainable from the natives—poultry in exchange for a bell, or for a picture from a pack of playing-cards. The natives offered their children in exchange for a knife or an axe! Then on again, southward-ho, coasting close in and examining every inlet and river-mouth, sailing day and night amid uncharted terrors, through horrifying storms of thunder and lightning, and turning back from time to time lest some opening had been missed which should prove the mystic way to the fortunate islands. Worse and worse grew the storms and bitter weather, and the fleet was compelled to anchor and pass the winter in the bay of St.



SPANISH SHIP THAT MADE THE FIRST VOYAGE ROUND THE WORLD

Julian. Here, to conserve his stores, Magellan found it necessary to ration his crews, and this call for sacrifice, coming on top of unwillingly exacted devotion to the great purpose of the voyage, fanned the smouldering embers of rebellion. Full rations or home, said the mutineers, or, better still, home in any case. Was it not clear that this horrible land stretched for ever down to the Poles? What were cloves and pepper and ginger and the romance of new discovery to them if they must pay with their lives? It was enough that they had penetrated to regions which no other man had ever ventured to approach. Let them go home.

Magellan was magnificent. Come what might, he would go on. Winter was with them, it was true, but the glad spring would come, and with it days three months long! Did he believe it, or was he gulling his cowards as Columbus had gulled his? At any rate, he himself was prepared to die rather than turn back. Gold and spice and riches and romance inestimable awaited them if they would but endure. It was all glorious, thrilling as the words of Ulysses:

Come, my friends,
'Tis not too late to seek a newer world.
Push off, and, sitting well in order, smite
The sounding furrows; for my purpose holds
To sail beyond the sunset and the baths
Of all the western stars, until I die.

Magellan's noble eloquence served for the moment, but Carthagena and his arch-traitors got to work that night, and seized three of the largest ships. Three big ships and a majority of men against two little ships, that was the spectacle which greeted Magellan's startled eyes in the morning. There is no more dramatic picture in history. What was he to do? What *could* he do? His action marks the man. He was as swift as an eagle, and as terrible. He captured a boatload of men sent to demand his surrender, and sent back in her to one of the ships men of his own, who, in his name, demanded the surrender of the captain. This man contemptuously declined to submit, but as he did so he fell, stabbed to the heart by one of

Magellan's men. Other officers were overmastered, and the crew, loyal at heart to Magellan though overawed by their leaders, at once came over to his cause, and the ship was brought alongside.

How Magellan Met the Mutineers with a Stern Hand

The tables were turned now, for Magellan had three ships against two. The two held out, however, and there was grave danger of their escaping at night and fleeing home. The same night one of the big mutinous ships approached that of Magellan. There was a short fight, then the rebel was boarded and mastered, and the ring-leaders put in irons without the loss of a single life. There remained only the fifth ship now, on which the wicked Carthagena had remained to hatch his plot, and this one, seeing the fight hopeless, surrendered at demand. Magellan's hand fell heavily on the fomenters of the mutiny. Some he caused to be executed, the lesser men he forgave, and he was master of his armada again, with none now daring to question his lightest word. When the ships at last cleared the land, Carthagena was left alive with a fellow-culprit, marooned on shore, to live with the giant Patagonians if they might, to die at their hands should fate so decree. What their end was we do not know, nor need we waste our pity on them. Magellan's experience was that of Columbus twenty-eight years earlier, and of Drake seventy years later, and he triumphed as they triumphed.

The Great Day in History when the Magellan Strait was Found

Farther and farther south they sailed, losing a ship in a storm, and much valuable stores. The coast-line seemed unending, and became increasingly forbidding, but Magellan's mighty heart seems never to have quailed, and he was marvellously rewarded when, at last, on October 21, 1520, a great day in history, the long-sought strait was found. They sailed with joy and foreboding, with hope and terror, into the mysterious waterway which divides the American continent from the island of Tierra del Fuego, or the Land of Fire, as Magellan called it, from the mysterious fires he saw burning on shore. For twenty-two days the little ships sailed through the mysterious passage—all the ships but one, for one, commanded by a coward, took advantage of night to desert and to sail back to Portugal, carrying food with it. But the other three went on, impelled by the unquenchable daring of Magellan. " Let us turn back, now that we have found the strait, and return better provisioned," said the waverers. But Magellan answered that he would go on if they had to eat the leather of the mainmasts. And go on they did, to the fulfilment of his vow. They sailed out into the great new ocean, which, because of the placid weather, they named the Pacific. Brave Balboa had seen and sailed on the ocean far up the coast on the western side of the Isthmus of Darien, but for real navigation Magellan and his timorous few were the first that ever burst into that silent sea.

On and On for Ninety Days, Drinking Foul Water and Eating Leather

And now they were to learn how false had been all the estimates of the size of the world. Next stop the Moluccas, they said, believing they were practically there as soon as they cleared Magellan Strait. They imagined they were already out of the West and into the East. But they sailed on and on for over ninety days before they sighted land. Food ran out. The ship biscuits were reduced to powder, filled with the noisome weevils which had destroyed them. The drinking water became foul, and they did eat the leather of the masts, trailing it for days in the sea as the vessels sailed, and eating it, charred almost to cinders over their little fires. It was north-west all the time they steered, ever on and on into the unknown, with Magellan's heroic courage and instinct for direction as their sole guiding star. Men died by scores, and all were near death when at last they reached the islands known as the Ladrones. There was small comfort here, for the islanders were

such thieves that Magellan called their home by a name which means simply Islands of Robbers.

But even the agonies of pioneering shipmen come at last to an end, and, admiral he was, he personally tended them and brought them back to health and happiness. These islands had come to the knowledge of the Portuguese as the Eastern Islands;



THE MAP OF SOUTH AMERICA IN A GEOGRAPHY BOOK OF THE SIXTEENTH CENTURY

900 miles from the Ladrones, Magellan hit upon the Philippines. Here he obtained fish and flesh and fresh fruit and vegetables for his dying men. He took his sick ashore and gave them time to recruit, and, like the great but to Magellan, who had come from the opposite direction, they were the Western Islands. There was no doubt as to their having come near their goal, for a slave whom Magellan had brought from the East was able to speak the

language of the Malayan islanders. Obviously, then, the circle had been nearly completed. Magellan's stay in the islands proved happy at first. With a passionate ardour for his religion, he set to work converting the native kings and their subjects to the Christian faith, causing the royalties and their families to be baptised, together with hundreds of their subjects. From island to island he went, making friends and alliances, and bartering. He could have had gold in abundance, but he would allow little to be taken, lest hunger for the precious metal should spoil his crew and ruin his dream of commerce.



THE SORT OF PEOPLE MAGELLAN FOUND IN PATAGONIA

He showed his armoured men to the islanders, and proved how completely they were protected against attack from native weapons. The natives naturally thought it wonderful, and when Magellan asked if they had enemies who did not behave as neighbours should they declared they had. Magellan undertook to go in person to compel them to subjection, for his friends were the friends of Spain, and Spain would not tolerate any enmity towards her allies. It was a fatal resolution. He set out to an adjacent island, with three boats containing sixty musketeers, accompanied by thirty canoes filled with native warriors.

The approach to the coast was rocky and dangerous, and so Magellan and his men leaped from their boats and waded ashore, to face a hostile army of 1500 natives armed with spears and bows shooting poisoned arrows. For a time the armoured Europeans had matters their own way, but the wily natives, seeing that their weapons were of no effect against the steel of white men, changed their attacks, and turned their weapons against the Europeans' legs. Magellan fought like a lion to enable his men to retreat to the boats, but was wounded in the face by a spear. Killing his assailant with his lance, he sought to draw his sword, but he was prevented by a wound in the arm, and while he was struggling a savage dealt him a fearful sword-cut on the leg and brought him to the ground. Then the enemy swarmed over him with sword and spear, and every weapon they had, and they ran him through—" our mirror, our light, our comforter, our true guide—until they killed him," as one who fought by his

side wrote at the time. Magellan perished on April 27, 1521, in a miserable squabble with savages, but his work was practically done.

One of his ships completed the magic circle, finished the journey round the world, and reached home on September 6, 1522, with seventeen sick but triumphant men. Others remained prisoners in the hands of the Portuguese, who, sailing to the East, met, at Tidor, these survivors of the expedition who had sailed there from the West.

That meeting was the first positive proof that the world had been circumnavigated.

cruiser found safety by a mad plunge into the strait, where the Germans dared not follow.

Magellan died before he had reached the prime of life, but his place is secure on the roll of great immortals. He was brave and enterprising, firm as adamant but kindly as a woman; he had the vision of the prophet, the romantic spirit of the poet, yet "he endured hunger at sea better than we," says one of his fellow-voyagers. He died in a foolish combat at the hands of ignoble savages, but it was an ardent Crusader who fought and fell. For Ferdinand Magellan would have died a hundred deaths for his faith

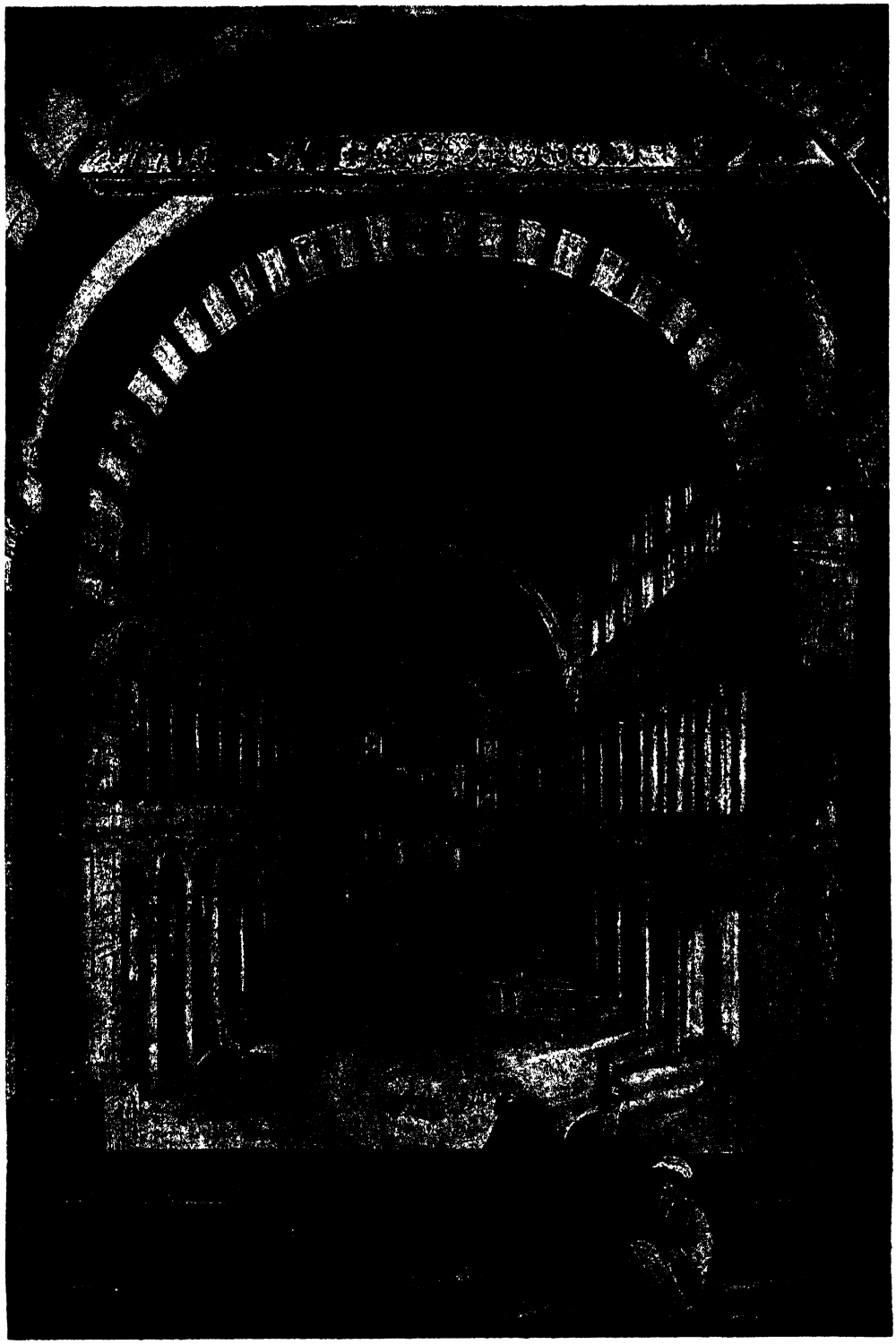


THE PRIMITIVE PEOPLE OF PATAGONIA, HARDLY CHANGED SINCE MAGELLAN MET THEIR ANCESTORS

Magellan's voyage, though it cost him his life, remains one of the magic pages of true romance. He braved all manner of unknown perils on his way. No one followed him through his strait for seventy years, when our indomitable Drake went thundering through. But, even today, such are the terrors of the passage that experienced navigators take the longer route round storm-swept Cape Horn in preference to Magellan's way, and once, during the Great War, a little English steamer chased by a German

and for his friends. He and Columbus were twin souls, very great and noble men, set like upstanding rocks in the sea, mightily shouldering back the flood tide of doubts and terrors by which lesser men were extinguished and swamped. Portugal quarrelled with her greatest son, and erased his name and titles from her volumes of nobility, but we and she forget that now. All the world thinks of her as the great mother of this hero, of an age of daring which laid open the secrets of the mist-enshrouded world.

IN THE CATHEDRAL OF CONSTANTINE



THE CATHEDRAL OF SAN SOPHIA. FOUNDED BY CONSTANTINE AND REBUILT WITH GREATER SPLENDOUR BY LATER EMPERORS. IS SAID TO HAVE THE FINEST INTERIOR OF ANY CHURCH IN THE WORLD

THE RIDER ACROSS EUROPE

CONSTANTINE, THE FIRST CHRISTIAN RULER ON EARTH

Sixteen hundred years ago a man was riding across Europe, as fast as a horse could go. Had anything happened to him on that ride, had his horse fallen and killed him, we should not now be reading of Constantinople, for there would be no Constantinople to read about.

THERE are chapters in history more strange and wonderful than any men can invent, and the story of Constantinople is one of the most astonishing of all. It is the story of the child of heathen parents who, beginning a dazzling career as a pagan, became a Christian, and ruled the whole known world, the first Christian ruler on the earth. He it was, Constantine the Great, who built beautiful Constantinople, to be at once the capital of the world and the home of Christianity.

Constantine was born at a time when Rome ruled the world. She was mistress of Europe, though barbarous tribes were continually in rebellion against her; she owned Britain, and her possessions reached through Africa and Asia. But this vast empire was tottering when Constantine came into it; the Roman Empire was a giant with feet of clay. In the year 284, about four years before Constantine was born—although there is much difference of opinion as to the actual dates—the Emperor Diocletian became ruler of the Roman Empire. That empire was constantly threatened on both sides—in the East by the Persians, and in the West by barbarian tribes of Hungary, Germany, and elsewhere. Diocletian, feeling that the task of ruling such an empire was too great for one man, divided the world, first into two parts, then into four, taking one part for himself and allotting the others to three other men.

Now, one of the men he trusted was Constantius Chlorus, the father of Constantine the Great. Constantius was what we call a soldier of fortune. He had won his way to the notice of the emperor as a daring, well-born soldier. Diocletian chose him to be Cæsar of the West—that is to say, he became a sort of emperor of that particular division, but had to recognise Diocletian as his own emperor. The part over which Constantius ruled was Britain, Spain, and Gaul. Diocletian kept the East for himself. He gave Italy and Africa to Maximian, while Galerius had the valley of the Danube and Illyricum—an area including such countries as the modern Montenegro, Bosnia, and Dalmatia.

Constantius, while he was yet a general, married a beautiful pagan girl named Helena. She was the daughter of an innkeeper, and it is disputed whether she was born at York, or at Treves, in Prussia. The people of York claim her as a native, and say that Constantine, also, was born there. They named their first parish church after Helena, and there are five or six churches near York which still bear her name, the reason being that this simple girl became famous in history as the noble St. Helena. She was the mother of Constantine, who was born, not at York, but at Naissus, in a country we now know as Servia.

At this time the father of Constantine was still a soldier, and not until his son was seventeen did the soldier become an emperor. But long before this the boy had known the life of courts, for while he was still a little boy he was sent to the court of Diocletian, where he was educated as a scholar and a soldier. He had not been sent willingly, but as a sort of hostage, which means that while his father's behaviour pleased Diocletian the boy was safe, but if the father's behaviour displeased the emperor the boy would be sacrificed. The father behaved, and the boy became a great soldier, distinguishing himself by his bravery in wars in Persia and Europe.

In 305 Diocletian, tired of the burden of empire, divided his kingdom and retired to Salona, where he built one of the greatest palaces ever seen. Its walls still stand today on the shores of the Adriatic Sea, and within them has sprung up the town of Spalato, one of the busiest places in Dalmatia. It was

THE VISION OF CONSTANTINE WHICH LED TO THE FOUNDATION OF CONSTANTINOPLE



CONSTANTINE, WHILE STILL A PAGAN, WAS MARCHING AGAINST A RIVAL EMPEROR WHEN HE FANCIED HE SAW A VISION FROM HEAVEN INSPIRING HIM TO VICTORY. HE WON THE BATTLE, PROCLAIMED HIMSELF A CHRISTIAN, AND BUILT CONSTANTINOPLE AS HIS NEW CAPITAL AND THE HOME OF CHRISTIANITY

Galerius who succeeded to Diocletian's share of the empire, and at his court he found young Constantine. But Constantius now insisted that his boy should return to him, and Galerius, who was suspicious and afraid of Constantius, unwillingly consented. Then Constantine, fearing that the order for his release might be cancelled, fled swiftly across Europe.

HOW CONSTANTINE FLED ACROSS EUROPE ON HIS WAY TO ENGLAND

In order that he might not be pursued and compelled to return, he took with him all the horses he found along the way, so that anyone giving chase would have to ride tired horses. A thrilling ride it was; the fate of Christendom may be said to have depended on it! Constantine fled before Galerius, who had unwillingly told him he might go, as the Israelites fled before Pharaoh. The future master of the world was a fugitive, for the time being, fleeing from east to west of Europe, to meet his father, who was about to embark at what is now Boulogne.

A sad thing had happened. Constantius, having married the beautiful Helena, had put her aside in order that he might marry the stepdaughter of the Emperor Maximian, who ruled with Diocletian. But Constantine was the joy of his father's heart, and, though he had other sons and daughters, it was upon this brave and brilliant youth from his rival's court that he set his affections. Constantius was just setting out for England, to suppress an invasion by the Picts and Scots, and here Constantine came with him, helping to win a great victory. Constantius died at York, and was buried there in July, 306. And now we are to see upon what a slender thread hung the future history of the world.

Constantius died, and his soldiers, the finest in the Roman Army, declared that Constantine should be their ruler. Constantine refused; he mounted his horse as though to flee from his admirers, but they restrained him, and forced him to consent. He became emperor of the Western Empire.

THE FUGITIVE BECOMES RULER OF A MIGHTY EMPIRE

It is said by some that all Constantine's unwillingness was a mere pretence, and perhaps it was. But we can only judge him by his acts. He did again and again refuse, and when he accepted at last, and wrote to Galerius telling him what had happened, he explained how the title and position had been forced upon him by the army. Galerius was wild with anger, but could not undo what had been done, for Constantine was a brilliant soldier and had the finest Roman soldiers at his back, so that Galerius could only grin and bear it, as we say, and Constantine became ruler of a great part of the world. He was only eighteen at this time. Now, had any mishap befallen him in that ride across Europe to join his father, Constantine never would have been crowned, another ruler would have ascended the throne of the West, Christianity might not have come to its own in Europe for perhaps many generations, and we should never have heard of Constantinople.

Constantine at this time was still a worshipper of the pagan gods of the ancient world, as were all the rest of the Roman leaders. His father had been a pagan, though it is said that of all the men who ruled in the Roman world he alone showed mercy and kindness to the persecuted Christians. It is wonderful that he should have done so, for the Christians were a hated sect, small in number, but feared and dreaded as mysterious and dangerous people. Constantine, like the rest of his fellows, could not understand them or their ways.

THE ROAD THAT WAS LEADING CONSTANTINE TO A WONDERFUL LIGHT

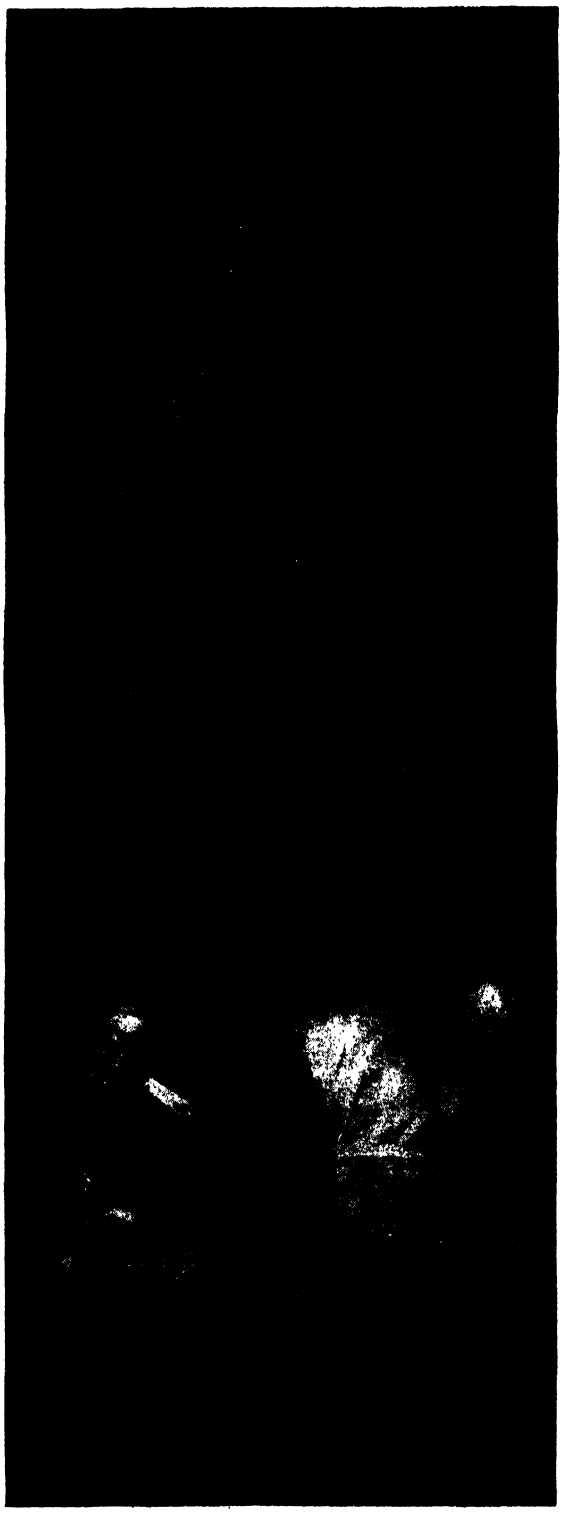
Soon after ascending the throne he led an army against the barbarians, and utterly defeated them, and some of the most distinguished of his captives he caused to be thrown to wild beasts. It seemed to him quite a natural thing to do. Gentle, unoffending Christian people were cast into the Colosseum to be devoured by lions—why, then, should not prisoners of war be treated in the same way? We must not blame Constantine; we must blame the hideous creed in which he was brought up at the court of Diocletian. His early life merely reflected the manners and customs of the times in which he lived, which were hard and fierce and barbarous.

The day had not yet come for his deliverance from the bondage of paganism, but, although he did not know it, he was on the road leading to a wonderful enlightenment. For the time being he was launched upon a series of terrible wars within the Roman Empire. We need not bother about them here, except that they bring us at last to Rome, where Constantine went but seldom. The truth is that Rome was the stronghold of his rivals, one after another. One of these rivals was Maxentius, his brother-in-law. When Maximian died, his son, who ruled in Rome, became the enemy of Constantine, who led a splendidly trained army

into Italy, crossing the Alps as Hannibal had done five hundred years before. Constantine's army is said to have been only 25,000 strong, but other figures make it nearer 100,000, while the army of Maxentius was over 200,000.

Constantine therefore risked all the perils that a commander fears when he is in the country of an enemy with greater forces than his own, but his daring amazed even his own men. For although he was a wonderful general, Constantine won his victories generally by cautious movements, while here, marching straight on to Rome, he dashed with reckless courage. What could account for such a miracle? Miracle we may well call it, for Constantine believed that he, a pagan, had received a message from God bidding him to go forth as a soldier of the Cross!

While he was on the march with his army, Constantine imagined that he saw in the sky a flaming cross in the clouds; and that night he dreamed that Jesus appeared to him, holding a cross, and bidding him make a standard like it, bearing the words, "By this conquer." Constantine, who went to bed a pagan, rose a Christian. He believed that the light he had seen in the sky was a signal from Heaven, and that the vision of the night was a direct command from God. He had a cross made to be carried before his army, and chose fifty of his finest soldiers to guard it. Trusting to the Cross — the symbol of faith in the Son of God, whom a Roman governor of Jerusalem had permitted the Jews to crucify upon a Cross — the Emperor of Rome marched upon the capital to meet his foe, Maxentius, utterly routing his army and driving him into the Tiber, where he was drowned.



CONSTANTINE ASLEEP IN HIS TENT

The conversion of Constantine was as strange as that of St. Paul, and the results were of enormous importance to the world. For some years afterwards Constantine was at peace; then came his war with Licinius, who shared the government of the empire. During this time Constantine thought deeply on religion. He did not at once determine to declare Rome Christian, but in 313 he ordered that persecution of Christians should instantly cease, and it was because Licinius, who had agreed to this course in the famous edict of Milan, continued to persecute them

THE GREAT PILLAR MOVED BY CONSTANTINE



THIS IMPRESSIVE PILLAR STOOD IN ROME WHEN CONSTANTINE WAS BORN, BUT HE INSCRIBED IT WITH HIS NAME AND CARRIED IT TO HIS NEW CAPITAL OF CONSTANTINOPLE, WHERE IT MAY STILL BE SEEN

that he became involved in the quarrel with Constantine which brought him to his death. The death of Licinius in 325 made Constantine master of the world. He, ruler of the ruling empire of the world, was a follower of the Nazarene whom Rome had despised and crucified. He had never forgotten the vision in the sky; he had never gone back from his determination to be a Christian. He had dark and terrible moments of doubt, for he did not know as yet what his new religion demanded of him; he did not understand that it called for charity and mercy. So, when his wife charged his eldest son with a grave crime, Constantine ordered him into exile, where he was put to death. Afterwards, Constantine discovered that the charge for which his son had suffered was false, and in his rage and agony he caused his wife also to be put to death.

Events such as these terribly marred his record as the first of Christian rulers, but it remains for us to be thankful for the good he did. It is useless to lament the dark deeds of his gloomy hours of wavering. At the death of Licinius, Christianity had been tolerated for twelve years; within another year the emperor declared that Christianity should be the religion of the empire. It was one of the most startling decrees ever given to the world. Rome, still the capital of the world, was crowded with the old Roman aristocracy, who were pagans to a man, despising and detesting the very name of Christian. All Constantine's friends were opposed to his faith. No ruler ever took a greater risk than he, who boldly declared for Christianity as the ruling spirit among men. But he was wise enough to realise that it was impossible to establish Christianity immediately in Rome itself —Rome, with its innumerable temples to gods and goddesses; Rome, whose streets and arenas had run with the blood of murdered Christians — men, women, and children. So Constantine resolved upon a plan which only a great and original mind would have dared. He determined that the "Eternal City" should no longer be the capital of the world; he would create a new capital of his own.

It was a surprising resolution, as surprising as if King George should today decide to remove the seat of Government from London to Lichfield. Constantine sought long and anxiously, and at last he chose the ancient city of Byzantium. On the ruin of this old place the emperor raised a mighty city. He designed it to be the home of Christianity, the headquarters of the Roman world and of the religion he had made his own. He built a city worthy of both objects. Fourteen miles of immense walls surrounded the site, and within it the new city rose upon seven low hills, like Rome itself. Constantine had the wealth and labour of the whole world to draw upon, and he used both without stint for the glory of his capital. With armies of labourers to call to his aid, with forests near by to supply him with timber, with quarries of the finest marble, with unlimited supplies of gold and precious stones, he devoted himself entirely to his great work.



THE RUIN OF CONSTANTINE'S PALACE IN CONSTANTINOPLE

But he found that, though materials were abundant and labour unlimited, skilled men were few; there were not enough artists or sculptors or architects. Messengers were sent to the most distant parts of the empire to search the schools and colleges for talented pupils, to establish schools where none existed, to appoint professors in schools where the arts were not taught. But still Constantine could not get what he wanted, so he ransacked the world for masterpieces ready made. The buildings

themselves were indeed put up by the men of Constantine's own finding, but the decorations were the work of vanished hands. The fairest ornaments of other cities were taken to adorn the new capital. War trophies, statues of heroes, gods, poets, and philosophers, were all carried to the great aqueducts to carry water, and mighty reservoirs to contain it. There were fine schools, theatres, halls, palaces, churches. But the noblest building of all was the great Church of St. Sophia, now replaced by a nobler building still, which, though commonplace outside, has, perhaps, the most beauti-



THE GREAT CATHEDRAL OF SAN SOPHIA, FOUNDED BY CONSTANTINE AS THE CAPITAL OF CHRISTIANITY, NOW THE CAPITAL OF MOHAMMEDANISM

city on the Bosphorus, so that it was said that nothing seemed wanting save the souls of the men of the glorious past in which these beautiful works were wrought. A fair and noble city Constantine built, a city of many wonders, of spacious streets and squares, with a vast number of baths, ful interior of any church in the world. It set a holy seal upon the city; it was the highest expression of Constantine's resolve to make his empire the home of Christianity. The work was finished in the year 330, and on May 11 in that year the city was dedicated to the Virgin Mary, and received its name

of Constantinople, the city of Constantine, the New Rome. Constantinople was the cradle of Christianity as the religion of the world, and Constantine was the first great ruler who worshipped the Saviour of the World. Augustus, one of the greatest Roman emperors, ruled when Jesus was born, but probably never heard His name; it remained for Constantine, 330 years after, to own Him Lord of all and declare himself His servant.

It is not surprising that the most important events of the closing days of Constantine's life were in regard to religious questions. He called a famous council at Constantinople, at which the first laws of the Christian Church were drawn up. Paganism, with its thousands of years of history behind it, was treated, not with the brutality which Christians had experienced, but with contempt, and Christianity was free to extend to the uttermost parts of the earth. It was no longer the creed of a hunted and tortured few; it was the religion of the Roman Empire.

THE NIGHT OF GLOOM AND TERROR WHEN CONSTANTINOPLE FELL

Constantine died on May 22, 337, having shortly before been baptised. He was buried in the Church of the Apostles at Constantinople. His work lived after him, and it lives today, enriched a millionfold. For over eleven hundred years Constantinople remained the capital of Christianity, with good rulers and bad, strong and weak. The Roman Empire itself broke up, but though barbarians overran the land again and again, though Constantinople was twenty-six times besieged and eight times captured, it remained the home of a Christian race until the coming of the Turks, in 1453. Originally a wild fighting tribe in Asia, the Turks were wanderers on the face of the earth, fighting for their living, and dwelling for the time being where they had won their battle. But by age upon age of fighting they became a tremendous force for war. They crossed out of Asia into Europe, and ran widespread over the land. They captured city after city, country after country. At last they came to the walls of Constantinople, and, after a siege famous in history, captured it in 1453.

The night before the fall of the city was a night of gloom and terror, which will never be forgotten as long as history remains. There had been sore disagreement and cowardice during part of the siege, for many nationalities and varying ambitions were represented in the people of the city. But on this last night all were united in a common chorus of woe and despair. All seemed to realise that the last night of Christianity in the great capital had come.

THE LAST CHRISTIAN SERVICE IN THE CHURCH OF SAN SOPHIA

The noblest and bravest of the defenders were summoned to the Emperor's palace to prepare them for the last tragic act. The Emperor addressed them in a brave but mournful speech, which was to prove the funeral oration of the Roman Empire. The strong defenders wept and embraced. Regardless of their families and fortunes, they vowed to give their lives to the last battle in defence of their beloved city; and each commander, after his affecting leave-taking, passed out to his post upon the battlements.

The Emperor and some faithful companions entered the Church of St. Sophia, where, with tears and prayers, they held a solemn service, the last Christian service held in that great church until the Cross shall be raised again upon the walls of Constantinople. After the service the Emperor went to his palace, its walls resounding with cries and lamentations. He humbly begged pardon of all whom he might have injured or offended. Then he mounted his horse, and when the Turks broke through the gates in the morning, he took his place at the head of his troops, and died a heroic defender of the great city of Constantine.

From that time till our own the Turks held sway in Constantinople, many times threatened but never invaded. Founded by the first Christain ruler upon the earth, built to be the bulwark, the watch-tower, and the refuge of Christianity, Constantinople became for over four hundred years the capital of the Turks, the central home of the Mohammedan race.

"A CITY OF ALL NATIONS WITH NO MORE WAR FOR EVER"

In our own time we have seen the nations of Europe again and again concerned for the fate of this ancient city, and it has long been felt that this gate between East and West should be no more the glittering throne of a race that has hardly emerged from barbarism. The Great War brought the Turk one step nearer to his final disappearance from Europe—no more can he control the Dardanelles. But the old city is his still. A fine thing it would be if this great place, the first stronghold of Christianity in the world, could be made a city of all nations; no more a city of barbarism but of human brotherhood.

THE MAN WHO FOUND BABYLON

HERE is a story more wonderful than the fairy stories. The Fairy Prince, when he goes to liberate the Sleeping Beauty, has only to break through a briar fence, but Sir Henry Layard, who liberated for all time the romance of a marvellous period of human history, had more than a briar fence to overcome. He had to find the place where a great storehouse of knowledge lay hidden, and then to dig down into the earth to rescue it. Mountainous heaps of soil and rubbish, collected during twenty-six centuries, covered the ancient glories of kings whose doings, told in the Bible, thrill us all with wonder and with terror.

There were no witches or giants to guard the mounds against Sir Henry Layard, but there were Turks and wild tribes, who are worse than witches, because they are real and witches are not. But this brave man triumphed over all, and the marvellous sculptures and writings that he recovered rest today in our incomparable British Museum. They speak, to those who can read their riddles, of Nebuchadnezzar and Sennacherib, the terrible Babylonian and Assyrian kings who persecuted the children of Israel; of the fiery Jehu and the tribute he had to pay; of Hezekiah, the king who kept his faith in Jerusalem amid the worshipping of idols. We may say of Sir Henry Layard that he put a tongue into the mouth of dead centuries and made them speak to us, and the stories they tell are of Bible times. Others have followed where Layard led, but we owe the beginning and the first unfolding of this recovery of the past to this one man.

Let us remember that Babylon and Nineveh were by far the richest and most powerful cities of the ancient world, but that when Layard was a boy no one even knew where they had stood. They were buried and lost, and no man knew where. It was as if London should be utterly overthrown; the population and cities of England wiped out of existence; the towns buried beneath the gathering dust and overgrowth of nearly 3000 years, with all the records hidden in the rubbish with them. Babylon and Nineveh had perished, not only from the sight of man, but from human knowledge. We read of them in the Bible, but they had passed like a dream from view.

The man who was to bring them back to light again, to discover Nineveh and reveal the chief glories of Babylon, had no training for his life-work. He was a wild, lovable boy, brought up in the strangest way. His ancestors were natives of France, driven by religious persecution from their native land to England. His mother, the daughter of a Ramsgate banker, was of Spanish descent; his father, who had a small private income, was practically an invalid. The boy, Henry Austen Layard, was born in Paris, on March 5, 1817, and was taken as a child of three to Florence, where he remained some years, until his mother's friends insisted that he should have some English schooling. So the family came to England, and Henry went to a little dame's school in Putney. But health and means would not allow his father to remain in England, so he went back to France, where Henry, a boy of eight, travelled alone to him, and was sent to a French school. There he was hated as an English boy, for it was only ten years after the battle of Waterloo. He had a very bad time, for which his own pranks were largely responsible.

One little incident while he was at this school served to show his readiness. While out walking he came to a bridge at which he had to pay toll. He gave the only coin he had and walked on, dreaming. When he wished to return, however, he had no money, and could not recross. While he was wondering what to do, an old gentleman approached. The boy ran up to him and said, "If you please, sir, will you lend me a sou? I am Henry Layard.

Everybody knows me!" The old gentleman gazed at the bold little fellow with amazement, and gave him the coin without a word. Afterward he got to know Henry's father, and, telling him the story, said, "That boy will go far." Splendidly was the prophecy fulfilled.

As Florence was the only place which suited the health of Henry's father, to Florence they returned. The aristocrats of Florence were at that time very poor, for the Italians were not then a prosperous and united nation as they are today, and families famous in Florence in their glorious historic palaces were glad to act as lodging-house keepers, themselves living up in the attics on the rent which their lodgers paid for the grand floors down below. So the Layards secured part of a famous home, the Rucellai Palace, built by Alberti, a great architect in Florence of the fifteenth century, while its owners, the noble family of Rucellai, who are rich and prosperous again today, retired to the garrets.

Here the boy lived a glorious life with his brothers and sisters, and with the children of other famous people staying in Florence at the time. Among these people was old Walter Savage Landor, who had a great love for this wild harum-scarum Layard boy, and in later life dedicated a beautiful poem to him. Layard's father took him to see and study the great collections of pictures; Henry came to know and love them all. He knew all the pictures; he knew every palace, every little house; he became passionately devoted to art. Grown-ups, interested in the subject, would take him about with them, telling him the stories of the golden past of Florence. One of these was an Englishman, named Seymour Kirkup, to whose house Henry used to run. He was deaf, and kept two fine dogs, which used to attract his attention when little Henry came knocking at the door.



SIR HENRY LAYARD AT WORK IN THE RUINS OF NINEVEH, WHICH HE REDISCOVERED TO THE WORLD AFTER NEARLY 3000 YEARS

This man is dear to us all, for he it was who discovered the only portrait in the world of Dante, the lovely portrait of the poet which Giotto painted in a great picture on the wall of a chapel in Florence. Kirkup felt sure that the portrait was in a painting which was concealed behind a great coat of whitewash, and he never rested until he got the Government of the day to remove the whitewash. There, behind the whitewash, were the glorious features of Dante, one eye destroyed by the driving of a nail through the fresco. Layard brought to England the first copy of the portrait ever made, and from this all the world has likenesses of the great poet.

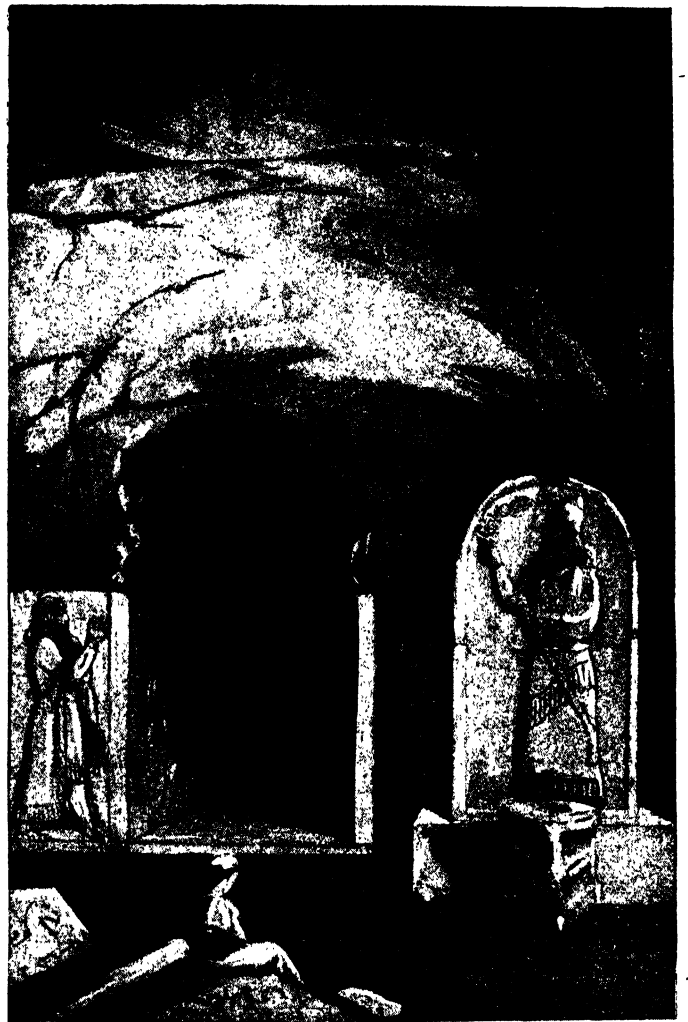
Just one more peep at the life in Florence before we bring Henry back to England.

You may find in the National Gallery a clue to this part of his life. In the palace where he lived were many pictures, and over the bed in which he and his brother slept was a beautiful altar-piece painted by Filippino Lippi. Now, if we examine that picture closely in the National Gallery today we may discover a slight wound on the canvas. That was caused by the heel of Henry Layard's shoe, which he flung at his brother during a romp in the bedroom when they were undressing. He did so much for the art he loved that we may forgive him this offence, and we must remember never to let precious pictures, if ever we have them, be in rooms where romping, high-spirited lads are turned loose.

But to England again. Henry had an aunt and uncle in London, Mr. and Mrs. Austen, and to their house went the famous literary and artistic people of the time. What must they do but suggest that the free-roving, art-loving boy should become a lawyer in Mr. Austen's office. Mr. Austen was the boy's godfather, and to please him the boy's Christian name was changed from Henry Austen to Austen Henry.

Henry's father had very little money; Austen had much; so poor Henry was packed off to England, and sent to an English school at Richmond to finish his education. In France he had been despised as an English boy; at the English school he was kicked and cuffed and despised for being an Italian or a Frenchman. They called him "organ boy" and "monkey boy," thinking that anyone who came from Italy must have dragged an organ about with a monkey on top of it. Still, Henry was too plucky a little fellow to mind very much; he kept his French and Italian to himself, and bore no malice, but he carried one or two friendships from that school into his manhood. When not quite sixteen he entered his uncle's office, intending to become a lawyer. His heart was full of love for Italy and art; his mind was on fire with the wonderful tales he had been reading in "The Arabian Nights." The book made him a traveller; his early Italian experiences, later in life, made him the friend and patron of art.

It would be hard to imagine a boy less fitted for a stuffy office in London. He hated the study of law. He had no money with which to buy proper books, and



THE ENTRANCE TO A TEMPLE AT NIMROUD, THE PLACE WHERE THE TOWER OF BABEL IS SUPPOSED TO HAVE STOOD

out of his father's allowance of £2 a week he had to feed, clothe, and lodge himself, buy his books, and pay all the expenses of his life and study in London.

Of the many people he met at his uncle's house we must note one, a very conceited young fop who wore fantastic waistcoats smothered with gold embroidery, velvet pantaloons, and shoes adorned with red

rosettes. One night, while Henry was at the house for dinner, Mr. Austen was called away, saying, as he left, "Ben is in money trouble again." When he returned he mentioned that he had been to get the foppish young man out of gaol, where he had been taken for a debt. Can we guess who the foppish young man was? He was Benjamin Disraeli, the future Prime Minister of England. In later life he and Layard were on different sides in politics, but though young Disraeli had snubbed and mocked the boy, he was kind and complimentary to the man, and tried hard to win him to his side. Layard, while hating the fop, had worshipped the genius in him, more especially as Disraeli had written about the East, towards which Henry's heart turned more and more. All attempts to make him a lawyer failed. He could not, would not, study the dry bones of law with a mind on fire with dreams of distant fields of romance. Instead of going back to the office at night to study, as his uncle demanded, he would gather about him a few starving refugees from other lands, talk to them about their affairs, and feed them. He used to limit himself to sixpence a day for dinner, so that he might have money with which to buy these men food at night, and they would gather at his lodgings, talk on art and politics and the reform of the world, and eat—bread and sprats!

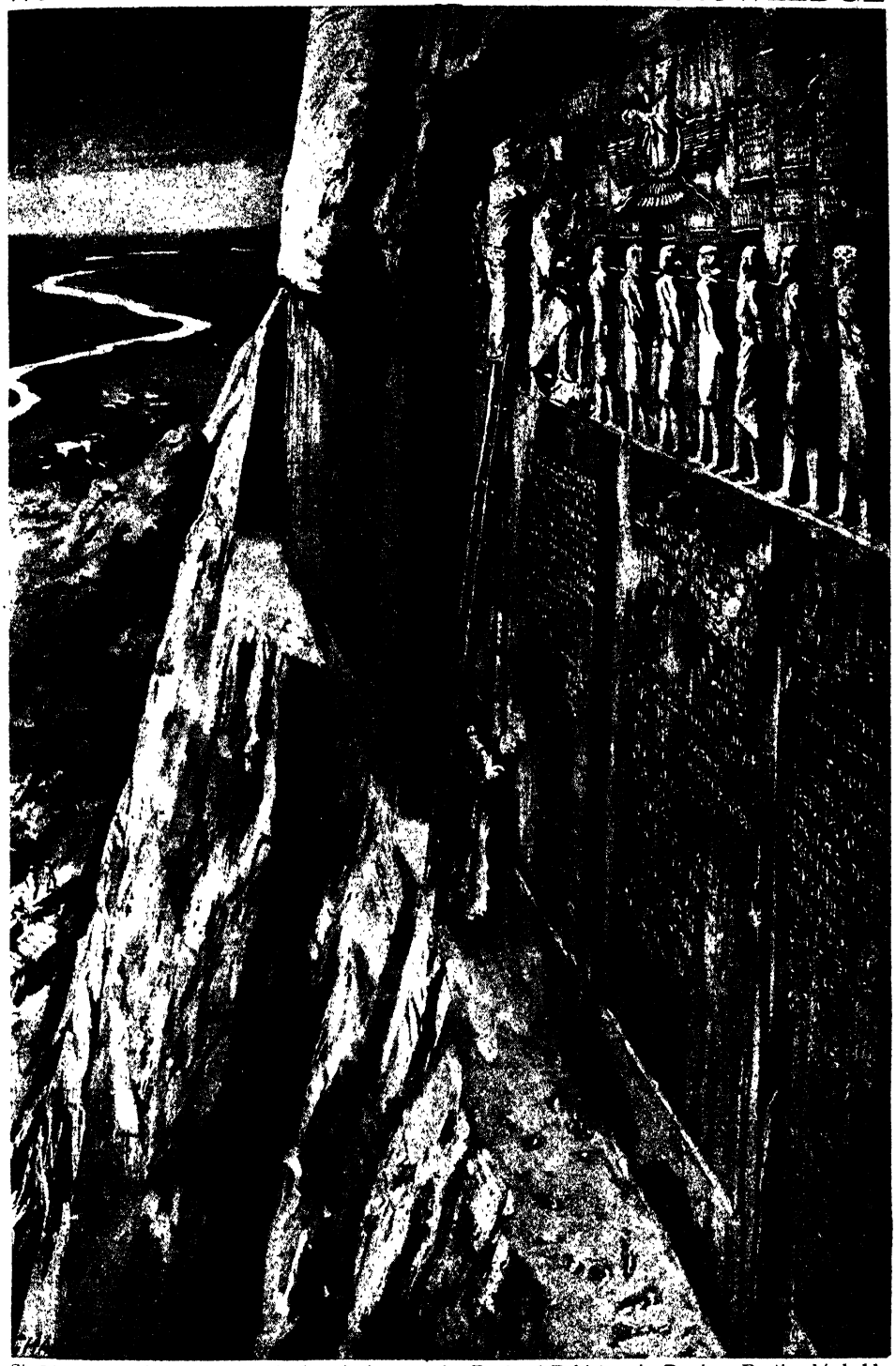


SIR HENRY LAYARD IN THE DRESS HE WORE AS A TRAVELLER
This picture, showing Sir Henry Layard seated, is from the book of his "Early Adventures in Persia and Babylon," published by Mr. John Murray

A delightful tour abroad with an artistic friend relieved the gloom into which the boy was plunged by the death of his father, and at the end of five years he duly passed the examination which made him a lawyer. Then, on the advice of an uncle, who had lived many years in Ceylon, he determined to go out there to practise law. His mother had £600 in trust for him, half of which was given to pay his expenses out, while the other half was sent out to await his arrival there. And how do you think he proposed to get to Ceylon? He set out to travel not by sea, but right across Europe, through then little-known Central Asia, finishing by traversing India, and so on to his destination. He was inspired to this extraordinary scheme by a young friend named Mitford, who was going out at the same time, and, dreading the sea, chose the overland route. But for that young friend's fear of sea-sickness Layard would have gone by ship, and Nineveh might never have been discovered. Layard was only twenty-two when he set out on this perilous journey, and before he reached the journey's end he had taken a step which changed his life, for he abandoned the idea of Ceylon, and surrendered himself to a passion for travel and exploration which made it impossible for him to think of ever settling down to practise law.

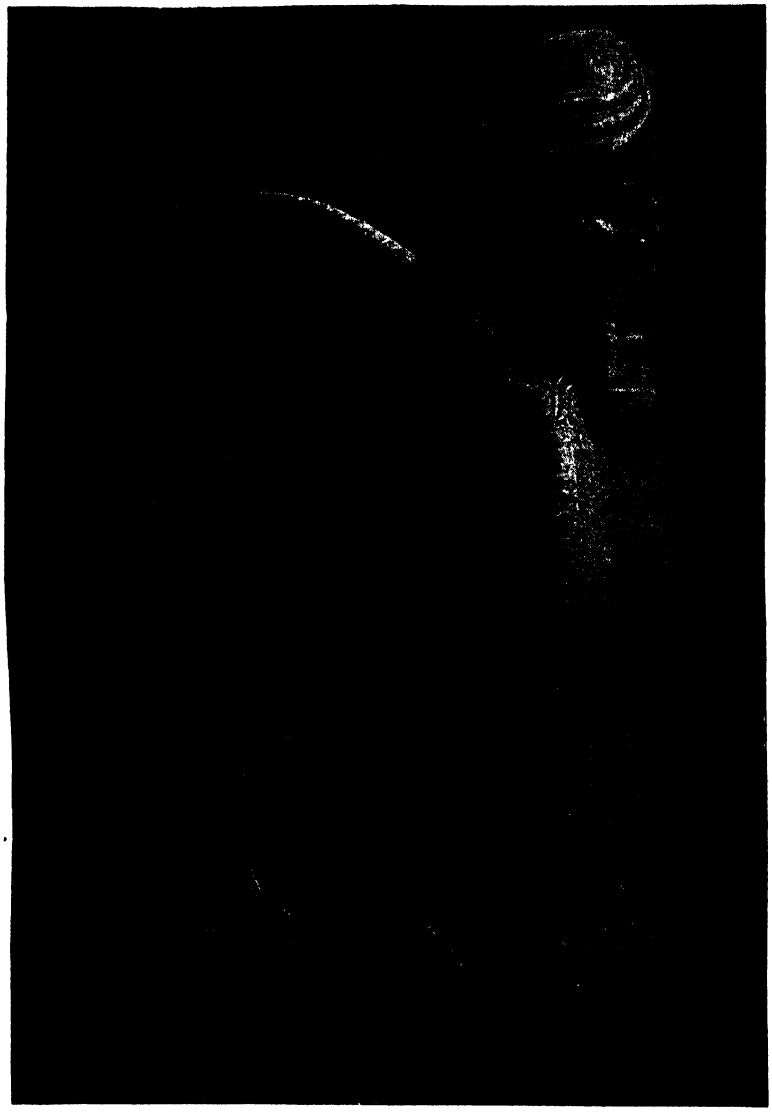
At Constantinople he became acquainted with Sir Stratford Canning, the British Ambassador, who was attracted by the knowledge and courage and charm of the young traveller, and employed him at the British Embassy. Some journalistic work followed, and certain secret missions in connection with the diplomacy, but all the time the born explorer was drifting nearer and nearer to the buried capitals of Assyria and Babylon. His travels took him along the River Tigris, where he saw a Frenchman digging in mounds at Kalah Sherghat, which is about twenty miles south of where Nineveh proved to be. Only a few scraps

WRITING A PAGE IN THE BOOK OF KNOWLEDGE



Sir Henry Rawlinson copying the inscriptions on the Rock of Behistun, in Persia. Resting his ladder on the edge of the precipice, he copied the messages withheld from man for 23 centuries, and then, laying his ladder lengthways across the broken ledge, he set out to walk to the tablets beyond. As he was crossing in this fearful way *the ladder broke*, and what happened is told on page 182.

were taken out of this mound, and it is a fact that at this time, while Nineveh was utterly unknown, the total collection of Assyrian and Babylonian relics in the whole of Europe were contained in a box three feet square. Layard's imagination was fired when, proceeding along the Tigris he saw the great mounds on the other side of the river, opposite the model town of Mosul.



THE WINGED LION WHICH GUARDED THE GATE OF THE PALACE OF THE KING OF ASSYRIA—NOW IN THE BRITISH MUSEUM

"When I first beheld the mounds of Nineveh," he wrote, "a great longing came over me to learn what was hidden within them, and I had a kind of feeling that I should one day seek to clear up the mystery."

He little thought that there, underneath these mounds, lay the buried capital of Assyria. He felt that human work lay hidden there—that was all. He made one or two preliminary tests before finally setting to work, and then he got Sir Stratford Canning to help him. Now, it is stated in many of the books about Layard that the work was carried out at the cost of Canning, and that it was he who gave to England the priceless sculptures which were found, but that does an injustice to Layard.

Canning and others helped a little, but "the greater part of these expenses," Layard wrote, "were met from my slender resources and by borrowing from my mother, who most generously advanced to me out of her very small income the little she could spare, in order to enable me to continue my work. I subsequently discharged my debt to her. I received no remuneration for my labours. The sum that was allowed me for personal expenses was entirely spent in carrying on the excavations, and it was not until my return to England, after my second expedition to Nineveh, in 1852, that I was repaid by the trustees of the British Museum the sum of money that I had advanced out of my own pocket." Further, the permission granted by the Turkish Government for the excavations to be carried on was made out to Layard, and everything he found was thus his own property. But he kept nothing at all for himself, giving everything to the nation. So much for the

finances of one of the biggest and most romantic undertakings ever carried out by one man.

The actual digging was begun at Nimroud, continued at Nineveh, and finished at Babylon. War was in progress at the time, and wandering tribes of the desert endangered the life and labour of the brave digger; fanatical Turks attacked him, and again and again he was made to suspend his labours, sometimes because it was said he was disturbing the graves of "the faithful," sometimes because he was supposed to be digging gold and gems out of the ground, sometimes because people declared he was taking measurements and making plans which would enable his countrymen to possess the land. But through it all Layard worked gallantly, showing marvellous skill in dealing with the troublesome people and the troublesome officials. His dwelling was a mud hut, he himself living on one side of a rough partition, with sheep and goats and cattle on the other. There was often no roof, and the rain streamed in, so that he had to sleep under a table with a trench cut round his floor to carry off the water. So Layard lived on the site of the great cities of Assyria which had been the homes of kings who had ruled Assyria, Babylonia, Egypt, and the whole territory of the Iraelites.



THE STRIKING HEAD OF ONE OF THE REMARKABLE FIGURES APPEARING ON THE MONUMENTS OF THE ANCIENT ASSYRIANS

It is impossible to follow him through his work of excavation, for the story fills several volumes. But we may get an idea of the way in which it was done from one incident at Nimroud, which was none other than the ancient city of Calah of which we read in the tenth chapter of Genesis: "Out of that land went forth Asshur, and builded Nineveh and the city Reheboth *and Calah.*" The great old city, whose walls could be traced for 7000 feet in one direction and for 5000 feet in another, lay beneath colossal mounds of earth, and only wandering tribesmen trod its soil, not knowing that it had ever been a city. Layard employed natives to help him, and they dug trenches this way and that, finding remains of great palaces below at varying depths.

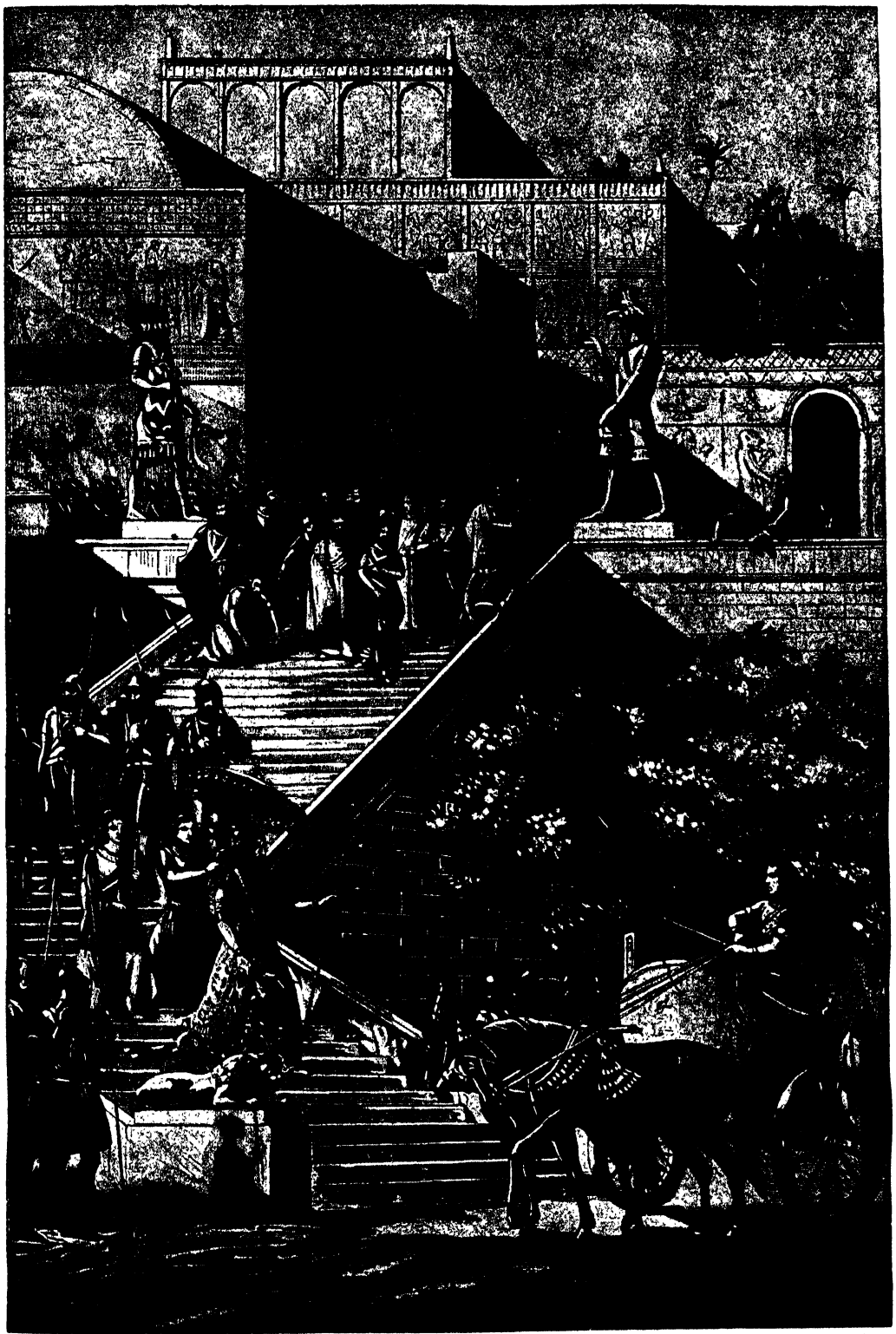
Parts of the remains had been destroyed by fire, parts were simply covered with earth. There were hundreds of inscriptions, and numbers of magnificent statues of great size, carved from solid stone—winged bulls, human-headed lions, eagle-headed men, and so on; carvings of every phase of life among a people who were highly skilled and artistic, but whose very existence had come to an end and whose very language had perished. Deep down in the city under the soil were beautiful works in ivory and bronze and other metals, some of them exquisite examples of work. What excitement and terror the discoveries caused we may gather from one story which Layard tells us.

One morning, as he was returning to the mound, he saw two Arabs urging their mares to the top of their speed. On approaching him, they stopped. "Hasten, O Bey," exclaimed one of them, "hasten to the diggers, for they have found Nimrod himself! Wallah! It is wonderful, but it is true; we have seen it with our eyes! There is no God but God!" And, both joining in this pious exclamation, they galloped off in the direction of their tents. On reaching the ruins, Layard descended into the new trench, and found the workmen standing near a heap of baskets and cloaks. While one advanced and asked for a present to celebrate the occasion, the Arabs withdrew the screen they had hastily constructed, and disclosed an enormous human head, sculptured out of the alabaster of the country. They had uncovered the upper part of a figure, the remainder of which was still buried in the earth. He saw at once that the head must belong to a winged lion or bull, and that it was in an admirable state of preservation. The expression was calm yet majestic, and the outline of the features showed a freedom and knowledge of art scarcely to be looked for in works of so remote a period. It was a thrilling discovery, and Layard was not surprised that the Arabs had been amazed and terrified at this apparition. It required no stretch of imagination to conjure up the strangest fancies. This gigantic head, blanched with age, rising out of the earth, might well have belonged to one of those fearful beings which are pictured in the traditions of the country as appearing to mortals, slowly ascending from the regions below. One of the workmen, on catching the first glimpse of the monster, threw down his basket and ran as fast as his legs could carry him. He rushed into the town, declaring that Nimrod had appeared, so causing a riot of terror and indignation. The chief of a local tribe called to see the wonder, and was afraid of approaching; but when at last he ventured to look he said, "This is not the work of men's hands, but of those infidel giants who were higher than the tallest date-tree; this is one of the idols which Noah cursed before



THE QUAINT EAGLE-HEADED FIGURE OF NISROCH, ONE OF THE GODS WORSHIPPED BY THE ASSYRIANS

THE KING OF ASSYRIA LEAVES HIS PALACE



KING SENNACHERIB GOES OUT INTO HIS KINGDOM IN THE DAYS OF WHICH THE BIBLE TELLS

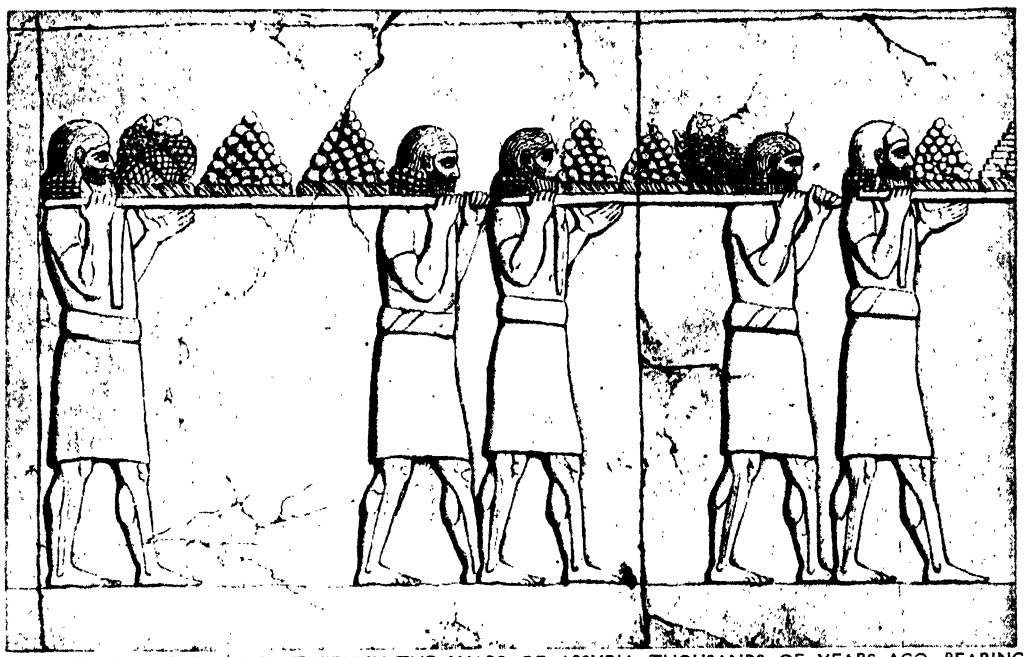
the Flood." And everybody standing near agreed with the astonished chieftain.

With all the priceless treasures of art and history discovered here were many representations of horses and chariots, but the natives around Layard had never seen a cart. When he had one made all the town turned out to stare and wonder at it, and to see him get his treasures hauled away to be floated down the River Tigris and taken by steamer to England.

Little do we think, when we look at these sculptures in the British Museum, what a history lies behind them—the story of their creation, erection, and overthrow, and the centuries upon centuries of burial. Layard found three palaces at Calah, and one was the palace of King Shalmanaser II., of whom we read in the seventeenth chapter of the Second Book of Kings. He it was who, when God was angry with the Israelites, carried ten tribes into captivity.

When he moved on to Nineveh, which proved to lie beneath the mountainous rubbish-heaps on the side of the Tigris opposite Mosul, Layard found abundant records of the old Assyrian kings, and particularly of Sennacherib, that dread king who twice assailed Jerusalem when Hezekiah was King of Israel.

And in Babylon Layard stood in the home of Nebuchadnezzar and saw thousands of the records of that king. There he found remains supposed to be the ruins of the Tower of Babel, but Layard proved that it had been a gigantic edifice famous as the Tower of the Seven Planets. Each towering storey of the structure had been of bricks glazed with the colour which was supposed to represent a particular planet. The discoverer stood in the very palace of Nebuchadnezzar, the terrible king who besieged and utterly destroyed Jerusalem, and carried away the people captive into Babylon. Nebuchadnezzar it was who set up the golden image which Shadrach, Meshach, and Abednego refused to worship; he it was to whom Daniel declared the dream. And now Sir Henry Layard stood in this king's palace. Nineveh was captured and destroyed in 606 B.C., Babylon fell three hundred years later, and both were buried by the sandstorm and the whirlwind, so that corn and grass grew over the palaces and citadels of the kings of the ancient world. Layard discovered them, nearly three thousand years after the day of their greatness. He discovered their works and their records, and the language of the marvellous story of these times has been deciphered and made plain.

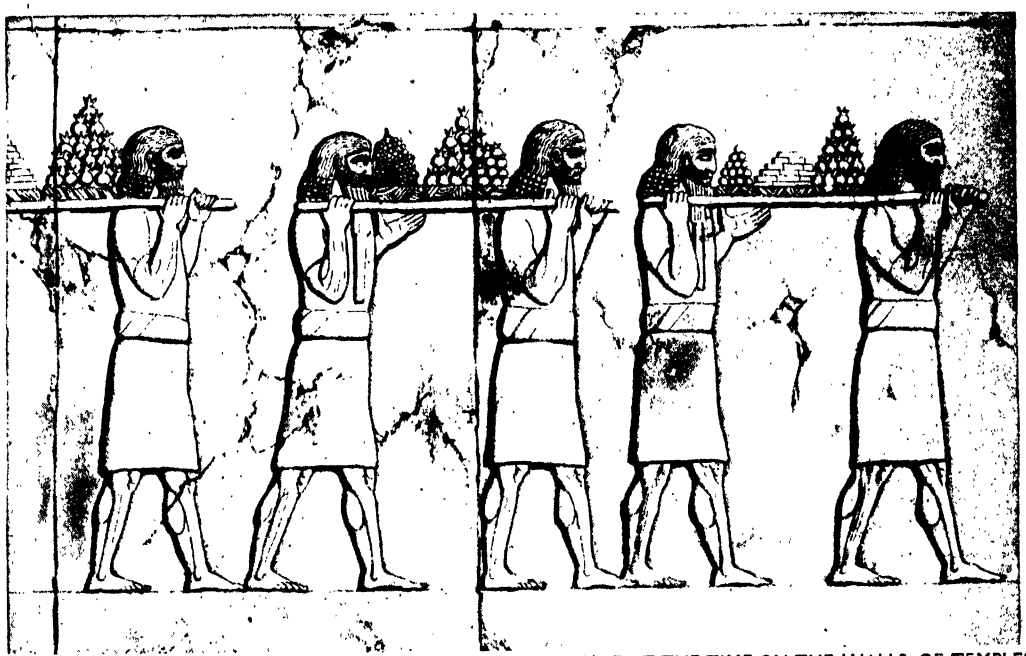


A PROCESSION OF CAPTIVES, TAKEN IN THE WARS OF ASSYRIA THOUSANDS OF YEARS AGO, BEARING

Today we have type which prints in metal exact copies of the characters which the ancients printed on clay and bronze and ivory, so that, were it possible for Nebuchadnezzar to come to life today, he

could pick up a book printed in London and read the language he wrote and spoke thirty centuries ago.

It was not in his great cities alone that Sennacherib set up his inscriptions to tell of his glory. Like other great kings, he carved his records in distant places where they should stand for ever, as he thought, eternal monuments of his greatness. One such inscription was carved by order of King Sennacherib to tell of a splendid piece of engineering which gave a water supply to Nineveh. There was a marvellous system of canals, which made the country fertile as a garden, and English engineers who are now at work in Mesopotamia are reconstructing this old system of canals in order to revive the ancient prosperity of the site of Nineveh.



OFFERINGS TO THE CONQUERING KING—FROM SCULPTURES MADE AT THE TIME ON THE WALLS OF TEMPLES

The inscription describing the creation of the old canals was carved on the face of a precipice at a place called Bavian, in what is now known as Kurdistan. It was carved in the solid rock by men who stood on a tiny ledge of stone deep down the face of the precipice, and when they had finished they cut away the platform on which they had stood, so that men should see their work from afar, but not approach to destroy it. The projecting platform was not quite destroyed, however, and Sir Henry Layard found the place, lowered himself down to the platform, and with the aid of paper took an impression of the carvings which had stood in solitude for more than 2500 years. In his hurry to get away from his dangerous position, he left some of the paper that he had been using for his work. Another fifty years passed, and then a travelling scholar espied the same spot and descended to the platform. There was the paper Layard had left fifty years before!

The peril involved in climbing the face of a precipice to copy an ancient inscription is such as even expert mountaineers would shudder to encounter. We may get a good idea of the danger from the experience of Sir Henry Rawlinson in copying the inscriptions on the Rock of Behistun. This rock is part of a range of hills near Kermanshah, an ancient Persian city. In the fourth century before Christ it was known that high up on the face of the rock, 500 feet above the level of the plain, were inscriptions whose meaning could no longer be guessed. For twenty-three centuries the message of these inscriptions and the name of the man who had caused them to be carved had remained a secret. Then, while Layard was at work in Nineveh, Sir Henry Rawlinson arrived at Kermanshah, and determined to copy them. To do so he had either to climb 500 feet up a precipice, or let himself down from a height of over 3000 feet, crossing, by means of narrow



HOW THE ASSYRIANS PICTURED THEIR GODS—FROM A SCULPTURE FOUND BY SIR HENRY LAYARD

planks, chasms across which it was quite impossible to leap.

The inscriptions are engraved on nine great tablets, carved in the solid rock, seven in one row and two still higher. Two of the seven actually overhang the precipice, the other five are above a ledge of rock, eighteen inches wide, which was probably cut by the sculptors who carved the inscriptions. Each tablet is as high as three or four men, so that they could only be reached by means of a ladder, and this had to be reared upon a narrow ledge of rocks, 130 feet higher than the cross on the top of St. Paul's Cathedral. By great exertions the ladder was hauled up from below, but when it was placed upright the slope was not sufficient to allow the climber to ascend. He therefore cut it short, and again upreared it, but now it was too short to reach the top of the upper inscriptions.

A TERRIBLE WALK TO READ A PAGE IN THE BOOK OF THE PAST

At last, after many trials, Rawlinson placed the ladder with its feet almost on the brink of the ledge, and, with a native holding the ladder from the back, he then ascended. He had to climb to the topmost rung, lean his body and his left arm against the rock, and then, holding his notebook in his left hand, make his sketches with his right hand.

A more dreadful position can hardly be imagined than that of a man balanced on the top stave of a ladder which is resting on the edge of a precipice 500 feet deep! But worse was to follow, for the inscriptions overhanging the wide chasm had still to be copied. Having reduced the size of his ladder, Rawlinson, who had hoped to lay it flat across the chasm from ledge to ledge, now found it too short to serve as a bridge across the gulf. But he was not to be beaten. He turned the ladder upon its side and fixed one end of the upper side upon the rock of the ledge on which he was standing, and the other end on a projection on the other side

of the chasm. In this way the ladder held in its place, and Rawlinson began to walk across, resting his feet between the staves on the lower side of the ladder and clinging with his hands to the upper side. As he was thus walking across, *the ladder broke.* The under side was rotten, and gave way under his weight, falling with a crash down the precipice. As if by a miracle, Sir Henry Rawlinson succeeded in supporting himself by his hands on the upper side of the ladder, and hung in deadly peril over the yawning precipice. Happily, he was a man of splendid strength and nerve, and succeeded in climbing back, hand over hand, from over the chasm to the narrow ledge of safety. He afterwards got two ladders, laid one flat across the gulf, stood the other upright upon it, climbed it, copied the inscriptions, and brought his knowledge back to England.

THE PRICELESS DISCOVERY OF THE KEY TO ANCIENT MYSTERIES

The inscriptions proved to be written in three languages—Babylonian, Scythian, and Persian—and they contained the history of the great King Darius, ruler of Persia, Babylon, Assyria, Arabia, Egypt, and eighteen other countries. The writings proved of priceless value as a key to the discoveries of Layard, for the same words were set down in three languages, so that there could be no mistake. But there are few pages in the book of knowledge which have been written at such a fearful risk as that.

Sir Henry Layard, after his excavating work was ended, became a member of Parliament, married a delightful woman, travelled a great deal, and settled down in a lovely home in Venice, where he and his wife did great good in helping the sick and needy and re-establishing some of the artistic handicrafts of the ancient city Sir Henry died in London on July 5th, 1894, honoured and beloved by the scholars and artists of all lands.



A STRANGE FIGURE FOUND BY SIR HENRY LAYARD NEAR THE ENTRANCE TO KING SENNACHERIB'S PALACE IN ASSYRIA

CHARLES STUART IN THE HOME OF VANDYCK



ALL THE WORLD KNOWS THE CHILDREN OF CHARLES STUART THROUGH THE VIVID PICTURES VANDYCK PAINTED IN THEIR HAPPY DAYS

VANDYCK, WHO LIVES FOR EVER

THOMAS GAINSBOROUGH, whom we love among English artists as we love Charles Lamb among English writers, lay dying, but with a radiant smile upon his face. Sir Joshua Reynolds, from whom he had been long estranged, sat at his bedside. All misunderstandings were smoothed away; the deep abiding affection of the two men prevailed over the petty irritation which had kept them apart. The moment came for the last good-bye. "Well," said Gainsborough, "we are all going to heaven, and Vandyck will be of the company!"

That phrase alone would be enough to confer immortality upon the Belgian artist who became an English knight. The man our cheerful Gainsborough hoped to meet in heaven should be good company for most of us. Gainsborough, who knew and loved the works of the great Vandyck, knew how Vandyck responded to all that was bright and beautiful in life, yet with what tender feeling he understood and depicted suffering and brave endurance of ills! Through his work, and through his story, Vandyck appears to us as to Gainsborough—a man of many charms, though we know that with his genius and fine powers there mingled illusions as strange and subtle as beguiled the brains of other men illustrious in his age. Who shall sneer at his illusions?

With a piece of wood or canvas, a palette of oils and colours, and a scrubby old brush or two, Vandyck could fashion a vision of loveliness, or of stately grace and power, which remains fresh and brilliant nearly three centuries after it left his hand. Why, then, should he doubt that the mysterious men of learning with whom he mixed, the men with strange visions, could achieve wonders with their raw material as great as he with the raw materials of his art? Copying them, he sought to make gold, as the other alchemists sought, not for gold's sake, but that he might have wealth for the luxurious life in which he found he could attain the noblest results with his brush. But success along the lines he sought was impossible, and perhaps it is as well.

Vandyck, almost the greatest portrait painter, scorned portraits, and desired to devote himself to historical subjects. Had he achieved his heart's desire in acquiring wealth, it is quite possible he would have failed in art, for Nature did not endow him with the qualities of the painter of historical subjects. He had not the force and imagination necessary for the mastery of subjects of strife and violence and terror, and the subtleties of calamity and triumph. He was not many-sided and fertile like his master, Rubens. Some of the works he did for churches were pure gems of art. No man could more poignantly picture the meek and gentle bearing of the patient sufferer; but he could never make a man triumphant over outrageous fortune.

He could idealise an actual portrait, and he did. He has imposed a sort of historical fraud upon us all. His portraits of Charles Stuart, who was a weak, deceitful, dishonourable, tyrannical man, cancel all those evil qualities which brought the country to civil war and Charles himself to the scaffold. Vandyck loved Charles, and he painted him as his partial eye saw him. No king looks more appealingly out upon posterity than does this base king from the canvases of his Flemish worshipper. In those glorious portraits he appears as the embodiment of knowledge, wisdom, virtue, and all chivalrous and kingly qualities. He was really a bad man, in spite of his love of art and literature; but it is impossible to study his pictures without sharing something of the affection he inspired in his painter. The king's supporters and friends, their wives

and children, painted by the same hand, possess the same charm, the same dignity, the same suggestion of virtue and nobility.

If romance and glamour and pity are inseparable from the Cavalier cause, it is largely because Vandyck painted its figures so delightfully.

Tempestuous Oliver had no Vandyck to Win Our Love for Him

There was not a man in the whole Cavalier army who was worthy to unloose the shoe of tempestuous Oliver Cromwell, but old Nol had not a Vandyck to give his rugged features a passport to the affections of posterity, and it is in spite of the artists of the time that we learn to admire and venerate that tremendous figure. Charles, whose mind was tinctured with romance, never did anything more calculated to keep his memory in good favour than when he brought Vandyck from Antwerp to paint his portrait and those of his friends.

Who can think of Henrietta Maria, his queen, as anything but a lovely, sweet-faced woman? She became repellent with age, but we have the brush of Vandyck to tell us what she was like in his day, and nothing else matters. She comes down to us a radiant beauty. His sitters were undoubtedly beautiful and distinguished women, the men romantic-looking, valiant, poetic in mien; but they lost nothing at his hands. He seemed always to catch the supreme expression of distinction and charm, "the Vandyck look."

How the Great Belgian Came Wandering Over Europe and Reached England

The result is that he gives us a gallery of roystering, hard-fighting gallants, looking like noble types of manhood, and women who claim our respect for every adorable quality. If he had had to paint that famous little girl who, when she was good, was very, very good, he would certainly have caught her farthest removed from the moment when she was horrid.

Well, how came this brilliant Belgian in our land, painting our beauties and our high-born plotters and fighters? He came, as other artists came, because it was the fashion for men of genius to wander over Europe winning wealth and glory with palette and brushes, as their fighting brothers wandered across the Continent winning fame and fortune with the sword.

The Middle Ages, with all their darkness, squalor, ignorance, and barbarity, had closed, and the Renaissance, the rebirth of learning, beginning in Italy, had spread to France and the Low Countries; and the Flemish Renaissance, at its high tide, gave us Rubens and his greatest pupil, Vandyck. England had no such artists. Insular security has its penalties as well as its privileges. In those old days of difficult and delayed communications, impulses which ran swiftly across the Continent were apt to sink in the sea which divided us from it. We may have had a great mass of the raw material of art, so to speak, in England, but the kindling spark was absent. The same influence which brought into being a new Flemish school of art left young art unnurtured in its cradle here.

The Great Movement which Set the Artists Free to Do as they Would

The Reformation tore the Low Countries into artistic halves. The glorious struggle of eighty years by the Netherlanders against the domination of Spain left a great part of the country independent and Protestant, with a small section still under the influence of Catholic Spain. The Protestant half had already received its artistic leaven, and this worked and released the artists of Europe from the crippling and cramping influence of the Church, which would have nothing but everlasting varieties of religious subjects. The emancipated Protestant artists looked round with delight on the noble buildings which had risen about them, upon the varied romantic costumes, upon the myriad interests of actual life—and they painted them all. Men who painted modern life had come into their kingdom

With us, however, the effect had been different. The Reformation meant for us cutting off the connections

with Italy, the well-spring of artistic inspiration. We were "heretics," so artists must not come to us for fear of excommunication; they must not even sell us pictures. We were left to our own meagre resources. We painted and carved as little and as badly as we had painted and carved in the days when our land was given over to wars, and only the weaklings wielded the brush and chisel.

Our art was contemptible, and its executors were regarded as mere workmen. The bold baron who needed a picture would obtain it from the man who made him a suit of clothes, or hammered out a pattern in metal, or carved some of those old chests we still see in ancient churches and old mansions. The tailor was sculptor and artist, too; and, to show the sort of thing he had to do, let us indulge ourselves in the joy of reading a typical document dealing with a work of art executed for one of our churches when the immortal Van Eycks were in their glory in Vandyck's native city.

A Precious Record of the Early Days when Art was Held in Chains

Here it is, a most precious record.

Memorandum: That Master Cumings hath delivered: the 4th day of July, in the year of our Lord, 1470, *to Mr. Philip Bartholomew, Vicar of Radcliffe . . . a new sepulchre, well gilt, and cover thereto; an image of God Almighty rising out of the said sepulchre, with all the ordinance that belongeth thereto; that is to say—Item. A lath, made of timber, and iron work thereto. Item. Thereto belongeth heaven, made of timber and stained cloth. Item. Hell, made of timber and iron work, with devils in number* 13. *Item. Four knights, armed, keeping the sepulchre, with their weapons in their hands; that is to say, two axes and two spears. Item. Three pair of angels' wings; four angels, made of timber, and well painted. Item. The Father, the crown and visage; the ball, with a cross upon it, well gilt with fine gold. Item. The Holy Ghost coming out of heaven into the sepulchre. Item. Belongeth to the angels, four chevelers.*

What a picture "this new sepulchre well gilt" must have presented, when we know from contemporary records that even the most talented artists in the kingdom, the men who executed the exquisitely coloured illuminations for books, drew those figures as hideous as emblems of death!

But there was a stirring of the spirit. Stupid and ignorant as were some of our national heroes, they did know that English art must be developed to maintain the dignity of the national life. They fought like tigers in their youth, but as they waxed old, and their thoughts turned towards heaven, they longed to decorate the churches and shrines—and there were no artists capable of such work.

The Great Awakening that Came with the Revolution of Thought

A passionate love for books arose, so that a man would sell all he had to acquire a beautiful volume, and would bequeath it as an heirloom, as men now bequeath an estate. Books would serve as security for a large loan, and they were even held so precious as to be accepted in pledge for the fulfilment of a treaty! The spirit of the nation was stirring when the Reformation came, then—pop went the bulk of our pictures and books. They were associated with the Church of Rome, and could not be endured. They were burned or torn to shreds and cast away. There was famine in the place where art and literature should have been. Henry VIII. set a new and splendid fashion. Failing to get Catholic artists, he brought in Protestant artists. He brought in the Protestant Holbein, who was destined to die here, with his powers still unimpaired, of that old penalty of English uncleanliness called plague; and in the wake of Holbein came many other artists. Rubens came to us, not as an artist, but as an ambassador of Spain to whom his art had endeared him.

How Rubens Amused Himself by Being Ambassador

"What!" said one of our courtiers, who discovered him painting while in London on an important mission, "does the ambassador of his Catholic Majesty amuse himself sometimes with painting pictures?"

"I amuse myself sometimes with being ambassador," Rubens said.



A VANDYCK PORTRAIT OF A LADY OF THE STUART COURT

He was much more interested in Inigo Jones's projected Palace of Whitehall than in all the treaties in the world.

Vandyck had the good fortune to be born within the range of the influence of Rubens when the great master was soaring into fame at Antwerp. This was on March 22, 1599. The son of a prosperous merchant and of an artistic mother, he had none of the difficulties by which too many artists have been confronted. After preliminary training by an artist and scholar of good repute, he entered the studio of Rubens and became his favourite, and in time his most illustrious, pupil. Rubens had studied and worked long in Italy, and had brought back with him the love of resplendent colouring which distinguishes the artists of that sunny land, and particularly Titian. Young Anthony was infected by his master's passion, and imitated him so well that Rubens, who was as honest as he was gifted, gladly admitted how large a share the youth had in his pictures. The more of Rubens there was in the work, the more you would pay; the more there was of pupils, the lower was the price. But if it were his best pupil, then the price would go up with a bound, for that best pupil was Anthony Vandyck.



A VANDYCK PORTRAIT OF A LITTLE GIRL FRIEND WHO LOVED HER DOGS—A PICTURE HANGING IN ANTWERP BEFORE THE WAR

The wise master recognised the talent of his young squire. He saw that portraiture was to be his fortune. He saw, also, that he was hampered by a certain poverty of ideas. "Go to Italy and study the masters," he said. Had this advice come earlier, Vandyck might have gone there and come back a monk, for of his eleven brothers and sisters several devoted themselves to a life of religi us seclusion. But there was no danger of that now, for, in spite of his limitations, he was recognised by his fellow-citizens as a genius, and was admitted, while still a pupil of Rubens, as an independent master of the Antwerp Art Academy. This was a year after he had presented to a church at Antwerp his first big individual work, a picture of Christ bearing the Cross.

Up to the time of the German invasion, in 1914, that picture still remained in the place where Vandyck put it. It is sad to think that much of the work of our hero fell into destructive German hands during the War. Towns which became sadly famous during the great onrush of the enemy into the stricken land contained many noble examples of his art. Happily, however, his works are not few in number,

for so prodigious was his industry that Vandyck pictures are scattered all over Europe, and Great Britain is rich in them. It would be a shame were it otherwise, for some of his most important work was done for English patrons.

By the time he was twenty his fame was noised abroad. It must have been pleasant to be an artist in those days; they were much sought after. Our great men sent agents and secret representatives abroad to look out for new men and their works, and it was due to an emissary of Thomas, Earl of Arundel, a great lover of art, that we in this country first heard of Vandyck. "Vandyck lives with Rubens," the benevolent spy wrote, "and his works are beginning to be esteemed almost as highly as those of his master. He is the son of wealthy parents in this town, and it will be difficult to induce him to leave home, especially as he sees what a fortune Rubens is making."

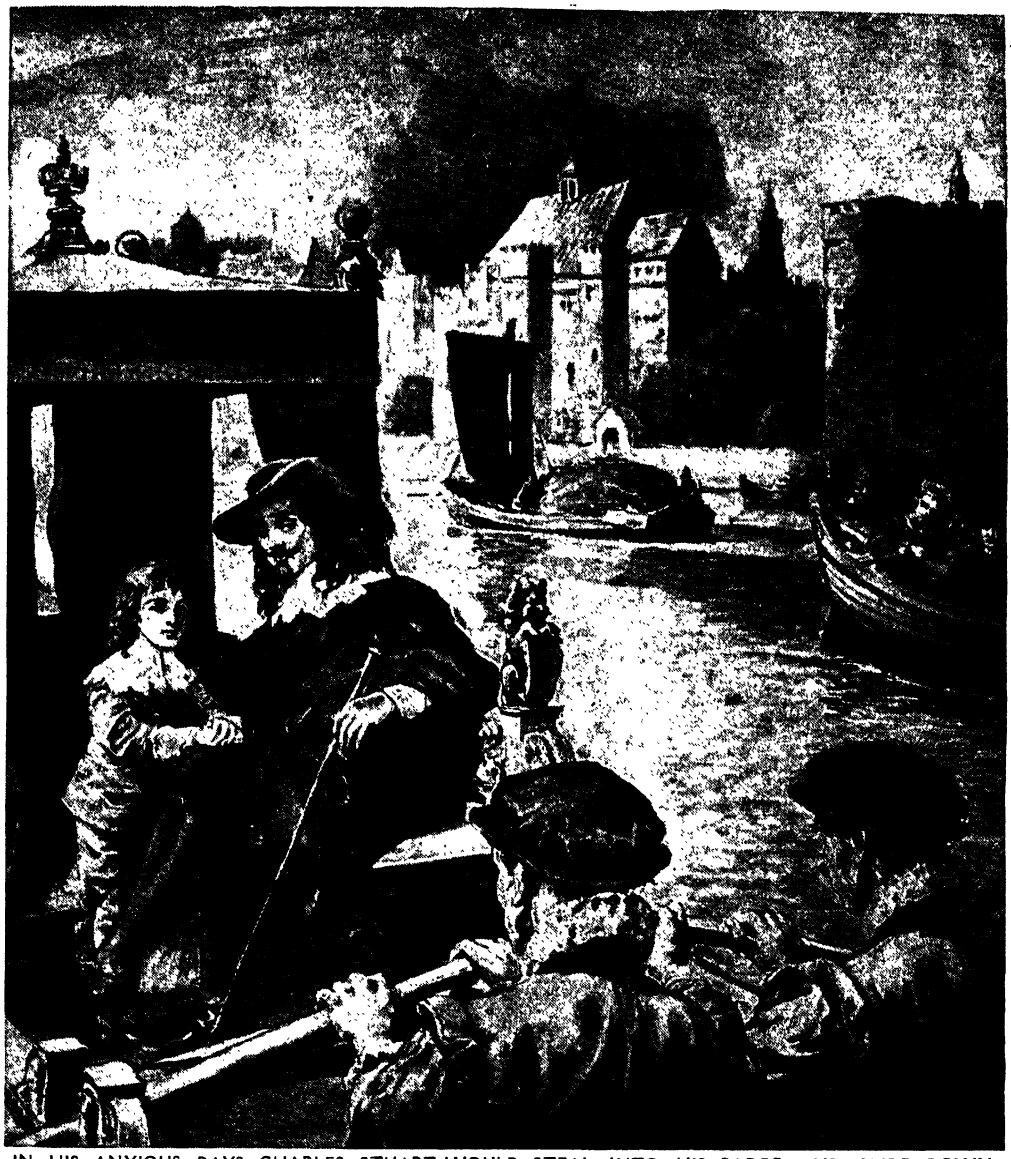


VANDYCK, BY HIMSELF

Almost as good as Rubens? The very man! Everybody who cared for art in England was crying out for the work of the great master, but there was not enough to go round. The deputy might train on into his equal. At any rate, he was immediately acceptable; and in the following year, fired by the news of the reception accorded to Rubens in England, to England Vandyck came. James I. was still king, and allotted him a salary of a hundred pounds a year. The young Belgian was not happy at first, and within three months was away home on a sort of passport, a document giving him eight months' leave. He did not return at the end of the eight months, but wisely went to Italy, as his great tutor had advised. It is notable, as showing the relations between master and pupil, that Anthony at this time presented Rubens with a superb work of his own as a sort of farewell gift. It is a wonderful picture, portraying the betrayal of Christ. The work of an artist just emerging from youth, it was never excelled by anything that Vandyck did in his prime.

Vandyck's way led through all the Belgian towns with which the war has made us dismally intimate. He was at Louvain and Brussels, and he passed through the town which was to be the scene of a romance in his life. It was at Saventham, in later years, that he proposed to the daughter of the magistrate. He was refused, but the lady's name lives in history, Isabella van Ophem, famous only from the fact that she won and rejected the love of this young prince of art. The place had tender recollections for him, and he painted there his famous picture of St. Martin. That work has become the centre of history. Placed in the village church, the painting was to have been sold in the middle of the eighteenth century; but the village art-lovers rose in arms against the outrage and prevented the sale. When Napoleon, in his march of spoliation, determined to have the painting for Paris, it required a considerable military force to get it away. To Paris it did go, but with the peace that followed Waterloo the peasants of Saventham had their lovely treasure back, and there it remained until the Germans arrived in 1914, when once more it was carried off.

We cannot follow Vandyck through Italy, but those who have wandered in his footsteps, and, with humble awe, drunk at the same fountains of inspiration from which he drew new stores of knowledge, can imagine what a paradise of beauty



IN HIS ANXIOUS DAYS CHARLES STUART WOULD STEAL INTO HIS BARGE AND GLIDE DOWN THE THAMES TO SEE VANDYCK

and delight it must have been to him. He passed from town to town, and, luckily, his funds ran low, which drove him to portrait painting for a livelihood. But for that, there is no saying into what blind alley of art he might have roamed. Portraits were easy to him, so that he did not want to paint them ; but the things to which his genius did not truly incline he wished to do. It is well that Fate should have ruled against him, and impelled him to the line of least resistance, along which he found perfection. That is not a good rule in life in general, but in Vandyck's case it was. There were many Flemish artists in Italy at the time, but they affected all manner of fantastic and boorish habits, so that Vandyck wisely kept aloof from them, and gained for himself the title of the cavalier painter. He was handsome ; he had a manner of great distinction, great charm of address, and singular sweetness of temperament, all very desirable attributes in association with true genius. Very distinguished people were numbered among his sitters. On returning to Antwerp Vandyck found that his father was dead, and that he had left a deathbed request that Anthony should paint a picture for the church of the Dominican nuns there.



THE RIDER—A VANDYCK PICTURE NOW IN GENOA

Anthony complied, and his picture, a fine specimen of his matured powers, remained in the church for 170 years, when it was carried off by Napoleon, and stayed in Paris for the next 21 years, when it was restored to its old place.

Next he returned to England, after an absence of seven years. Not meeting with recognition from Charles Stuart, who had now ascended the throne, he hurried home again, and resumed his portrait painting, many of the great artists of the time being among his subjects. But his fame was widespread, and his brush was kept busy with portraits of rulers and princes and potentates in several countries.

Being in Haarlem, Anthony Vandyck strode one day into the studio of the great Franz Hals, to whom he was unknown, and asked to have his portrait painted. Hals set to work upon his task, and in two hours he had finished a portrait of the stranger.

"Portrait painting seems so easy that I should like to try my hand at it," said Vandyck, and, sitting down, he painted a picture of Hals in even less than two hours. Franz realised by the splendid touch and colouring, and the marvellous hands, who the artist was, and the two became fast friends.

Mention of hands recalls a point that we may note. Nobody has ever painted hands with greater skill and dexterity than Vandyck. Artists have various limitations, and hands are usually an abomination to many of them. By the average artist a

hand must be hidden from sight in the portrait, or it comes out like a slab of putty or a malformed limb. Vandyck's treatment of the hand, however, was masterly. You see the hands displayed with prominence in nearly every picture; he actually obtrudes them, so well does he realise his power. He himself had beautiful hands, and he studied them, with the result that he endowed many of his men with hands too ladylike and gentle for their muscular frames. But his woman's hands were perfect. "Why, you pay more attention to my hands than to my face," said one beauty. "Ah," he laughed, "I am thinking of the rich reward I am to receive from them."

He did not work rapidly as a rule. He devoted fourteen exhaustive sittings to one subject, Nicholas Lanier, an English courtier, and turned out a portrait of such excellence that the fame of it reached England, and made Charles feel that he must have this artist at whatever cost. And have him he did, for Vandyck came over yet a third time, in 1632. Charles, who was a perfect judge of art, had gathered a notable company of artists about him, but he described Vandyck as his official painter, promised him a handsome salary, gave him one house at Blackfriars and another at Eltham, and gave him a knighthood, too. Eventually the artist married here, finding a bride in Lady Mary Ruthven, granddaughter of that Earl of Gowrie who perished in the Gowrie Conspiracy.



CHARLES STUART, BY HIS FRIEND—A VANDYCK PORTRAIT

In the full tide of his glorious powers, Vandyck painted his matchless portraits of the king, the queen, and the royal children. Quite a dozen pictures of these he painted, but none is so famous as his portraits of the artistic, refined, gentle-mannered, but treacherous King Charles. But the king's patronage did not take up all the artist's time. He had hosts of sitters. He painted practically everybody at court.

Charles wished to have the panels of the Banqueting Hall in Whitehall painted, and Vandyck was chosen for the work. He sketched out the plan,and his designs are still in existence, representing the history of the Order of the Garter. Walpole repeats the story, which he believed to be true, that the artist wanted £80,000 to complete the decoration, and that Charles could not raise it.

The nation was slowly rising against him. It was fighting his unjust taxes; it was rebelling against ship money. Had there not been a village Hampden to lead that righteous revolt, possibly the unlawful imposts would have been raised; Charles would have got his £80,000, and we should have had the walls of the Banqueting Hall painted by Vandyck. Our forefathers vindicated the rights of a free people, and in so doing unconsciously lost what would have been a crown and glory of our national art. Curious, is it not, how many dramatic issues attend the great sweep of events of which we read the bare outline at school?

Vandyck was much disappointed at his failure to secure this work; he was disappointed, too, when Poussin, recalled from exile, was summoned to Paris to undertake a great decorative scheme in the French capital. His days were often clouded by lack of money. The resources of the king did not enable him always to pay his painter's salary, and the artist lived luxuriously. He kept open house, maintained a bountiful table, loved music and paid large sums to musicians, dressed expensively, gave lavishly, and often outran the constable, as the saying goes. At such times, instead of raising his prices or working harder, he turned to the laboratory, and, like other credulous mortals, tried to coin all sorts of impossible substances into gold. His marriage was not a happy one, and this fact also tended sadly to darken the closing years of a brilliant life. One of his deepest sorrows sprang from his fear of the thunderbolt he saw lurking in the clouds that slowly gathered about the king.

The artist and king exchanged a genuine affection. Often, after some stormy scene with his independent and threatening subjects, Charles would take a boat and glide down to the studio at Blackfriars, and there watching the artist at work, and talking over things dear to the hearts of both, he would forget the stress and strife of politics. It is pleasant to think of him there, in the little studio by the river, discussing, with gleaming eyes and a happy smile, the affairs of that realm of art which he was fashioned by Nature to adorn.

Nothing more distressed the king and his painter than their joint failure to carry out the scheme for the Banqueting Hall. Little they knew it, but that room, with its walls still unpainted, was destined to be the last apartment of any sort on which the misguided king was to look. It was from that chamber that the king stepped through an open window to die. We cannot but be glad that Vandyck was spared this sorrow. He died in 1641, at old Blackfriars, only eight days after a little daughter had come into the world to bless him. Charles vainly offered his own physician a sum equivalent to £1500 of our money to save the artist's life. Eight years later he followed the great painter to the tomb.

Let us hope that, in that day when all sins are forgiven, king and artist may meet again in that heaven where Gainsborough hoped to meet Vandyck.

THE MAN WITH THE HEART OF POLAND IN HIM WHOSE MUSIC STIRS HIS TRAGIC RACE

CHOPIN has been called "the poet of the piano," and the description is very apt. Rubenstein, the Paderewski of our parents' young days, said finely, "The piano bard, rhapsodist, the piano mind, the piano soul is Chopin. Tragic, romantic, lyric, heroic, dramatic, fantastic, soulful, sweet, dreamy, brilliant, grand, simple—all possible expressions are found in his compositions, and all sung by him upon his instrument." Yes, and upon that instrument, the piano, alone.

This is the first and the most interesting thing to remark about Chopin. Most of the other great composers worked in all, or nearly all, the different fields of composition—wrote for voices, singly and in combination, wrote for the orchestra, for the stage, for the Church, for organ and piano, for leading string and wind instru-

ments. But Chopin did nothing of that kind; he never once attempted a choral composition, nor an opera, nor an oratorio, nor a symphony, nor an overture.

He began with the piano and stuck to it, knowing it best. He has sometimes been reproached for thus confining himself to the one department; but the best answer to such reproaches is that if Chopin was small in great things, he was great in small things. That is, he was great, and, indeed, unique, as a composer for the piano.

Looking at a complete list of his works, we cannot fail to be struck by the fact that he, more than any other, is a composer of "groups." Nearly everything can be classed under the several headings of Nocturnes, Polonaises, Mazurkas, Preludes, Studies, and Waltzes. Some of these forms he almost invented. We usually think of a waltz as something to dance to. But Chopin made an art-form of the waltz. No doubt it *would* be possible to dance to his waltzes, but, as Schumann said, the dancers should be countesses at least. Ehlert called them "dances of the soul, and not of the body," and that is a good description of them.

The Great Music of Chopin Which Seems to Have the Moon in It

The waltzes are the most generally admired of all Chopin's compositions. Next to them in that respect come the nocturnes. A nocturne is a name given to pieces of a dreamy character, suggestive of moonlight. The term was used in the liturgy of the Latin Church to describe certain portions of the service which were sung shortly after midnight. There is no other musical form with which the name of Chopin is so intimately associated as with the nocturne. In fact, musicians never use the word without thinking of him. His nocturnes are true night pieces, whose real charm can never be felt amid the glare of light in the modern concert-room. The one in F sharp major (Opus 15, No. 2) is the loveliest of them all. Its rich beauty is quite Persian in style. It paints, as it were, the stately palm and the sad cypress, the rose thicket, and the great stars burning low in the southern sky.

Next there are the polonaises. The polonaise was one of the principal Polish dances in Chopin's time, and Chopin was himself a Pole. The old dance expressed the Polish national spirit and character—chivalry, grandeur, and stateliness—and Chopin put all these characteristics into his fifteen magnificent compositions bearing the name. They are, along with the mazurkas, the most typically Polish of all his works. Love of his native Poland was certainly in his heart when he wrote them; but hatred of Poland's ruthless oppressors was there too, as it would have been had he been living now.

The Blithe and Joyful and the Dark and Sorrowful Pieces of His Music

The mazurka seems to have been a favourite form with him, for he wrote fifty-six mazurkas. There is something new and arresting in them all. Their emotional "content" shows Chopin at the two extremes of his temperament, for while some are blithe and joyful, others are dark and sorrowful. Liszt said that "one must harness a new pianist of the first rank to each of them," but Pachmann has shown us how one great pianist may reveal the soul and feeling of all the fifty-six when he is himself a true artist.

The preludes are in various styles—a "sheaf of moods"—but over all there hovers a spirit of combined sweetness and strength. Then there are the studies. The old idea of the study had no attraction for Chopin. Before his day, "studies" were written simply to help the pianist to master special mechanical difficulties of the key-board. They had no claim to rank as music. Chopin did not entirely ignore the aim of technical advance in his studies, but he sought always to give expression to some poetical idea, some musical sentiment, some dramatic situation.

Finally, we have the four ballades, in which Chopin has surpassed himself for masterliness of form and beauty and poetry of the musical contents. In these he attains the height of his power as a composer.

The Dreamy Man Whose Music is Like Unto Himself

Taking his works as a whole, their characteristics are pretty much those of the man himself. Chopin was of delicate physique, of refined, aristocratic manners and poetic temperament. Liszt said that his appearance suggested the convolvulus, which, on the slenderest of stems, balances "divinely coloured chalices" of such vaporous tissues that the slightest touch destroys them. He was something of a dandy—he loved fine clothes and expensively furnished rooms, and was very particular about his gloves and his ties and his walking-sticks. They called him "the ladies' Chopin," and the name was significant, for, like Shelley, he dwells in a region "where music and moonlight and feeling are one."

LIVINGSTONE'S FIGHT WITH A LION



AN ANGRY LION SPRINGING UNEXPECTEDLY OUT OF THE JUNGLE UPON DR. LIVINGSTONE



BEFORE THE LION WAS SHOT, DR. LIVINGSTONE SAYS IT SHOOK HIM AS A TERRIER DOES A RAT

The people among whom Livingstone lived.
A dance of Bechuanas in honour of the missionary.



DAVID LIVINGSTONE OF AFRICA

THE STORY OF A MAN WHO DIED FOR OTHERS

SOME of us have read stories of boys who were always good and always clever, boys with clean faces and clean hands, with spotless collar and unsmeared boots, who never had spirit or imagination enough to risk the dangers which most boys have to face and conquer.

Now, David Livingstone could never come into a story-book as a boy like that. He was a lad of mettle, who sometimes got into scrapes, or deserved to. He roamed far and near with his brothers, studying Nature, both plant and animal life, and he was as bad as Shakespeare, for if he saw a salmon when he was fishing for trout, he would poach the salmon, and if some plump and saucy rabbit scuttled across his path, he would stop and catch the rabbit.

David was very much a child of Nature in his early years, and except for those great, earnest eyes of his, and a certain business-like haste in his ordered methods, he was very like most other jolly boys. But there was one difference which marked him off from his fellows, which attracted the esteem and affection of men very much better placed in regard to social position and worldly wealth.

It was not the casual person who found him out; it was the close and sympathetic observer who discovered his qualities—men, destined themselves to become famous, such as Sir Roderick Murchison, the brilliant geologist; Sir Lyon, afterwards Lord, Playfair, a delightful man, who taught King Edward science; and Sir James Young, who made a fortune from his discovery of paraffin. Finding Livingstone in company such as this, we might expect to trace his origin to a wealthy home. But he was the son of very poor parents, so poor that at ten years of age he was put to work as a piecer in a cotton-mill in Blantyre, near Glasgow, where he was born on March 19, 1813. Poverty, however, did not mar the happiness of the family.

The father, a splendid type of man, and the mother, a bright, merry little woman in spite of her weak health, both inspired the lad with high ideals. But he needed no spur. There was in him that faculty of steady, persistent application which carries its possessor far. Guess what this sturdy little fellow did with the pocket-money that his mother was able to afford him out of the first earned half-crown that he proudly laid in her lap. He bought a Latin grammar.

The book was not intended for show; he diligently studied it, and followed up the language at the night school. He was a good classical scholar by the time he was sixteen. His working day began at six in the morning, and he did not leave the factory, except for breakfast and dinner, until eight o'clock at night. But he would rush off, after work,

to his night school, which lasted from eight till ten, and on returning to his home he would pore over his lessons until midnight, unless his mother fondly but firmly took his precious books from him and marched him off to bed.

HOW LITTLE DAVID READ HIS BOOK WHILE HE WAS SPINNING COTTON

Livingstone was one of the rare few who could do many things well. He took up nothing unless he meant to make himself proficient in it. He was a diligent and careful worker at the factory; he was a plodding, unwearied scholar. But he was a lover of Nature, and on Saturdays he and his brothers would scour the countryside, studying birds and plants and animals. His little bit of poaching came into these excursions, and there is nobody in the world who would not forgive him.

His diligence at the factory brought him promotion to the rank of cotton-spinner, and this gave him unexpectedly a new way to knowledge, for he set up a book on his spinning jenny, and, as he passed to and fro at his work, he was able to read sentence by sentence of his precious volume. That is a practice which is hardly to be commended to operators of our present-day fast-running machinery, but with slower-moving mechanism Livingstone was able to combine mental with muscular effort, so that his mind grew while his mechanical skill increased.

All this time he was insensibly preparing himself for his great work in life. So far he had had no definite plan. He loved learning for its own sake, and humbly pursued it. But when he was about twenty a great change came over his life, and he resolved, if he could, to become a missionary. In order better to qualify himself, he determined on a course of study at Glasgow University.

THE FACTORY BOY WHO SPENT HIS WAGES AT THE UNIVERSITY

To earn his fees, he worked with redoubled energy at the factory for half the year, then spent the other half at Glasgow. There it was, while studying medicine and surgery—for he was to be a medical missionary—that he gained the friendship of many celebrated men. Sir James Young, who had begun life as a carpenter, taught his friend Livingstone how to use tools; the others encouraged in him that love of exactness which is the prime necessity of the scientist. All his experiences and studies had gone to build up the mind and character and bodily efficiency of the man destined to become a leader into trackless wilds, teaching him self-reliance, readiness of action, and skill in what he used to call the Jack-of-all-trades line. Even his rambles as a boy had been of account. The man who is going into unknown lands must understand the life of plant and animal, and Livingstone did, particularly well.

He was two years at Glasgow University, and then a missionary society to whom he had applied accepted him as a probationer, finally equipping him for his work as a missionary. It was not all smooth sailing, for, diligent as he was, Livingstone had no inspiration or genius. In fact, at the end of the regulation period which should have qualified him for service, he had not done nearly well enough to pass, and he had to undergo a further term of study before he was finally accepted. Even then he was a miserably poor preacher, and never did well in the pulpit. Still, he passed at last, and completed his medical and surgical studies. Then the question arose as to where he should go.

LIVINGSTONE ARRIVES IN A DARK AND UNKNOWN LAND

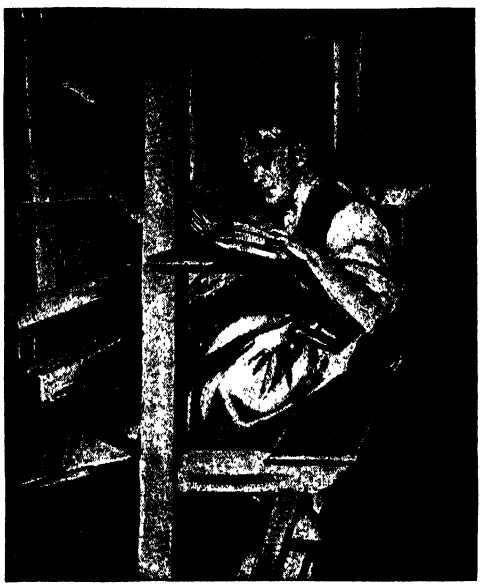
He yearned to go to China. What if he had gone? He might have lived there long enough to meet General Gordon; and what miracles two such men might have wrought in that wonderful land! But it was not to be. War broke out between Great Britain and China, and Livingstone was ordered to the West Indies. It would have been an easy position, but he loved not ease and smooth living. "Please do not send me there," he said. "Remember that they have regular medical men in the West Indies, and my two years' medical studies would be wasted." In the end he obtained permission to go to Africa, to work under the direction of Dr. Robert Moffat, a noble man who had already begun to work wonders in the Dark Continent. He sailed in December, 1840, being then twenty-six years of age.

In those days Africa was still a land of mystery to the rest of the world. The Portuguese, who had first sailed round its coasts, had established settlements; so had the British, and the Boers had made their homes in the south, but northward all was a blank—a nightmare

of strange savage peoples, fierce wild animals, terrible gloomy forests, vast mysterious rivers of sources and courses unknown. Livingstone was the man destined to carry the torch into the darkness and gloom.

The conditions he found there were dismal in the extreme. Moffat's station was up-country, in Bechuanaland, the northernmost post of the London Missionary Society, by which he was sent out. Livingstone was ordered to wait there until Moffat returned from England. But he could not rest inactive. He must be up and doing; there was so much to do, so little time in which to do it.

He found that too many missionaries clustered about the towns and settlements, instead of breaking new ground where the actual work was to be done. He was shocked to hear of new missionaries being appointed to the same field, when he felt that there were already men enough if they would but push out to where the real work of their lives lay. He, at any rate, would be no party to such a scheme, and he boldly set off on a great journey, seven hundred miles north of Dr. Moffat's post. He found, wherever he went away from civilisation, that the country was wretched with the effects of tribal wars, and still more from the effects of the hateful slave trade.



Livingstone studying Latin while working at the loom in a cotton factory

Wherever the Arabs and the Portuguese had penetrated, there he found this horrible commerce flourishing. It dawned upon him that to kill this inhuman traffic a real and legitimate trade must be cultivated, honest trade in which the natives could be interested and profited, so that no longer would they sell prisoners of war and even their own relatives for the miserable articles which the traders offered in exchange. The trade in slaves flourished there when Livingstone arrived, just as if Wilberforce had never lived, and the thought came to Livingstone's mind that new highways to the coast must be found. In place of the trackless waste in which he found himself, there must be well-mapped routes by which traders could travel ; by which natives could carry their wares to the seaboards of the Atlantic and the Indian Oceans; by which white men could advance into the interior to buy or exchange.

That, thought Livingstone, must be the way of the native to salvation. And that is the secret of his becoming one of the most famous explorers in the world. The riddle of Africa had to be read in order that civilisation and Christianity might extend their blessed sway, and the land be redeemed from bloodshed and crime.

Livingstone set himself diligently, also, to master the native language, and in course of time he was able to talk freely to the tribes among whom he moved and worked. He cured the people of their bodily sickness, and at the same time laboured to convert them from their savage ways. His name as a doctor spread far and near, and people came 150 miles and more to be treated by him. He found that, though they were cowards in the face of terrors, due to ignorance and superstition, they were very brave in bearing physical suffering. And though they were cruel and treacherous and barbarous among themselves, they were, for the most part, loyal and affectionate to him. He had a marvellous way of getting the best out of a man.

He loved all men worthy to be loved, and they loved him in return, and soon he was able to convert a powerful chief to Christianity, though this conversion cost the chief much suffering in loss of friends and respect among his own people. His name was Sechele, and Livingstone in his writings lingers lovingly over the details

LIVINGSTONE'S LIFE AMONG THE PEOPLE

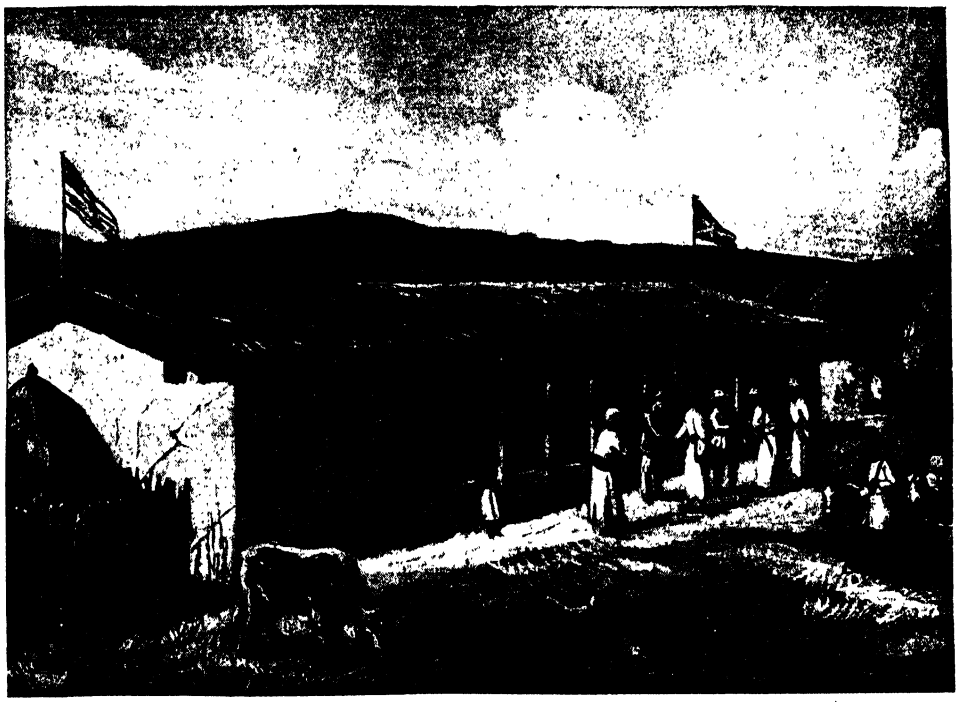


LIVINGSTONE, WITH HIS WIFE AND CHILDREN, DISCOVERING THE DESERT LAKE OF NGAMI



LIVINGSTONE HAVING A FRIENDLY INTERVIEW WITH A POWERFUL AFRICAN CHIEF

LIVINGSTONE'S HOME IN DARKEST AFRICA



ARAB CHIEFS PAYING A VISIT TO LIVINGSTONE AND STANLEY AT UNYANYEMBE



DR. LIVINGSTONE WRITING ONE OF HIS BOOKS IN HIS HOME IN THE HEART OF AFRICA

of the black man's life. When he first heard the story of Christianity, Sechele said to the doctor :

" You startle me—these words cause all my bones to shake—I have no more strength in me. But my forefathers were living at the same time that yours were, and how is it that they did not send word about these things earlier ? They all passed away into darkness without knowing whither they were going."

He learned to read his Bible, and he would say to Livingstone, " Hear me read," and at the end of a chapter would remark, " He was a fine chap, that Isaiah ; he knew how to speak." But there was the problem of getting his tribe to follow Sechele. " Do you imagine that these people will ever believe by your merely talking to them ? " he asked one day. " I can make them do nothing except by thrashing them," he added. " If you like I will call my headmen, and with our whips of rhinoceros hide we will soon make them believe all together."

LIVINGSTONE'S VICTORY WITH A CHIEF AND HIS FIGHT WITH A LION

From this we may realise that the chief had not fully grasped the meaning of the religion to which he had become a convert. He learned his lesson in time. He had been a great warrior, but he was brought to see the blessedness of peace. Having realised the wickedness of violence practised at the expense of his enemies, he came to understand that it should not be employed against members of his own tribe. The convert became a missioner. He himself preached the gospel of peace, relying on the Bible instead of whips. In this instance Livingstone gained a wonderful triumph.

It was not to be expected that Livingstone would escape the perils to which all travellers in the wilds of Africa are subject, and after being nearly killed by a wild buffalo he had a terrible adventure with a lion. The natives with whom he lived had seen lions leap into their cattle-pens by night, and even carry off the cattle by day, and they fully believed that their tribe had been bewitched into the power of the lions. It was necessary for Livingstone, therefore, to teach them that there was no witchcraft in the matter, and he led them forth one day to attack the lions, in the hope that by killing one of the animals they would drive the rest away. Several lions were discovered, and a group of natives closed round them, but let one after another escape. At last one of the natives shot and hit a lion, and Livingstone fired two bullets at it as well, then prepared to load again. But the lion charged at him, and seized him by the shoulder. The struggle which followed is famous in the history of encounters with wild beasts, for Livingstone was the first man to tell us that at such a moment the victim feels no pain.

THE LION WHICH SHOOK LIVINGSTONE AS A TERRIER SHAKES A RAT

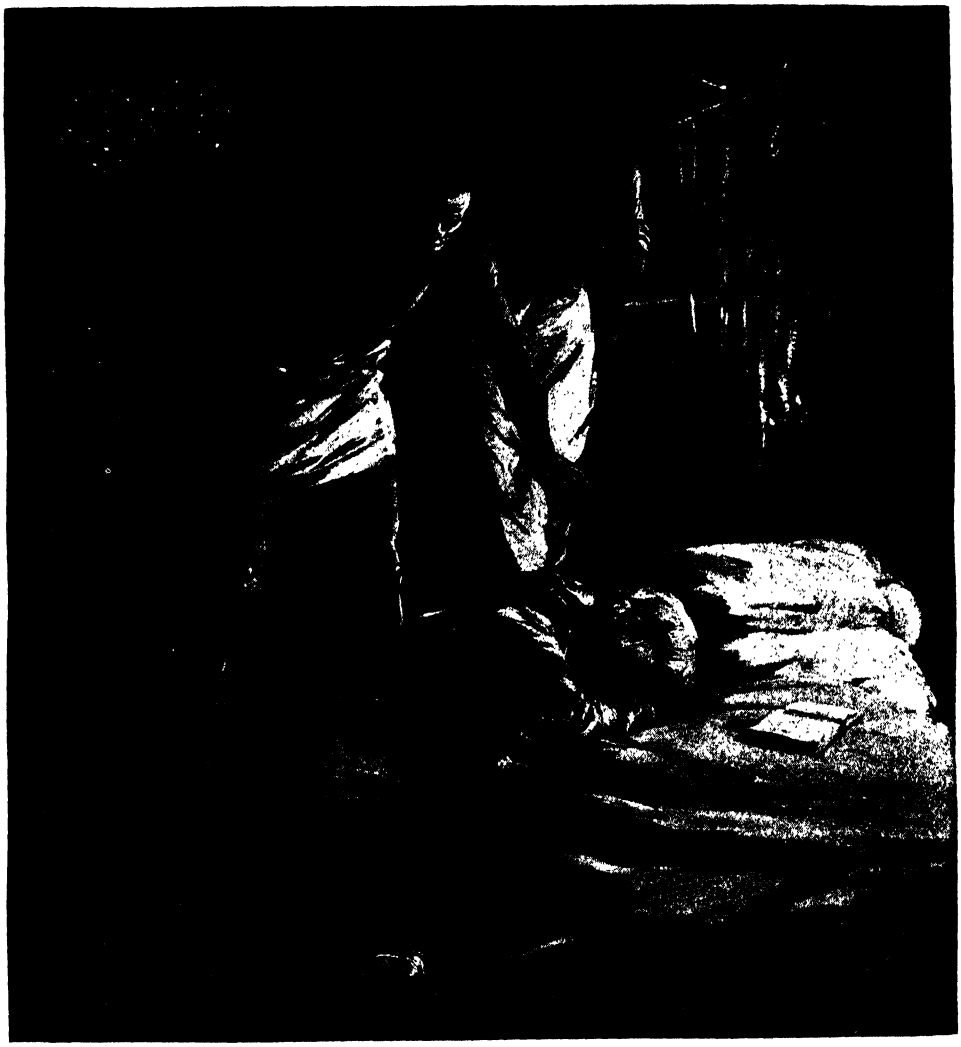
Here is his description of this fight: " Growling horribly close to my ear, he shook me as a terrier shakes a rat. The shock produced a stupor, similar to that which seems to be felt by a mouse after the first shake of the cat. It caused a sort of dreaminess, in which there was no sense of pain, no feeling of terror, though I was quite conscious of all that was happening. The shake annihilated fear, and allowed no sense of horror as I looked round at the beast. This peculiar state is probably produced in all animals killed by the flesh-eating animals, and, if so, it is a merciful provision by our benevolent Creator for lessening the pain of death. Turning round to relieve myself of the weight, as he had one paw on the back of my head, I saw his eyes directed to Mebalwe (a native convert whom Livingstone had educated), who was trying to shoot him at a distance of ten or fifteen yards. His gun, a flint one, missed fire in both barrels. The lion immediately left me, and, attacking Mebalwe, bit his thigh. Another man, whose life I had saved before, after he had been tossed by a buffalo, attempted to spear the lion while it was biting Mebalwe. It left Mebalwe, and caught this man by the shoulder, but at that moment the bullets which it had received took effect, and it fell down dead."

THE LION'S MARK WHICH IDENTIFIED THE HERO'S BODY AFTER DEATH

Livingstone was left with a shattered arm, and with eleven wounds in his flesh from the lion's teeth. With such scanty resources for curing his injuries, the wonder is that he did not die. As it was, he was left for life with a misshapen arm, and that disfigurement was the only means which remained, after his death, whereby his body could with certainty be recognised. This was not

his only peril from animals. Once, while he was travelling by canoe down a river, his craft was suddenly flung high into the air by an angry hippopotamus, which butted the boat from below, causing all the occupants to swim to the banks through water which was literally teeming with crocodiles.

marry—fell in love. His courtship was comically unromantic, but it led to the happiest of married lives. He himself built the little home in which they were to live, and when they settled down he was the man Jack-of-all-trades—the doctor, tinker, carpenter, preacher, and schoolmaster of the village; while she



DR. LIVINGSTONE FOUND DEAD BY HIS BEDSIDE, WHERE HE HAD KNELT IN PRAYER

All these dangers were safely passed, however, and Livingstone suffered more from fevers and the other ills which the climate of Africa produces than from all the terrors of animal life.

Dr. Moffat had by this time returned to Africa, taking with him his charming eldest daughter, Mary Moffat, with whom Livingstone, greatly to his own surprise—for he had never meant to

was the maid-of-all-work in the home, and schoolmistress in the village. She was also the candle-maker, the soap-boiler, the tailoress, and the nurse.

Their first home was at Mabotse, but soon they moved farther north, leaving behind the house and mission which he had built and the garden which he had planted. His next home was at Tshonuane, where his eldest son was born,

and where the excellent Sechele was converted and baptised. Now, among the superstitions of the natives was one that men could create rain by offering certain charms to the powers which they worshipped. Each tribe had its "rain-makers," and so had the tribe of Sechele. Livingstone told the people that he, too, could make rain—not by charms, but by constructing irrigation works.

A MOTHER'S SEARCH FOR HER CHILDREN IN EDINBURGH

He actually persuaded the whole tribe to migrate with him, and to go and live forty miles away, so as to be near the River Koloben. There he taught them to dig canals, through which to admit water from the river to fertilise their land. But it was northward still that he felt compelled to go, for there lay a land of broad lakes and great rivers, and thickly populated. Here was the land in which to seek homes for white men who would help to civilise the natives.

He must explore this land from coast to coast. His children were sent home, and his wife followed, so that he might be assured of their safety. Mrs. Livingstone arrived one evening in Edinburgh, and went straight to the house of her husband's friend, Lord Playfair. She was not expected, and Playfair had a big dinner-party when the lady, travel-stained and weary, arrived. She would not sit down to dinner. She had come to Playfair that he might help her to find her children. She had lost the address, but knew that they were staying in one of the longest streets in the city.

Lord Playfair immediately engaged two or three men to divide the longest streets and to inquire at each house in turn. They found the children, and their mother was able to join them that night. This noble woman died in Africa, and her body rests in the shade of a giant baobab-tree at Shupanga.

THE GREATEST JOURNEY EVER MADE IN AFRICA

In the meantime, Livingstone, in the face of extraordinary difficulties, carried out his plan of exploring Africa from Cape Town to St. Paul de Loanda on the Atlantic coast, and eastward to Quilimane on the coast which is washed by the Indian Ocean. The journey occupied four years, and was the greatest ever undertaken in Africa up to that time. In the course of his travels, Livingstone was constantly exposed to perils from sickness, from wild beasts, from savages, from starvation, from perils of the forest and the swamp, the river and the treacherous lake. But he triumphed over all. He discovered rivers and lakes of which we had not previously heard; he discovered, also, one of the world's greatest wonders, the marvellous Victoria Falls, down which the mighty Zambesi river pours. He came back to England, after sixteen years' absence, armed with information as to the shape and nature of the great Dark Continent which was new to the world, and with information as to its peoples, industries, and possibilities which, for the first time in history, drew back the veil that had enshrouded the land.

For fifteen months he remained at home, honoured and "lionised," but desperately uncomfortable in such an atmosphere of hero-worship. Then he was sent out by the Government to continue his explorations, and was absent five years. This expedition cost him the life of his beloved wife, and the blow was almost crushing. He worked harder in order that he might forget it.

FIVE YEARS IN WHICH DAVID LIVINGSTONE NEVER SAW A WHITE MAN

He made many important discoveries during his five years' wanderings, and upon his return to England exposed in a book that he wrote the abominations of the slave trade, carried on with increasing vigour and barbarity by the Portuguese. Only thirteen months elapsed before he was off, for the third and last time, to Africa to settle disputed points, on behalf of the Royal Geographical Society, as to the river systems of Central Africa and the Nile sources.

He took with him only thirty-four men, and of these ten had to be dismissed for misbehaviour; and twelve deserted, carrying with them the medical stores, and leaving him in the heart of a savage land with no remedies for the terrible illnesses with which he was constantly plagued. The deserters reported that he was dead, and two expeditions were sent out to find him—one from England, the other from America. In spite of the sorry condition to which he was reduced, Livingstone kept doggedly at his task, and continued to fill in blank spaces on the map, and for five years never saw a white man. Stores which he had deposited at the outset had been stolen or squandered, but relief came

when the expedition, under Sir H. M. Stanley, was met at Ujiji. We all know the story of that meeting, and how Livingstone's life was saved by the food and medicine which Stanley took him.

Stanley pleaded in vain with Livingstone to return to civilisation. The missionary-traveller felt that his life-work was not completed, so Stanley returned to the outer world, while Livingstone remained to battle on alone with the problem of Africa's geography.

His health grew worse and worse as he travelled wearily from point to point, unravelling his tangled skein of twisted ways and mazy courses. Disease was never far from him as he made his way through dripping forests and over swamps which resembled great poisonous sponges.

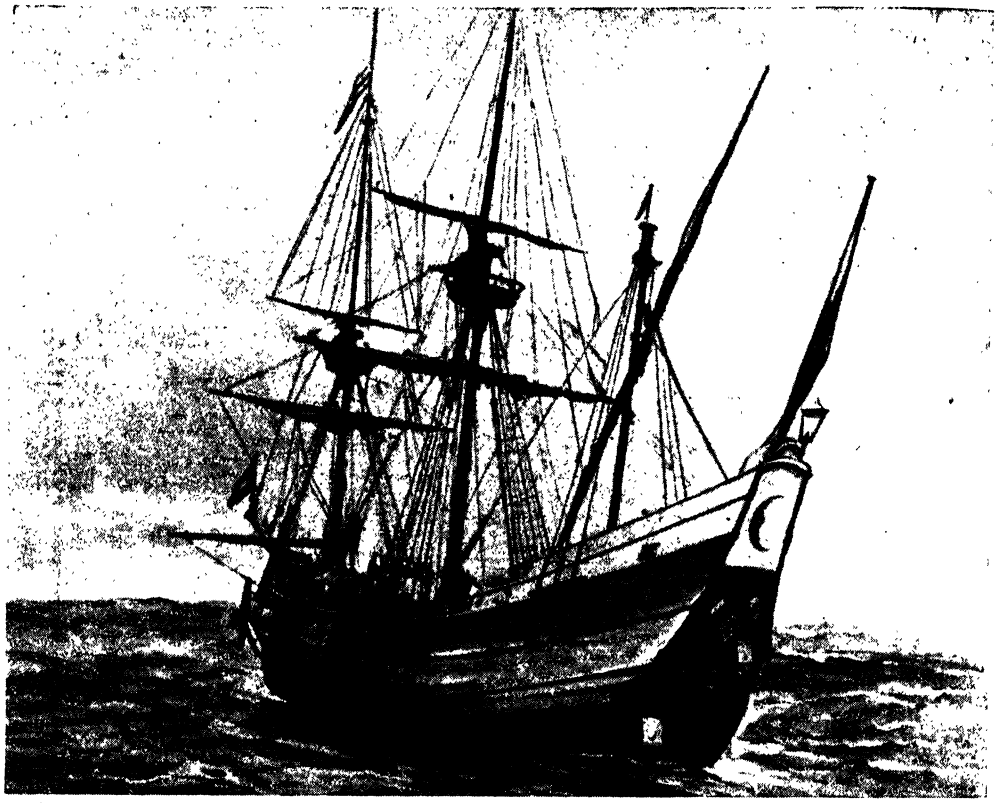
At last he could walk no more, and had to be carried in a litter. He broke down at Ilala, and there in a little hut, on the morning of May 1, 1873, his attendants found him kneeling, dead, by his bed, his hands clasped as in prayer.

The faithful few who remained by his side to the last vowed themselves to a final mission of fidelity and affection—they determined that their beloved master's bones should lie in the land from which he had come. After burying the heart in the African forest, they embalmed the body, and set out to carry it to the sea at Zanzibar, having previously packed the dead explorer's effects away in tin boxes to preserve them. The brave natives had innumerable difficulties and perils to face—hunger and privation, the fear of wild beasts, and, worst of all, the enmity of superstitious savages who would not permit a dead body to pass over their land. The body had sometimes to be hidden, and then smuggled secretly through hostile territory; sometimes it had to be disguised as a bale of merchandise. At last the natives met the English relief expedition which had been sent out, and the leaders of this party desired to bury the body on the spot. To this the native heroes would not consent. They brought the remains of their master in safety to Zanzibar after a nine months' journey, and to-day the bones of David Livingstone lie in Westminster Abbey, a fit resting-place for one of the noblest men who have added lustre to our national name.

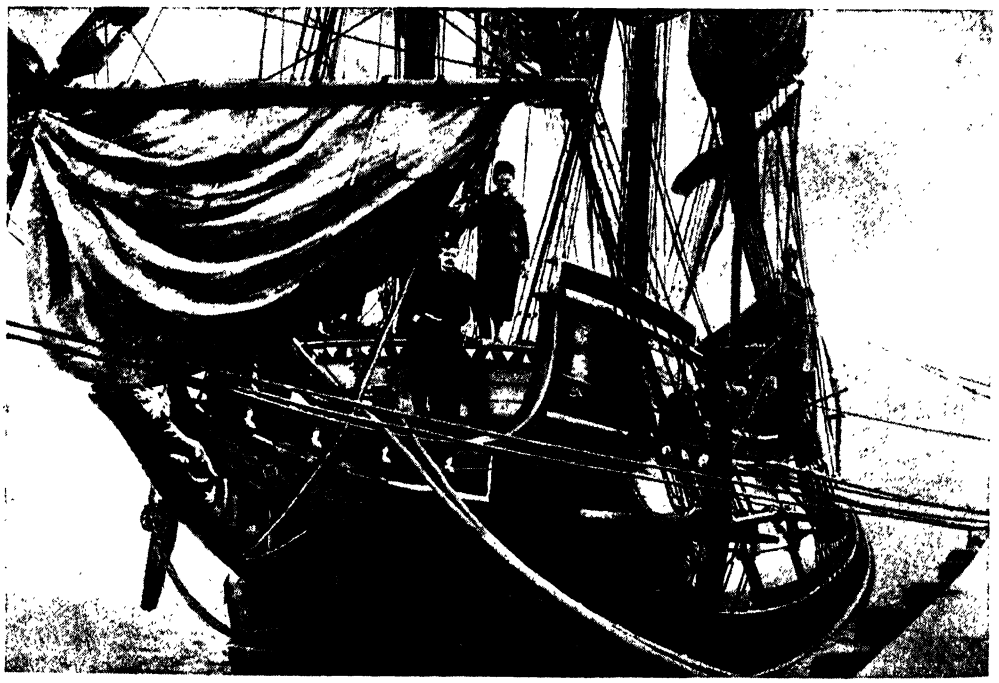


LIVINGSTONE'S FOLLOWERS BRINGING HIS BODY TO THE COAST
These devoted men braved many perils in order to carry the embalmed body of their beloved friend and master to the sea for shipment to England.

HENRY HUDSON'S SHIP AS IT WAS



HENRY HUDSON'S LITTLE SHIP, "THE HALF MOON" RECONSTRUCTED 300 YEARS AFTERWARDS



HUDSON'S "HALF MOON" RECONSTRUCTED, WITH MEN AT THE PROW IN COSTUME OF 300 YEARS AGO

HOW HENRY HUDSON CAME INTO HISTORY

And how he Passed out Again

Here is a tale of one of the most pathetic tragedies in all the great discovery of this world. It is told for us by one of the chief writers in these pages, Mr. Ernest Bryant.



HENRY HUDSON

AWAY towards the north of the world you will still find men who will tell you, when the crash of thunder comes, that the distant rumblings are not thunder, but the roar of balls in a game of ninepins played in the Catskill Mountains by Henry Hudson and his men away in America, west of the river on which New York stands, to which Hudson gave his name.

Henry Hudson and his son have been posted missing for 300 years and more, but Rip Van Winkle found them—in the story—before he fell into his long sleep; found them bowling, after their last fight with Fate, as Sir Francis Drake bowled before the culminating triumph of his life. From Drake's bowling-green at Plymouth Hoe to the Catskill Mountains is a long sail, but Henry Hudson made it, in as desperate an enterprise as ever engaged the courage and resource of man. He carried it out with the quiet, romantic determination of one who courts a mighty hazard, yet counts it no higher than that of the fisher putting off to haul up his lobster-pots.

For the love we bear Rip Van Winkle let us keep in memory that picture of the mirage game of ninepins in the Catskill Mountains, but let us never forget that Henry Hudson was actually one of the grandest of our national heroes, the man who dared the impossible, the man who gave his life in the pitiless North rather than return with his mission unaccomplished. All the circumstances of the voyages, the astounding inadequacy of his means, the pitiless death to which he was ruthlessly sent, combine to throw into relief a career which cannot to this day be read without a tingling of the blood or without deep sorrow. He comes to us unknown, he goes out into the unknowable, cruelly slain, yet famous as long as history shall last.

We do not know who Henry Hudson was It is surmised that he was the grandson of a London alderman, and that he was born before 1570, in which case it is as likely as not that he fought against the Armada. What we do know is the way in which he came into history.

He was asked by the Muscovy Trading Company to sail across the North Pole into Asia and bring home a cargo from "the isles of spicery," these being the Moluccas. No tacking round the world to left or right, but right over the top he was to go—for pepper and spice and all things nice, and "mind the Dutch don't stop you." It was surely the coolest request ever made to mortal man, but Hudson forthwith agreed to go, agreed to sail a tiny barque through the icy latitudes which had mastered lion-hearted Martin Frobisher, and which every respectable mariner declared to be alive with imps and demons.

Hudson cared little about tales of demons; he was content to face them with ten men and a boy, his own beloved son. He had his superstitions about mermaids, but no fear.

By the happiest chance there lay in the Thames at that very moment a little ship, the Hopeful, which had sailed these terrible waters. It was one of Frobisher's tiny craft, and Hudson

commissioned this mite of a ship, a mere 60-tonner, to reach his enchanted goal.

How he was to do it the Muscovy Company did not explain, except that he must not go south, he must not go by the Cape of Good Hope ; he must "penetrate directly to the Pole," and drop comfortably into the Pacific. So away he went, he and the boy and his ten men, quitting Gravesend in May, 1607. His last journey to London included a touching little ceremony, his visit to St. Ethelburga's Church in Bishopsgate, where he and his crew, "proposing to go to sea in four days," attended Communion.

The little Hopeful was driven under all the sail she could carry, and reached the coast of Greenland in six weeks. Making up the east coast to the north, he soon lost sight of land, but, coming in sight of it again, he named a new site in a way characteristic of him. He called it Cape Hold-with-Hope, as brave a title as John Bunyan could have devised.

Hold with Hope! Hudson wrote the very spirit of his fine nature in those words. He held with hope in those grim and forbidding fields of ice. He was faced by an enormous far-spread phalanx of ice, impenetrable, although he would not admit it. He had only sails to carry his ship, and he knew nothing of the strong under-currents of the seas he was fighting. He did not much want to know ; all he wanted was to get his mad little ship wafted deeper and deeper into the ice, so that he might find the path of peace which he felt convinced must open to his unwearying endeavour. Eleven men and a boy in a cockleshell challenging the Arctic! Opposed in the north-west, he edged away along the ice barrier to the north-east, until he crawled up to the coast-line of Spitsbergen.

Spitsbergen was a terrible test of endurance. The wind blew northward, but there was a current running southward. He got past a point in latitude 80 degrees, and for three days he strove to make further progress ; but, finding that no advance was possible in this direction, he turned his little craft to the west, intending to force a passage round by the north of Greenland into Davis Strait. No ship has ever done what he tried to do in the tiny Hopeful. He himself discovered, as he wrote in his log, that, "from an icy skie and neereness to Groneland, there is no passage."

He was mastered by forces too strong for man, but he had added a great fact to the world's knowledge, for he had proved that there does not exist a short cut to China by sailing over the North Pole. But, poor man, he dared not go back without something positive to tell. He found the icy waters of the North to be alive with whales, and on reaching the Thames, in September of the year of his sailing forth, he set hardy English fishermen on fire with the prospect of whale fishing in the North. He became known as the father of the Spitsbergen whale hunt, which long brought wealth to the nation and steeled the fibre of our seamen.

Well, if China and India and the isles of spicery could not be reached by way of the Pole, Hudson must get there either north-west or north-east. We all know how long it takes to prepare a Polar expedition in these days, what fine men are chosen, what perfect ships are commissioned, what mountains of stores and equipment are taken. But Hudson was off again through the ice within seven months, this time he and his boy with a mighty crew of 13 men—a prodigious expedition for an exploit which eventually took centuries to accomplish and cost hundreds of lives and scores of ships! He made a good run, for, leaving the Thames on April 22, 1608, he rounded Cape North, the farthest point of Sweden, by June 3, then turned east and plunged afresh into the ice-pack in the attempt to pass to the north of Nova Zembla.

All the artillery in the World War would have been required to blast a passage for him, and then the water would have frozen behind him, but for three weeks he tried to find a way through the roaring, heaving ice.

TELLING THE STORY OVER AGAIN



WHERE HE FOUGHT FOR YOU AND ME

Failing at last, he determined to go round another way. He turned south-east and sought to fight through the Kara Strait into the Kara Sea. If he could do that, he thought, it would be an easy voyage into a benevolent Pacific, then hey for fabled Cathay!

The ice was impassable; it could have smashed a thousand ships like his and dropped them into the depths unseen; and, in addition to ice, there was a terrific storm, during which he anchored his ship and rode it out. The intrepid man then turned his helm and tried to get round the world



HUDSON RIVER, ON WHICH NEW YORK STANDS—NAMED AFTER HENRY HUDSON

by a north-west route, though his provisions were short and the season more than half gone. He had a giant's courage, but he had a great man's discretion, and he would not risk the lives of his boy and his crew in pursuit of an absurdity, so when he found the North-West Passage impossible he abandoned it, and brought his ship home as taut as when he sailed her out.

Wise and brave was Henry Hudson, but he lived in an age of legend and myth, and he knew the old story of mermaids as children know them now, with the difference that our little ones realise that mermaids are only a fabulous imagination, and Hudson did not. So here we have his recital of what happened in the middle of June during his voyage in a high latitude

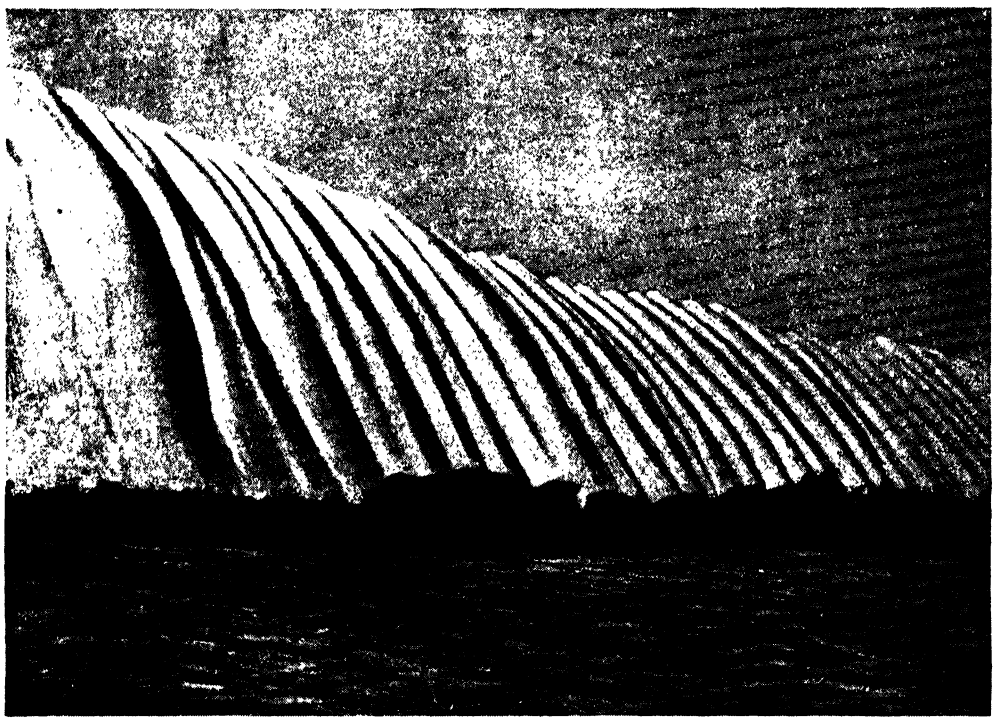
"One of our company, looking overboard," he wrote in his log, "saw a mermaid. By that time she was come close to the ship's side, looking earnestly on the men. A little after a sea came and overturned her. Her back and bosom were like a woman's—as they say who saw her—her body as big as one of us, her skin very white, and her haire hanging downe behind, of colour blacke. In her going down they saw her tayle, which was like the tayle of a porpoyse, and speckled like a macrell."

We know the names of very few ordinary seamen of those days, but Thomas Hilles and Robert Rayner live in the world's literature simply because Henry Hudson wrote them down as the two men who saw what we know to have been a seal, but which they called a mermaid.

The enterprising Dutch, hearing of Hudson's exploits, engaged him, and in March, 1609, he set sail under their flag with two ships, the Good Hope

and the Half Moon, on the same old mission. Back he went to charge the Kara Strait; but the Dutch sailors, good as they were, had not the pluck of Hudson's countrymen, and they raised such a hullabaloo of fear that he was obliged to turn west. To return to Holland? Not Henry Hudson. He carried the Half Moon away across the wide Atlantic, while the other ship went dismally home.

The Half Moon reached the coast of Newfoundland, where the vessel lost her foremast in a gale, compelling Hudson to put ashore at what is now Maine, where there was a fight with Red Indians, and much bloodshed, before the Half Moon sailed again, coasting "with a low saile because we were in an unknown sea." Sailing carefully south, he examined a virgin coast-line as far as Chesapeake Bay, where great cities now stand. Next he entered what is now New York Bay, and explored a great waterway opening inland. Intercourse with friendly Indians living on its banks led him to believe that here was the short cut to the Pacific at last. His guides had little more than local knowledge. They probably thought the river and the great lakes did actually cross the continent, of whose size they had no knowledge. Hudson sailed for 150 miles up the river, which now bears his name, and sighted the Catskill Mountains, with which the story of Rip Van Winkle still associates him. He satisfied himself that the way to the East did not lie up this river, and so regained the sea and sailed back to England, being prevented by the Government from going on to Holland. Twelve years after this voyage the Dutch colonised in his footsteps, and founded what is now New York.

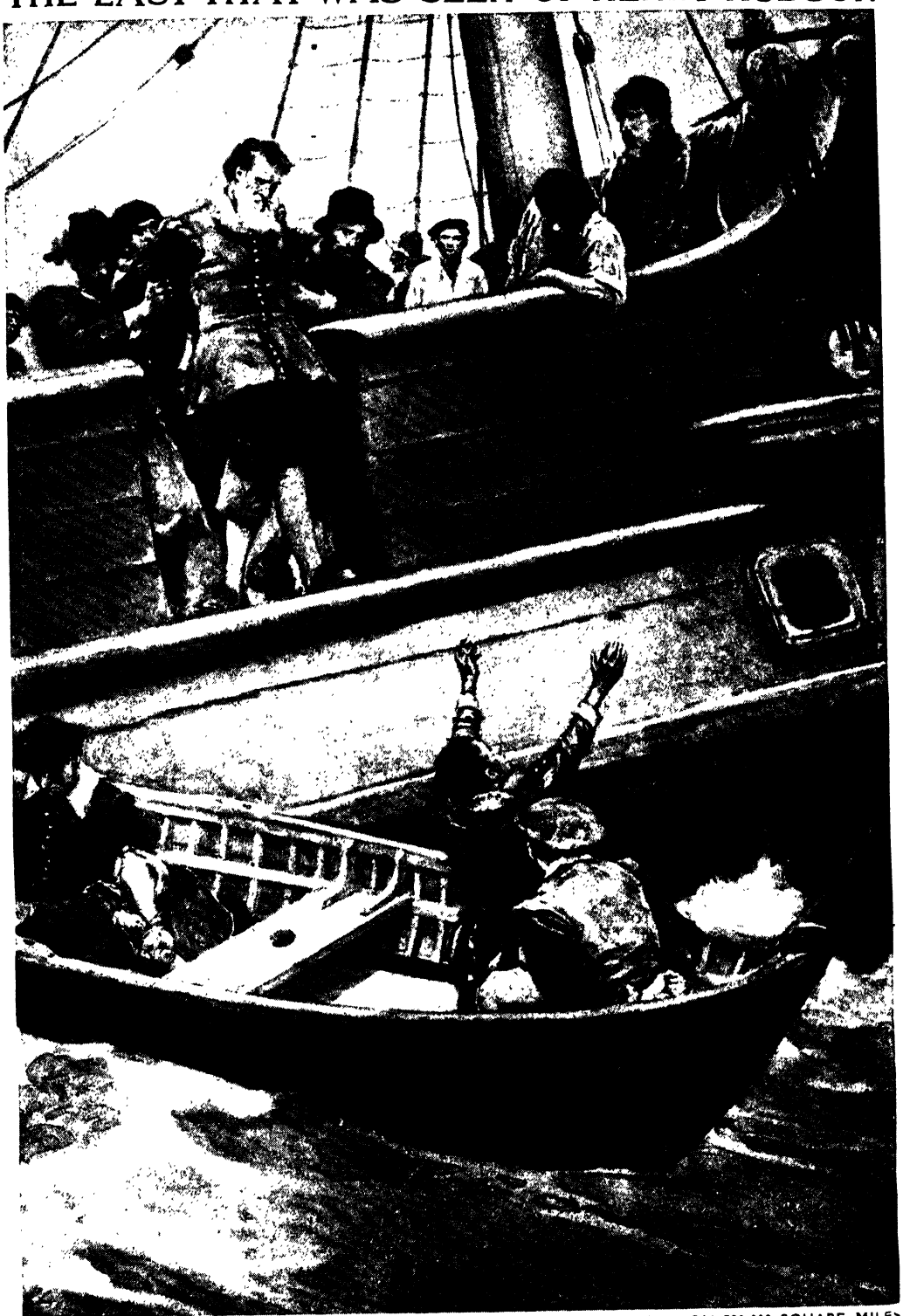


A REMARKABLE SPECTACLE IN THE WHITE WORLD IN WHICH HENRY HUDSON SPENT MUCH OF HIS LIFE—AN ICEBERG CORRUGATED BY STREAMS OF WATER FLOWING DOWN IT

This capital photograph was taken by Mr. W. G. Gosling, for his interesting book on Labrador.

There was no rest for our hardy hero. Failure on the Hudson had made him determined to find a north-west passage by another route, and so, in April, 1610, he sailed again to seek it. He had a 55-ton ship, provisioned for six months, to get to the

THE LAST THAT WAS SEEN OF HENRY HUDSON



THEY THREW HENRY HUDSON AND HIS BOY INTO A LITTLE BOAT. ALONE ON 500,000 SQUARE MILES OF SEA; AND THE LAST TIME THEY WERE SEEN THE BOAT WAS DRIFTING, DRIFTING . . .

other side of the world by an undiscovered way! But the elements of defeat did not lie so much in his scanty stores as in his crew. Of these there were 20, with his son and himself, and among them was a wretch named Green, a dissolute fellow whom Hudson had befriended when his family cast him off. Sound men and sound hearts are essential to a great enterprise such as that on which this little company was setting out; unsound hearts corrupt others, and so our captain was to find.

All went well at first, with good sailing to the Orkneys and wonder and delight in Iceland. There was an island ice-bound and snow-covered, with a mountain vomiting fire and lava in its midst. In the lonely waste of that frigid land Mount Hecla was showing what a demoniac volcano can do. The sky was a glowing mass of rainbow tints from the fiery furnace, and the crew, landing, found that, far away from the flaming mountain, springs of water issued from the ground so hot that they could boil a fowl in them.

Leaving Iceland and skirting Greenland, Hudson pushed out west by north, and, though hampered by heavy winds, by icefields and those iceberg battle-cruisers of the Arctic, he crept into the strait which preserves his name, and into the inland sea which we now call Hudson's Bay.

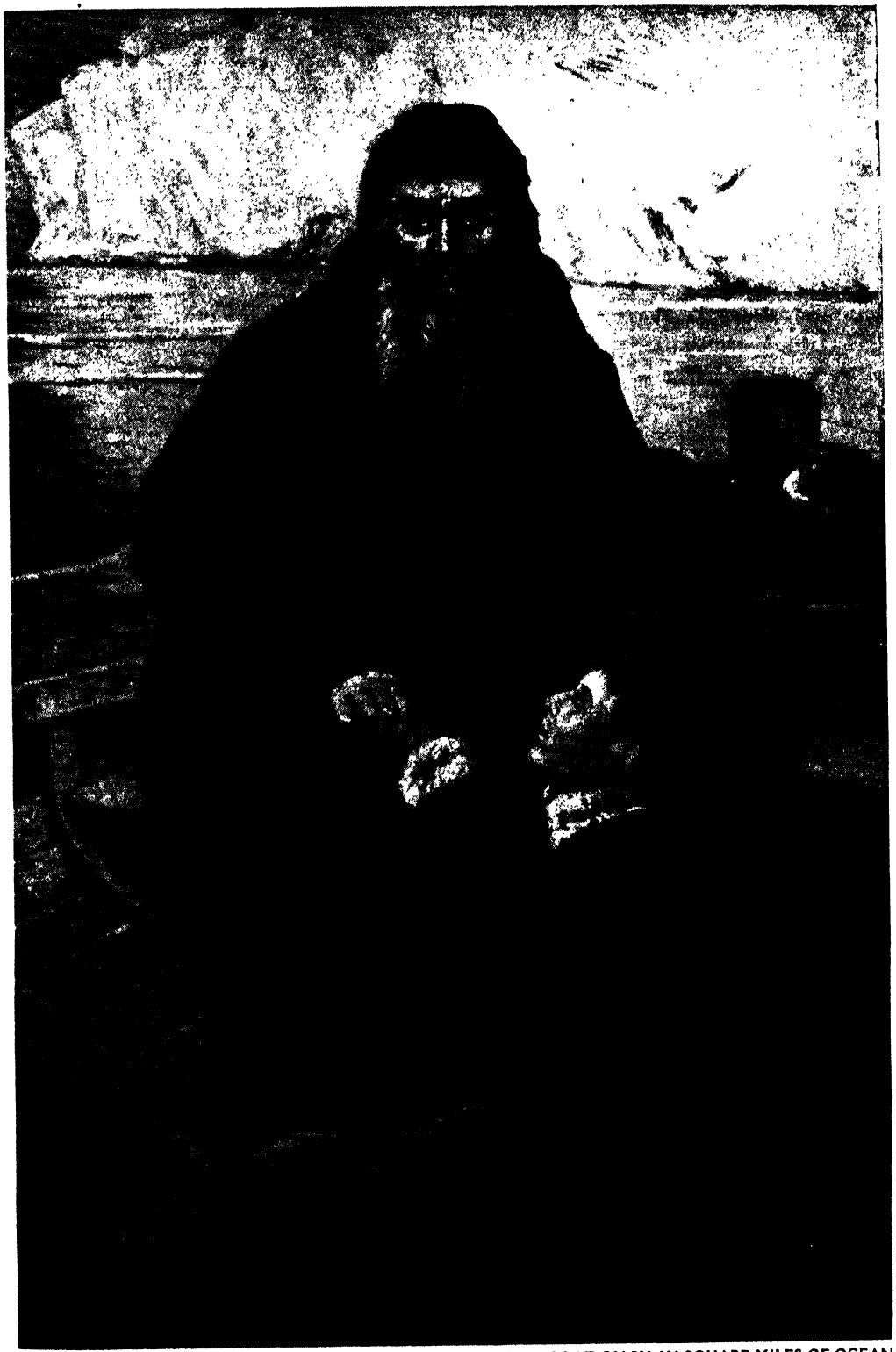
He was not the first to enter either the strait or the bay; but no one had ever gone so far as he, no one ever explored them so systematically and thoroughly as he. Entering the bay and finding an enormous tract of water, he thought this at last must be the sea that would take him to the East; but, alas! he was in a bay of half a million square miles, an inland sea more than twice the area of the entire North Sea. But he did not know it. He spent three months in exploration, naming capes and headlands and islands, but seeing no way out. The ice grew, the ship was again and again in peril of being closed in, and the crew, secretly urged by Green, raised their voices in complaint at the hopelessness of the quest.



RED INDIANS WATCH WITH AMAZE THE APPROACH OF HENRY HUDSON IN HIS LITTLE SHIP, THE "HALF MOON"

This fine and imaginative picture is from the painting by Mr. Edward Moran, the American artist

DRIFTING, DRIFTING, OUT OF HISTORY

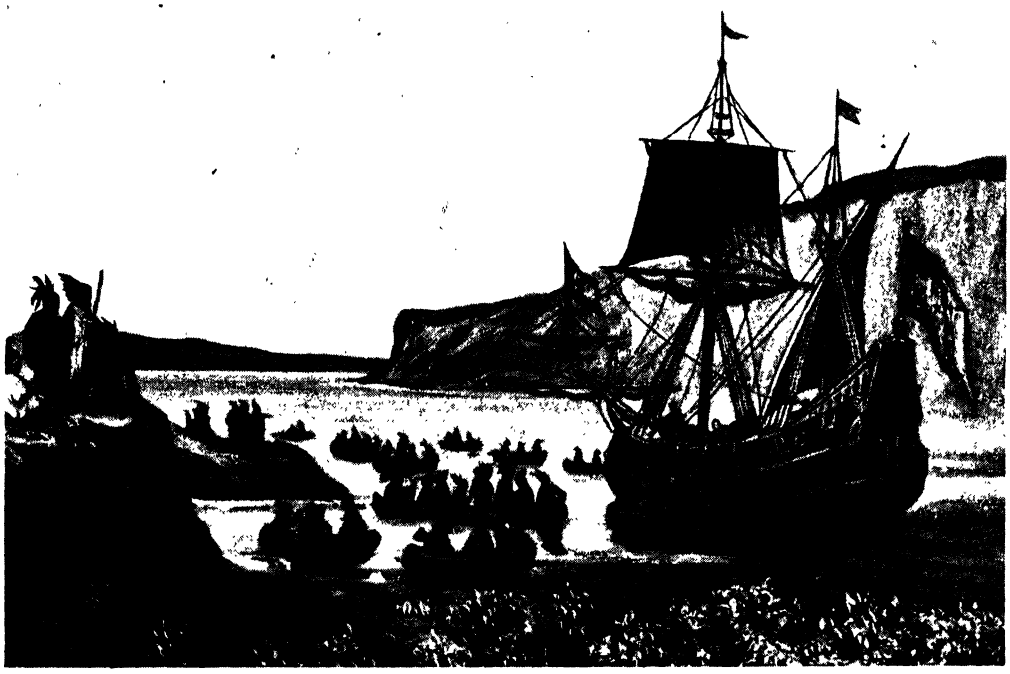


HENRY HUDSON AND HIS SON, BOTH CAST ADRIFT IN A SMALL BOAT ON 500,000 SQUARE MILES OF OCEAN

Hudson's heroic heart never failed him. It was a fight for life indeed, but a fight for honour too. He pulled out his chart and showed the men that they had sailed 300 miles farther than their countrymen had ever gone before. Would they continue or return? The crew were divided, so Hudson decided for himself, and went on seeking the North-West Passage. He had made up his mind, if necessary, to winter in the ice. At one point men were put on shore to gain provisions. They were unable to shoot deer, for these, though abundant, were wary; but the men shot birds, and they came upon evidence of human occupation in these desolate lone lands. Hidden in hollow cells of stone they found scores of birds hung up by the neck. Clearly there were men here, and they had learned the secret of keeping flesh food by cold storage.

The crew pleaded to be allowed to remain here to refresh themselves with food, but Hudson deposed two of the ringleaders and pushed on, sailing week after week in plain open water—straight to China, as he believed.

There is nothing finer in the history of the Arctic than the simple faith and valour of this man in that last long sail. He should possibly have stayed where the men had suggested, and resumed the journey in the following spring; but the fire burned too ardently in his breast to allow him to waste a single day. So it fell out that at last the ship approached a barren rocky shore, where, in deadly fog, they had suddenly to anchor amid shoal water. No sooner did a gale clear the air than Hudson, still afire for progress, insisted, against the wishes of his crew, on the anchor being hauled up, with the result that a great sea came aboard, knocked down and injured many of the crew, and carried the anchor away. Then on came the freezing gales and snows of winter, and Hudson had to ground his ship and let her be frozen in. They set up a camp, but the hut they built was riddled by the raging gales. Food was appallingly short, and nearly every man was maimed by horrible frost-bite. By good luck they managed to shoot a thousand ptarmigan, then a few ducks and swans,



THE "HALF MOON" ON HUDSON RIVER VISITED BY NATIVE INDIANS OF AMERICA IN THEIR CANOES

and with the coming of spring they ate moss, buds of trees, and frogs.

The ice began to break at last, and Hudson, taking stock, found that he had just ten days' provisions left. With this they set sail and increased their larder by the addition of a few fishes; but the day came when they had nothing but five cheeses left. Everything had been fairly divided, but Green and the two men who had been deposed provoked a mutiny, on the plea that Hudson had not made a proper distribution of food. Suddenly they seized their captain and bound his hands behind him; they then rushed to a part of the ship where Hudson's strongest adherents were, and made them prisoners.

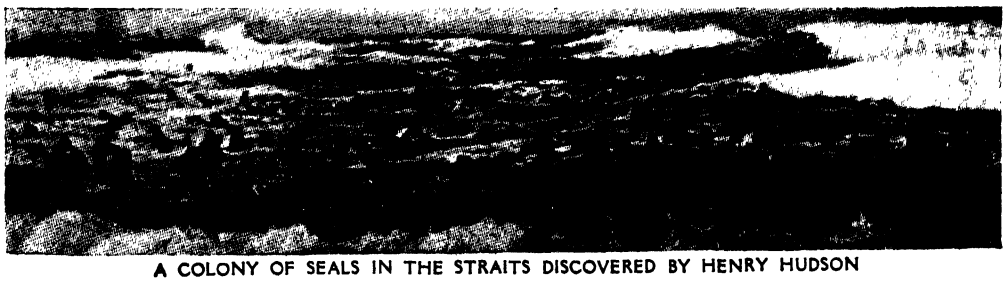
Then the ruffian Green ordered a little boat to be put out, and into this the mutineers thrust Hudson and his son. With them went the ship's carpenter, who fought for his master in a scrimmage in which four men were killed. After these three a number of sick and helpless men followed, so that they should not remain to share the food still on board. One of the eight men in the boat was left with his hands free so that he might release the others, all bound, when the boat was safely away. Then a fowling-piece and some powder, a cooking-pot, and a little meal were thrown in, and the boat was cut adrift, far from land, on that 500,000 square miles of uncharted water.

So, with his son and his sick men, the great captain drifted in his little boat into the mighty waste, with ice floating free about him, and not one friendly hand to wave farewell from the ship that he had nobly commanded. When last seen he was drifting fast before the wind, deeper and deeper into the heaving icefield, and so he drifts out of history, lost evermore in that mighty bay which houses his bones and glorifies his name.

The fate of the mutineers was tragic and dramatic. Reduced almost to bare skin and bone, some of them brought the ship home to Ireland, where they put it in pledge to raise funds to carry them to England; but the bulk of the men were dead. Green and his accomplice were slain by Eskimos when they landed to get food, and on the passage home Death was busy among the survivors. The few who reached England told the sad story, coloured, of course, with a view to save themselves.

What we know is that Henry Hudson, from first to last, acted with the shining chivalry that characterised the great voyages of Columbus and Magellan. He was one of the greatest of our pioneer seamen, who went forth, not to seek wealth, but honour, the honour of winning new knowledge for humanity, putting new seaways and new lands on the map, and multiplying comforts for mankind. He was a worthy citizen of a realm in which intellectual preeminence and martial and scientific daring marched in company. A faithful master of men, he was a loving father. Nothing but abiding affection could have persuaded the boy to go or the father to take him, but through those four long voyages little John Hudson was the constant companion of his father. They shared triumph and tribulation together, and in death they were not divided.

So they came into history; so they passed out of it; but as long as the map of the world shall stand their names shall be remembered.



A COLONY OF SEALS IN THE STRAITS DISCOVERED BY HENRY HUDSON

MICHAEL FARADAY HAS A TERRIBLE SURPRISE



THE MOMENT MICHAEL FARADAY THOUGHT MIGHT BE HIS LAST—SITTING DOWN WITH A CANDLE IN A COAL MINE, HE IS SUDDENLY TOLD THAT HE IS SITTING ON A SACK OF GUNPOWDER

CLEVER MICHAEL FARADAY

MICHAEL FARADAY, like many another man whose name will never die, came from a lowly home. His father was a poor blacksmith living in Newington Butts when Michael was born, in 1791, while his mother was a very ordinary type of woman, a farmer's bonnie lassie.

The young couple had kind hearts, but not a tittle of genius. They could read and write, but that was almost the limit of their mental powers. We like to search into the family history of genius, but to account for the genius of Michael Faraday we can do no better than adopt a charming comparison by one who knew him: "A favourite experiment of Faraday was representative of himself. He loved to show that water, in crystallising, shed all it impurities. Out of acids, alkalis, or saline solutions, the crystal came sweet and pure. By some such natural process in the formation of this man, beauty and nobleness combined, to the exclusion of everything vulgar and low."

But do not let us imagine that Michael Faraday came into the world with all men bowing down to him. He was really the happy accident of science, for he began life as an errand-boy. Near his home, a tiny home in a mews, there happened to be a worthy little bookseller named Ribeau. Ribeau wanted an errand-boy; Michael wanted a situation; and so the two came together.

Ribeau used to buy up sheets of printed works, bind them, and sell them as books, so that Michael, who had had little schooling, was plunged into what seemed to him an atmosphere of learning. He was happy, and he so well satisfied his master that, when he was thirteen, Ribeau bound him as an apprentice without asking for a premium. There Michael worked and studied for eight years. Electricity was still in its infancy, but in binding up an encyclopædia with an article on the subject Michael became fascinated with the theme, and soon he made himself a little battery from an old bottle. He was reading some of these pages one day when a kind-hearted customer called, and, finding him devouring the article on electricity, gave him tickets for some lectures Sir Humphry Davy was to deliver at the Royal Institution. That was in 1812, when Michael was in his twenty-first year. Faraday went to the lectures, sat up in the gallery, and took notes, which he wrote out in a book. Then he did a very wise thing.

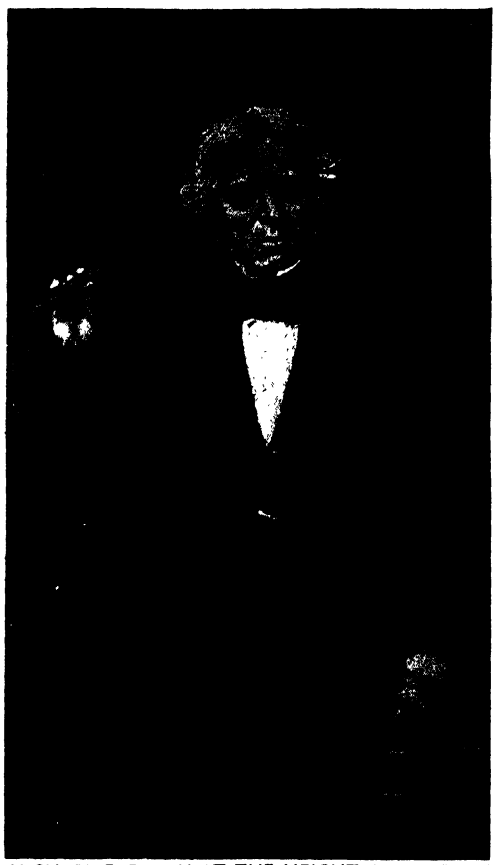
Sir Humphry Davy, who was a great scientist, and a fashionable scientist as well, had begun life as a harum-scarum apothecary's boy, always threatening to blow himself or his master up with his wild experiments. He was the very man for a friendless youth to approach. And Faraday sent his volume of notes to Sir Humphry Davy, with a letter, in which he told the great man that he yearned to quit trade, and to devote his life wholly to science. Scientists are not always very human; they live aloof in the mists of their reflections and experiments. But Davy was as kind as he was talented, and this letter went to his heart. He wrote Michael a letter, which arrived at his lodgings on Christmas Eve, telling him that he would be absent from London until the end of January, but that then he would do his best to help him.

Sir Humphry Davy was true to his promise. One night, as Michael was getting into bed, there was a thump at his door, and Michael found a stately-looking footman there, holding out a letter. The letter was to Michael, and bade him call upon Davy the next day. Michael kept the appointment. His kind patron pointed out to him that there was little profit but much hard work in science, but he could not shake the ardour of the

young bookbinder, and so promised to get him appointed as an assistant in the laboratory of the Royal Institution. He was as good as his word, and Michael, at twenty-one, began his career as a scientist at twenty-five shillings a week. No start could have been more modest, but his good friend quickly found that he had snatched a prize from the lucky-bag of the streets, and in later life, when congratulated upon his many achievements in science, he said a very fine thing. It was this: "My best discovery was Michael Faraday!"

Michael could not have imagined that verdict at the outset, for while he was still new in this service he was taken abroad by his master in a rather embarrassing capacity. Faraday had already begun to help in the lectures at the Institution, and had, indeed, begun to lecture on his own account in less exalted circles. But now, as Davy had no valet, Michael had to brush his clothes and render other little services. He loved Davy, and was far too broad-minded to object, but the position led to some painful incidents. Davy's wife behaved most unpleasantly to him.

At one house which they visited her attitude suggested to the host, a charming old gentleman, that poor Michael was truly the family lackey, and so Michael was set down to meals with the servants. When he learned that Faraday was Davy's laboratory assistant, he was shocked at the mistake he had made, and desired that Michael should dine with the family. Not so Lady Davy; she demanded that the young scientist should be treated as a menial, and remain with the servants. But the host was too wise and kind either to cause a scene or to obey the tyrannous mandate, and he quietly caused Michael to receive his meals in a private room. The meanness of Lady Davy was not satisfied, however; she persisted in her unmannerly behaviour, and but for his master's courtesy Faraday would have returned to England in disgust. He managed to endure his humiliations and remained abroad for two years, visiting various countries and meeting many of the famous friends of his master. During one of their visits he had a wonderful experience, for he saw proof that the diamond is pure carbon. A diamond was fixed in position, and, with the rays of the sun concentrated upon it by means of a powerful magnifying glass, it was burnt to powder before his eyes.



MICHAEL FARADAY AT THE HEIGHT OF HIS FAME

With his return to London he settled down to study and hard work, and began that great course of investigations which lifted him from the rank of valet to that of the foremost scientist of Europe, a king among chemists, a wizard among electricians. The errand-boy had become a fairy prince of science. If Faraday could see the things that are done by chemists and electricians today, he would rub his eyes in wonder, as Fulton would if he could see the modern submarine, as Trevithick would if he could see modern steamships and locomotive engines. But we can trace back thousands of things done by chemists and electricians today to the discoveries of Faraday and the foundations he laid down.

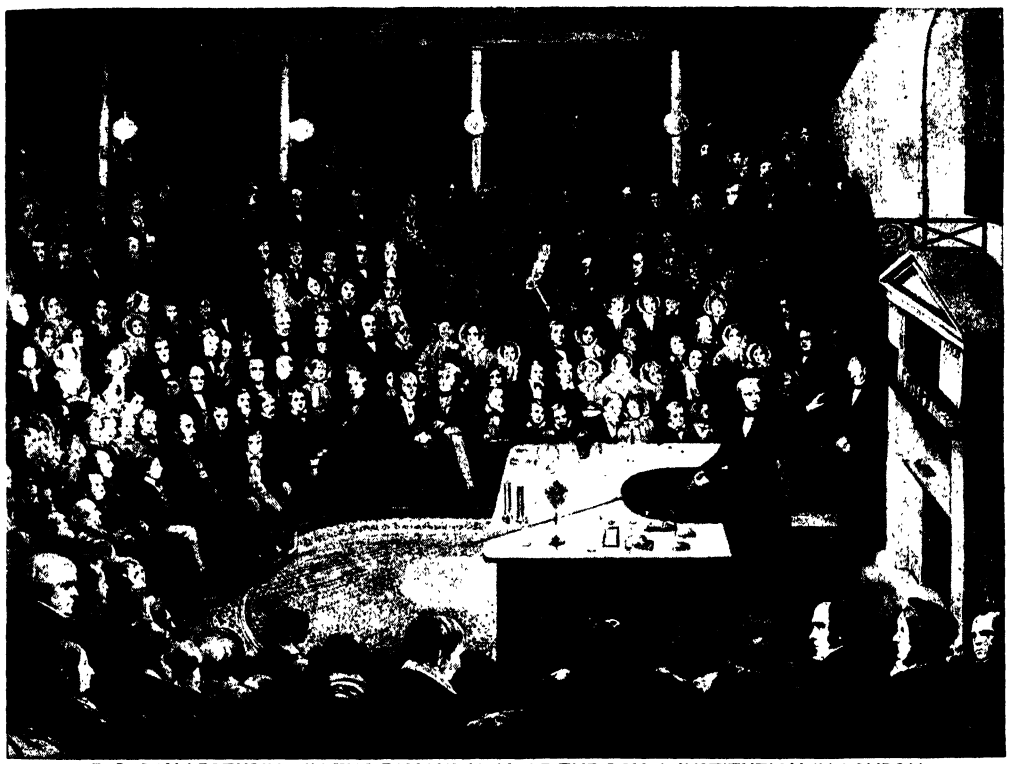
Faraday explored the realms of chemistry and electricity. He forsook the old paths and cut out new paths for himself, and wherever he turned he found new treasure awaiting him. Surprises did not check him nor difficulties make him retreat. If he went to see a friend's experiment, he would say, "Tell me what I am to look for,"

so that he might keep his mind fixed upon the important point. But when he was experimenting by himself, as he generally was, he seemed to examine things both telescopically and microscopically. His splendid mind saw great horizons opening out ahead, but his powers of concentration enabled him to detect the details close at hand. He was always asking himself, as new and unexpected things revealed themselves, " What is the meaning of that ? " and he was not satisfied until he had found out. Before he was thirty, the errand-boy, bookbinder, and valet was communicating discoveries to the Royal Society, the greatest scientific body in the world.

Faraday's genius enabled him to make brilliant speculation, and to prove his theories true, but he never gave out his guesses as knowledge until he had found them true. Probably no man ever made more experiments. Certainly no man made them with greater care, refinement, and precision. He kept a record of all the important ones, entered them in books, and numbered them, and the last entry in his ledger of knowledge is numbered 16,041. He dealt in the same way with his lectures, dividing them into paragraphs, and numbering the paragraphs and indexing them, so that at a moment's notice he could trace not only any experiment he had made, but the details he had set forth in his lectures on the subject.

The scientist today has the choice of an enormous range of instruments, but Faraday had not. He had to get most of his made. Some he and his assistant would make for themselves. His assistant was a Scot named Anderson, a clever man who had been a soldier, who gradually seemed to become a part of Faraday, the slow, mechanical, laborious part. Anderson needed a day's notice of the things that his master required, for he was not to be hurried ; but if he could not be hurried, neither could he make a mistake. He lived for Faraday ; thought for Faraday ; gloried in Faraday. They used to say that if the Royal Institution were on fire Anderson would not touch it unless Faraday told him, but that if Faraday expected him to do it he would put out the fire single-handed.

The first notable thing Faraday did by himself was to discover benzol, and when we remember that that discovery led to the



FARADAY LECTURING IN THE FAMOUS HALL OF THE ROYAL INSTITUTION IN LONDON

founding of the great industry in aniline dyes we are able to grasp its significance. Faraday did not make the first aniline dye, but his discovery prepared the foundation for those who were to come after. He would take chemical compounds, supposed to be elements, break them up into unsuspected parts, and combine these to form new compounds; he would do the same with gases, and he showed us that various familiar gases are simply the vaporised form of substances which turn to vapour, or "boil" at a very low temperature. Water and metals turn to vapour at very high temperatures, but, following in Faraday's steps, we have found that even the air we breathe can be reduced to liquid and from that brought to a solid form. By discoveries such as these Faraday, who never worried about money, was constantly increasing the wealth of the world, for he was bringing new industries into being, extending old ones, and finding new employment for multitudes who, but for his efforts, would have remained poor and ignorant. Moreover, his discoveries stimulated hosts of young men to whom science had a meaning. They were proud to labour in the same field with him, and some of them made useful suggestions which he was not too proud to follow up.



MICHAEL FARADAY'S MOTHER

When, in the course of time, Sir Humphry Davy gave up his position at the Royal Institution, there was only one possible successor: the man who had been proud to brush the great man's clothes succeeded him. Davy used to say, "I am thankful that I was never a dexterous manipulator, for the most important of my discoveries have been suggested by my failures;" but it was different with Faraday. He was a delicate and accurate manipulator, and it was his rightness, not his wrongness, that made him master of so many fields. It is pleasant to think of him in his quiet laboratory at the Royal Institution, with only the faithful Anderson in attendance. When all was ready he would set to work, like a good cook with all the ingredients before her. He could soon see if things were going as they should; and Anderson knew, too, because Faraday, when he was satisfied, would balance himself first on one foot and then on the other, rocking from side to side, and crooning some little tune. He knew when he was right, and we know today that he was right, for there are his sixteen thousand experiments to tell us.

Lord Kelvin, one of the great successors of Faraday in our own time, would appeal to these experiments when his own went wrong. He would say, with that splendid humility of his, "Faraday's result was so-and-so; mine is just the opposite. But Faraday, with inferior instruments, *divined* the truth. Remember *his* result, not that which you have just seen me obtain." So Faraday's notebook has been ruling in our day, correcting the slips of the greatest physicist that our age has known.

It would make the brain reel to read of all the things that Faraday achieved, for they deal with the most difficult of sciences. But there is one mighty effect which stands out in the imagination above all the others. It is part of an immense whole, but we must take the essential feature. It was already known that, if metal through which a strong current of electricity was passing were placed near a magnetic needle, the point of the needle, which should point towards the north, could be turned aside from its ordinary position. Faraday, taking up the idea, experimented in all directions, and arrived at a grand result.

He made a magnet electrify wire through which no current was passing. As soon as his wire came under the influence of the magnet it became electrified. The moment the wire became magnetised a current flowed through it *in one direction.* At the moment that it was de-magnetised—that

is, at the moment the wire was passing out of the sphere of the magnet's influence —a current of electricity passed through it *in the opposite direction*. He tried the experiment with wire; he tried it with rings of iron and steel; he tried it with straight bars of metal. The result was always the same. The metal had not to touch the magnet. It had only to be brought near it. The magnet exercised its action in what he called fields of force; as often as the metal was brought within those fields of force electric current flowed through it. The next step was to make a machine which brought metal frequently within the influence of the magnet, and to collect the force so generated: and at a bound we had a new and permanent source of electric power. Previously we had had to create electricity by friction or by chemical action, and to store it in accumulators. Now we were able to make it in unlimited quantities.



FARADAY AND THE NEWSPAPER BOYS OUTSIDE THE ROYAL INSTITUTION

People wondered what the young lecturer could be doing when they saw him playing with the magnetic needle. We know now, for it has given us the telegraph and the telephone; it has given us our dynamos, our electric lighting, our trams and trains and motor-cars. It drives our submarines beneath the seas, it fires our guns, it heals our wounds. The mighty generators that work obediently to the touch of a man's hands, carrying the power of Niagara to a thousand factories and houses—these and all the great power-houses in the world we owe to the little man singing songs of exultation as, rocking on one leg, he watched the success of his experiments.

That is the great thing by which we remember Faraday, but it was only a tithe of his work. He helped to revolutionise the making of glass for optical work and for lighthouses; he found that mercury turns into vapour when exposed at an ordinary temperature—and so he made photography possible. He carried us far in the science which enables us to plan buildings so that the voice may be heard in all parts of them. Franklin had shown us that lightning and electricity are the same thing. Faraday proved to us that electricity, whether obtained from rubbing a cat's coat or a pair of silk stockings, or obtained from a shock given by the electric eel, or derived from chemical action or by heat, is all one with the electricity whose awful effects are manifested in the thunderstorm; and Lord Kelvin, following him up, once healed a little child by means of electricity from a canister into which lightning had been run and sent to England from America.

These are but a few of the things that Faraday did, but we cannot know nearly all unless we take up the study of science, for to realise their importance we must understand the operations to which they relate. One other thing we may recall. He was called upon by the Government to help in discovering the cause of explosions in coal-mines, and he discovered one reason of which no one had thought. Down in a mine he waited to see how coal was blasted by gunpowder, and he sat down on a sack, with a lighted candle, stuck in a piece of clay, balanced between his legs. The hole for the gunpowder charge was being drilled, and Faraday, anxious to see the whole operation, waited.

"By the way," he said, "where is the gunpowder kept?"

"Maister," said the miner, "that be the bag o' gunpowder you're a-settin' on!"

Faraday used afterwards to say that of all the delicate and responsible experiments he ever made, the raising of that candle

steadily between his legs, shaded with his hand to prevent sparks from reaching the powder, was the most anxious and alarming.

We have never had a more famous scientific lecturer than Faraday. He had the supreme gift of charming and instructing at the same time. Children swarmed to hear him; adults would go to his lectures as to an opera. His experiments, his writings, and his lectures caused a breakdown in his health when Faraday was fifty, and he had to rest for two years. The holiday completely restored him, and his greatest work followed his illness. Towards the end of his life he was recommended to the Government for a Civil List Pension, and was asked to go to see Lord Melbourne, an astronomer!" He was deeply grieved, and wrote Faraday a humble apology. In the end, Faraday was induced to accept a pension of £300 a year and a cottage at Hampton Court. It was enough for him, though he had once thrown up an income of £1000 a year, because he felt that he could not earn money and be a scientist too.

Towards the close of his life he felt that his brain was tiring, and gave up his work at the Royal Institution, after being associated with it for half a century and more. He died on August 25, 1867, and in him passed the greatest experimental philosopher the British nation has produced. He was simple and modest in his life; he said his prayers to God as a child makes an appeal



MICHAEL FARADAY'S STUDY AT THE ROYAL INSTITUTION

a typical statesman of the period, a man who knew next to nothing outside politics. He told Faraday that the idea of giving pensions for literature and science was, in his opinion, "all humbug," and Faraday's fine spirit was bitterly wounded.

He turned away, more in sorrow than in anger, pensionless—this man who had given more riches to the world than all the politicians the British nation has known. But Melbourne, if he was a bear, was a lovable sort of bear, and when his friends read the riot act to him, and told him that Faraday was not only the foremost scientist in Europe but one of the noblest of men, he was deeply sorry, and said, half petulantly, half penitently, "I thought he was to its father; he loved his friends, and had no enemies; he was the benefactor of people unnumbered. He came into the world a strange, unaccountable genius; he went out of it leaving none of his blood to follow him. But he bequeathed to the world riches beyond all dreams—in actual wealth, in labour-saving, and, best of all, in knowledge. He preferred the quiet of his laboratory to the fashionable places; he preferred the grandeur of a thunderstorm to the splendours of a palace. The nineteenth century, in which he lived, was great in a hundred ways, but in some respects, at least, it might adopt the famous phrase of Sir Humphry Davy, and say, "My best discovery was Michael Faraday."

GARIBALDI
KING OF LIBERTY

ONE day during the Great War an old man appeared in London with a crowd of laughing people at his heels. He was a tall man and spare, but unbent by his years, his eyes still bright. People wondered why he should carry himself with such martial bearing, and why he should wear that curious faded cap, worn, frayed, and torn. They thought he was mad. But he did not mind their jests ; he seemed glad that a mob gathered about him. Suddenly he stayed, and, turning to the people round him, said :

" You wonder why I wear this strange old cap. I wear it because it is the cap I wore when I served under Garibaldi for the liberation of Italy. I was one of Garibaldi's Thousand ! I bring my old cap out and set it on my head, and expose myself to your wonder and laughter, that I may tell your young men that there is as great a need for them to rise to deeds of heroism now as when Garibaldi called for volunteers."

The effect of this little speech was wonderful. The crowd ceased to laugh. Men bared their heads before the veteran and pressed forward to shake hands with him. For today, as in the days long gone, the men who fought with Garibaldi are enrolled among the heroes. Today we are all proud to belong to a nation which imperil her whole Empire to defend a small nation against a big bully.

Europe, sixty years ago, was full of such bullying tyrannies, the blight of Austrian oppression, which strangled knowledge and crushed freedom and smothered conscience, which fostered ignorance and cruelty and made widespread poverty. And Europe in those days produced a Hero, " the only hero in Europe " men called him then.

He was Garibaldi, the leader of the Thousand, the man who broke the sword and snapped the fetters which kept captive the most oppressed and miserable of all the peoples of Europe.

We cannot easily realise now that that people was Italy. Today Italy is a united nation, one of the Great Powers of Europe. She has a united population of over thirty-five million people, settled in one of the fairest lands in all the world ; and nations which once oppressed her now court her for her favours. How different is all this from the conditions men still remember, and how much this Italy owes to Garibaldi, who set her free !

To understand his life-story, it is necessary to understand the story of the Italy that he redeemed. It would be pitiful to read of it if it were still existing ; but, as it is one with the bad old days that have gone for ever, we may consider it with glad hearts, for it teaches us the golden difference between a people divided and enslaved and a people strong and free.

Italy, which once ruled the world, sank into helplessness when the Roman Empire was overrun by barbarians. She became the spoil of successive waves of invaders. Goths, Lombards, Franks, and finally Germans ravaged and ruled the land ; for centuries after the fall of Rome this fair part of the world was prostrate in the dust. Then the people gathered themselves together into cities. Callous nobles ruled the country, but a sort of freedom was enjoyed in these fortified places, and in them there came about that rebirth of learning and art and science which the world has not since seen equalled. The cities became little republics, and allied themselves with other cities—Florence, Genoa, Pisa, Venice were among them. They were the wonderlands of the earth when other capitals of Europe were still the homes of ignorance and squalor. Italy's cities taught the world.

But the growing needs for defence and safety caused them to call to their aid men who could command the use of hired soldiers, and these men, from being the servants of the

community, gradually became the masters. At length Spain, France, the Germans, even the hated Turks, strode masterfully over the land. Misery and subjection again crippled the people, and when Napoleon marched his army over the Alps he found the tortured country divided among many rulers. There was a cruel Spanish Bourbon on the throne of Naples; the Pope was ruling Rome and the country round about; and, in addition to a few miserable little republics, there were numerous areas ruled by petty dukes. The Austrian rulers, often tyrants, had possession of Lombardy. Then Napoleon came, swept away the other despots, and made himself King of Italy. After his fall, the rulers of Europe assembled at the Congress of Vienna, threw Italy afresh to her old rulers, and, to make matters worse, added Venice to the territories of the Austrians. So the condition of Italy was, after all, worse than before. The Powers imposed upon her perhaps the most hated of all men in the brutal King of Naples, who governed by sword, gun, spies, and the scaffold, refused his people the faintest shadow of self-government, deliberately prevented them from gaining education, and, generally, did all that a despot could do to prevent human beings from rising above the level of the beasts of the field. It is wonderful that the heart of Italy did not die within her.



GARIBALDI, MAKER OF UNITED ITALY

And then Garibaldi was born—not in a court or a castle, but in a lowly house at Nice, on July 4, 1807. His father was the owner of a little trading vessel, an honest seaman; his mother was a God-fearing woman who, because her son Giuseppe—or Joseph—was such a handsome, affectionate, and clever boy, decided that he should be a priest. But, instead of falling in with his mother's plans, young Garibaldi would steal away to the sea and get sailor friends to take him out in their boats, teach him to swim, and make him a sailor.

He learned algebra, geometry, astronomy, geography, and commercial law, and acquired a general culture which his school did not afford, reading hard from his earliest days. When he was fourteen he was taken on board his father's little ship, and, passing through all the grades, from cabin-boy upwards, he became, during the next eleven years, a fully qualified captain. As he grew up he studied the history of his country and formed a passionate desire to free her from bondage. There were many others who had the same ambition; they were called the Young Italy party, and they sought, by political or military means, to snap the fetters which bound their native land. But, although there were men of heroism and genius among the politicians, and men of daring and passionate devotion among those who looked to the sword for their salvation, there was not one who combined the fine qualities of Garibaldi. There was Cavour, the apostle of freedom in the Parliament of Piedmont and Sardinia; there was Mazzini, the thinker of freedom; there was Panizzi, the exiled enthusiast; there was Manin, the hero of Venice; there was Nino Bixio, the fire-eating little soldier; there was Sirtori, the priest turned philosopher and soldier;

there were all these and many others striding in those breathless days into the pages of immortal history.

But there was only one Garibaldi. He was the man of an age, of a century. He was handsome, of middle height, broad-shouldered, deep-chested, of powerful athletic build, with glossy chestnut hair flowing back from a noble forehead, with light brown eyes that had volcano fires glowing in their depths. There was poetry in his nature and music in his voice. To say that he had a great intellect would be untrue, but he had genius. He was born a king of men. Kings and princes, nobles and warriors, all received him as their equal.

He was the sword and the soul of Italy, perhaps the bravest man she had ever produced, and the most inspiring. He had only one idea in life—the unity of Italy, and he began his mission as a young man of 26, when, in order to win over officers and seamen, he entered the navy of Piedmont and Sardinia, and sought to foment a rising in favour of a republic which he hoped to see established. It is curious that he should have begun here, and that Genoa should have been marked as the scene of the rising, for the kingdom of Sardinia and Piedmont was the only part of the land not hopelessly down-trodden. Let us understand more clearly this perplexing matter of Piedmont and Sardinia.

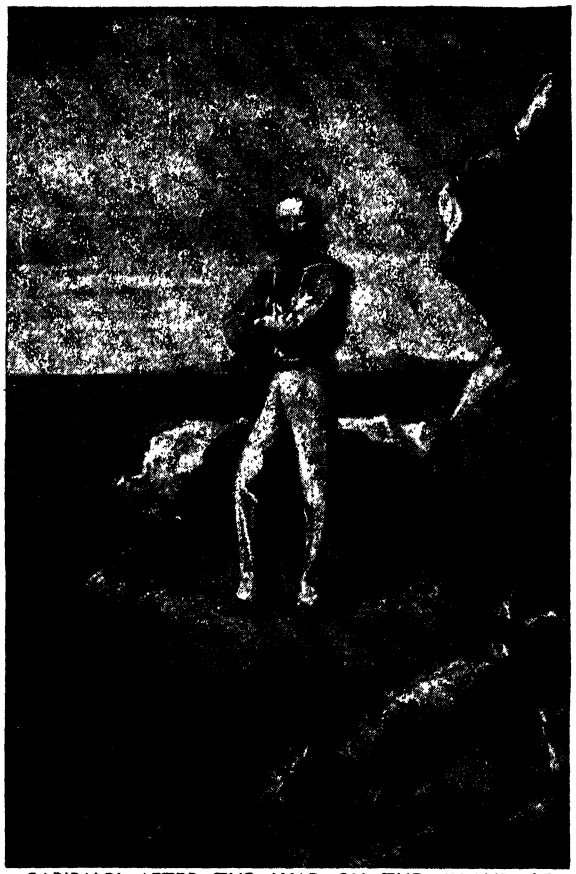
What is now the French province of Savoy was then part of Italy. Its dukes became kings of Sicily, but they exchanged Sicily for Sardinia, and remained princes of Piedmont and kings of Sardinia. It is from this house that the present King of united Italy descends. But in those days Garibaldi wished for a republic, and he set to work with others, in the navy and in Genoa, which belonged to Sardinia, to create a rebellion. Going on shore one morning in 1834 to see how things were progressing, he heard a voice whispering, "Fly! All is discovered!" He did fly. Exchanging his uniform for a peasant's, he hurried by quiet ways to his home at Nice, and, travelling to Marseilles, saw a paper in which appeared a notice sentencing him to death as a bandit. That was Garibaldi's introduction to public life. When he first saw the King of Sardinia he went with the sword of the liberator in his hand, and found his king the very man who, fifteen years before, had passed sentence of death upon him!



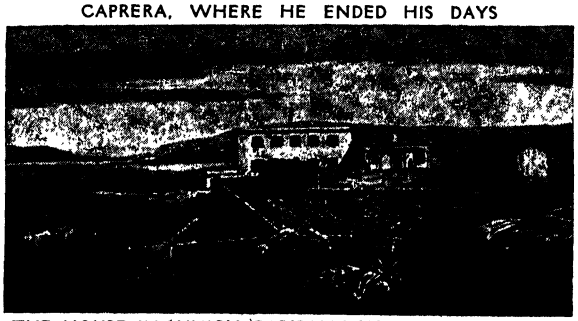
VICTOR EMMANUEL, FIRST KING OF UNITED ITALY

Garibaldi had now to flee to America, where he had thrilling and romantic adventures in the South American republics. These alone would make a book of surpassing interest, but his importance to us is in relation to Italy. He took service with small Powers against tyrants, and won renown as a naval commander and a leader of soldiers. He beat big squadrons with small ones, he led forlorn hopes with success; when ordered to sack cities and slay prisoners he refused to do so, but behaved with humanity and chivalry. He was taken prisoner and placed on the rack; he wandered in trackless forests. All that he did increased his reputation as a fighter, as a champion of lost causes, as a true and perfect gentleman. In Brazil he met and loved a beautiful creole, Anita Riveira de Silva, whom he married. In all his campaigns and battles, through triumphs and adversities, she accompanied him.

During these thrilling years Garibaldi got together a legion of Italians in South America—chivalrous men, fighting with him for the little peoples. But all the time he and they were thinking of their beloved Italy. They knew, as he knew, that Time would bring a day when they might strike a blow for their Fatherland; and the day did come. It came in 1848, the year when half Europe rose up in revolution against bad kings. So, with 85 companions and two small cannon, Garibaldi returned to his native Italy, and in June, 1848, reached Nice. His fame had travelled in advance, from the New World back to the Old, and he was rapturously received at his birthplace. Garibaldi hurried on to the headquarters of the king who had sentenced him to death, but was coldly received, and it was only with difficulty that he found places for himself and comrades in the little army of Lombardy which, helped by Sardinia, was fighting to shake off the Austrian yoke.



GARIBALDI AFTER THE WAR—ON THE ISLAND OF CAPRERA, WHERE HE ENDED HIS DAYS



THE HOUSE IN WHICH GARIBALDI WAS BORN, AT NICE

But the military power of the Austrian tyrant was too great, and the Lombardian army was shattered; yet Garibaldi and his little force fought their way to safety. The king, having failed in Lombardy, was only too anxious to preserve Piedmont, so he concluded peace with Austria. Garibaldi was wrath with him for this, and issued a proclamation declaring the king a traitor, adding that the "royal war was now at an end, and that of the people must begin." He made one or two brave fights against great odds, but his forces were gradually broken up, and he had to seek retirement.

Then an amazing thing happened in Rome, where the Pope was ruler. The people rose against the Pope, and he had to flee. Rome declared itself a republic, and Garibaldi rushed to help to defend her against the forces of Naples, and against the army sent from France by Napoleon III. He defeated the Neapolitans, and inflicted heavy losses on the French, but the French besieged the city with artillery and defeated it after stern battles.

When all was lost, Garibaldi and his comrades quitted the city rather than lay down their arms to a conqueror. Brave Anita was with him as he fled. Though seriously ill at the time, she cut off her hair and put on a boy's clothing and rode side by side with him. A gallant Englishman, Colonel Forbes, joined them with a few hundred volunteers, and they made their way into the mountains, where they were pursued by a body of troops. While Garibaldi was absent for a little time the troops attacked his forces, and, though Anita and Colonel Forbes did all they could to stay the

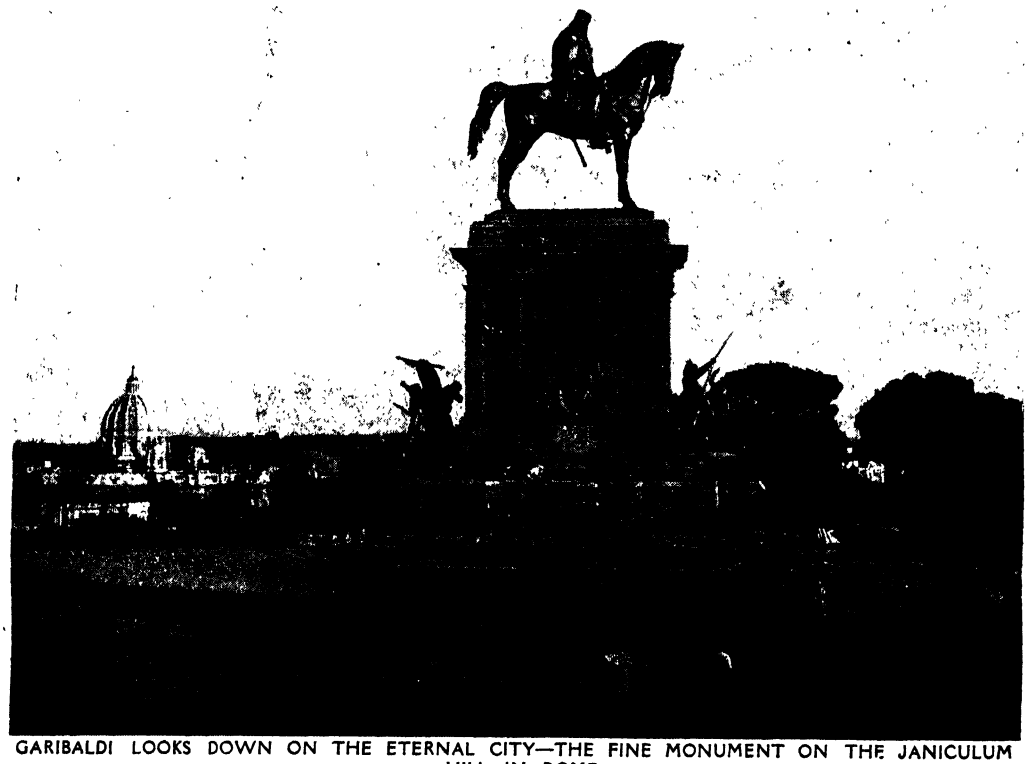
THE MAN WHO LED ITALY TO UNITY & FREEDOM



GARIBALDI IN HIS TENT AFTER A BATTLE

attack, the ill-fed, ill-armed volunteers faded away, and Garibaldi, on returning, dismissed the rest. Those who refused to go accompanied him to the coast, and they set out in thirteen small boats for Venice, which was then being valiantly held by Manin against the Austrians.

It was a lovely moonlight night as the fugitives approached Venice, but the moon betrayed them to the Austrian warships, battering away at the city, and all but four of the boats were captured or sunk. Garibaldi escaped, carrying the devoted Anita, who was by this time in a dying condition. She died soon after they reached the village



GARIBALDI LOOKS DOWN ON THE ETERNAL CITY—THE FINE MONUMENT ON THE JANICULUM HILL IN ROME

of La Mandriola, near Ravenna, and passed out of the life of her hero in the darkest hour of his distress. All who love a lover and honour a good and faithful wife reverence the memory of Anita, whose children's children are living still, with her brave blood and Garibaldi's running unsullied in their veins. Their sons, true to the father's memory, fought for freedom in the Great War.

Garibaldi was now a hunted criminal, with a price upon his head. Piedmont could not shelter him, for he was declared a dangerous man, and was warned to leave, though the Sardinian Parliament passed a noble resolution, declaring that the decree of expulsion was a violation of the principle of nationality and of Italian glory.

After many romantic wanderings Garibaldi found himself again in America, where he worked in poverty as a hired man for a tallow chandler, The man who was to kindle a great light in Europe had now to earn his living as a candle maker in America! Happily, an Italian friend found him out and gave him command of a little trading ship, in which he sailed to various parts of the world. One of his voyages brought him to London, where he met Mazzini, who told him of dreadful things being done by the Austrians in Italy. Garibaldi made friends in London, and when, on a later voyage, he went to Newcastle in his grimy little vessel to get a cargo of coal, the working people of that northern city honoured him as if he were a king, and presented him with a sword of honour, bought by the pennies of hundreds of workmen.

"Each penny," he was told, "represents a heart that beats true to European freedom." Garibaldi responded in excellent English, in a charming little speech full of prophecy, declaring that "Italy will one day be a nation." It was a charming

incident, honourable to Garibaldi and to the freedom-loving sons of toil in the hardy North of England.

Although Piedmont dared not openly shelter Garibaldi, for fear of Austria, it was the one spot in Italy—with Sardinia—in which freedom still existed, and the wanderer's heart yearned towards it as towards home. There, at last, he returned in 1854, and saw the gallant Sardinians bravely fighting in the stupid Crimean War. A year after his return his brother died and left him $7000, with which, added to his savings, he bought half the wild and lovely island of Caprera, off the northern extremity of Sardinia. There, with his children, he built a little single-storey house, and devoted himself to farming.



LORD TENNYSON WELCOMES GARIBALDI TO HIS HOME IN THE ISLE OF WIGHT

But great events were coming. The King of Sardinia and Piedmont had become friendly with France, and Napoleon III. promised that if Sardinia were attacked by Austria he would go to war to help the little State. Austria did, in her usual

cowardly way, make war on Sardinia. The Franco-Austrian War was the outcome, and the big Austrian bully was beaten, as she always is. She had to give up Lombardy, which was handed over by France to Sardinia. France, however, took Savoy and Nice, so that Garibaldi, in his frenzy of grief, declared that he was now a foreigner in his own birthplace. He never forgave this, but he still strove for Italian unity,



THE TRUMPET BLAST OF A FREE ITALY—FROM THE PEDESTAL OF THE GARIBALDI MONUMENT IN ROME

and his heart leapt for joy when a number of tyrannical dukes were turned from their thrones and their dukedoms voted themselves into the new kingdom of Sardinia, ruled by Victor Emmanuel. Greater things still were to follow.

There had been a rising in Sicily in 1848 which had been cruelly repressed by the savage King of Naples, and in 1860 the people of Sicily steeled themselves to throw off the detested Bourbon rule for ever. They called Garibaldi to their aid, and the strangest picture was now presented to Europe. Garibaldi did not then want a republic ; he realised that unity could come to Italy only under the rule of the King of Sardinia, whom he meant to make King of Italy. So he raised the banner for freedom in the name of Victor Emmanuel, much to the alarm of that king and his clever Minister, Cavour. These two had to pretend to discourage the movement, so that, if it failed, they could declare themselves guiltless. But they had, on the other hand, secretly to encourage it, so that if it succeeded all might be well for the New Italy.

The turning point in Garibaldi's life had now come. At Genoa he formed his immortal legion of the Thousand Heroes. The men of the Thousand came to him from all parts, every one of them a passionate lover of Italy. Most of them were workmen, but there were also 150 lawyers, 100 doctors (who fought during the day and tended the wounded by night), 100 merchants, 50 engineers, 20 chemists, 30 ship captains, ten painters or sculptors, three ex-priests, one lady, and men of private means, authors, journalists, and small tradesmen, such as barbers and cobblers.

They sailed away in two little steamers from Genoa. The ships had been bought, but the volunteers had to pretend to seize them like pirates at dead of night. They went off without ammunition, and had to take some, in the king's name, from a fort. Chance still favoured them marvellously. They were regarded as pirates by Russia, France, Prussia, and Austria, and would

have been treated as such had they been caught. Just before they steamed into the harbour of Marsala two warships of Naples had steamed out, and 20,000 armed men had been sent away to another part of the island, and fortunately the raiders got into harbour and landed before the warships could return.

In the islands were thousands upon thousands of troops of various nationalities, all under the Government of Naples, and Garibaldi had to attack these in strongly fortified cities. He had only just over a thousand men, with very little ammunition and only the worst of muskets. But his generalship was marvellous. He stormed a mountain position and put an army to flight, but the issue was so left that his way to Palermo—the first place of importance—seemed hopelessly barred. Perhaps no man on earth save Garibaldi would have attempted to advance, but he sent a small part of his force in one direction, and followed with the rest, taking a winding mountain path in sight of the enemy. The enemy followed, thinking he was making for a village lying far from Palermo; but at dead of night, leaving the small advance guard to lure the enemy on, Garibaldi doubled back by a secret path, and, after a tremendous climb which tore his men's clothes and boots to pieces, succeeded in reaching Palermo. The Thousand Heroes, supported by a rabble of irresolute peasants, fought their way in by the only undefended gate, and there followed terrible street battles, in which the people helped. Chance again fought for Garibaldi. There were about 24,000 regular troops in the city, with abundant arms, and a fleet lying in the harbour, but the troops were badly handled by the Naples generals, so that the ships at sea bombarded the city in vain. The Thousand raised barricades and fought like demons, but their ammunition became exhausted, and the hour for death seemed near. At that very time the governor of the city sent a messenger to Garibaldi, and a truce was agreed upon.



ITALY AGAINST HER FOES—A GROUP FROM THE BASE OF THE GARIBALDI MONUMENT ON A HILL ABOVE ROME

Terms were discussed, and the upshot was that Garibaldi's boldness so deceived his enemies that they marched out, leaving the city to him! They had been beaten, a mighty armed force, by a rabble of almost unarmed heroes. Palermo, capital of Sicily, had been won by this marvellous man and his few comrades against an army and a fleet!

Within three months all Sicily was free. Volunteers poured in in thousands, men,

GARIBALDI LEADS HIS THOUSAND HEROES



THE MAKER OF UNITED ITALY URGES ON HIS MEN

money, and arms, and Garibaldi used them all well. But he counted far more than his army. He was its inspirer, general, leader, and its very soul. Some feared him as more than earthly, but all adored him as one of the greatest of men. When all Sicily had been reduced, Garibaldi crossed to the mainland, and rode, far in advance of his army, into Naples, which was still held by a hostile force. He rode alone, and took the city and its fleet without a blow. He had added to the realm of his master the kingdom of the Two Sicilies. He proclaimed the King of Sardinia "King of Italy," then took a bag of corn and a handful of money, and returned to his farm in Caprera. He could have been king, but he preferred his humble station on the little Mediterranean island. Venice and Rome remained to be added to the kingdom. Venice came as the result of the Austro-Prussian War, and in 1870 an Italian army entered Rome, and the Eternal City became at last the capital of united Italy.



FAR BEYOND THE SOUND OF THOSE HE FOUGHT FOR—GARIBALDI ON HIS FARM AT CAPRERA

It is impossible to follow Garibaldi through all the rôles he played in these great scenes, for his life is woven into a large part of the history of Europe. But to his undying credit be it told that in 1870 he fought against the Germans on behalf of France, and, although his part was not a great one, it is true that he was the only general on the French side whom the Germans did not beat. With Italy united and a nation at last, Garibaldi turned his thoughts to the affairs of other oppressed nations. He did rash things in his later years, and brought himself to poverty. The Italian Parliament voted him £40,000 and an annual pension of £1,000 a year, and he declined both, but he accepted from affectionate admirers a gift which released him from poverty, and he accepted also from English admirers the gift of that half of his island which he had been unable to buy.

Before the end came he visited London, where he was the hero of the hour. He was unspoiled, untouched by flattery. As leader of the Thousand he always wore a plain garb, grey trousers, and a red shirt—the Garibaldi shirt which has since become familiar all over the world. He kept to his old style of garb in London, where the highest in the land were proud to do him honour.

Garibaldi suffered from disease and the effects of wounds in his old age, but whenever he was able to appear in public he was received with honours greater and more touching than any accorded to a sovereign. His work had been well and nobly done, and he passed away in complete happiness at his little home in Caprera on June 2, 1882. He was universally mourned, and the dirge of the weeping women of Italy, "Dead is Garibaldi; my beauteous one is dead," re-echoed through the world.

MURILLO, THE PAINTER OF BEGGAR BOYS



Murillo, as a poor youth, painting pictures of the beggar children in the fair at Seville. He sold these pictures for very little in order to get money to support his sister, to whom he was passionately attached.



Murillo painting pictures in a convent in Spain

THE PICTURE BOY

MURILLO AND THE BEGGAR BOYS OF SEVILLE

THREE hundred years ago people loved pictures much more than they do now. Painting was the most popular of all the arts. Few persons in those days were able to read, and, moreover, books were very costly. On the other hand, everybody could understand what they saw in a painting; beautiful pictures were placed in great numbers in all the churches and public buildings, so that the poorest and most ignorant should see them, and learn from them; and in the houses of the humblest and poorest worker there were almost as many pictures as in the mansions of the rich.

This was especially the case in Spain and Holland, where the art of painting then flourished. When the people of a town found that one of their fellow-townsmen could paint fine pictures, they became wild with delight, and honoured him more than if he had been a great nobleman or a famous general. So in those days it was the chief ambition of every thoughtful boy to become a good painter.

Poor Murillo of Seville—the lovely city of orange-groves and white palaces in Southern Spain—was afraid he would never become a good painter. He was born in 1617, and when quite a little child he showed a talent for drawing. He was sent to school; but, instead of doing his lessons, he covered his school books with portraits of the little boys around him. The pictures were so well done that his teacher did not scold him, but said, "I should not wonder if Murillo does not become a great painter some day!"

In the holidays the little lad had no time to spare for playing games in the tall, cool, narrow alleys of Seville. He would wander through the churches gazing in admiration at the beautiful religious pictures.

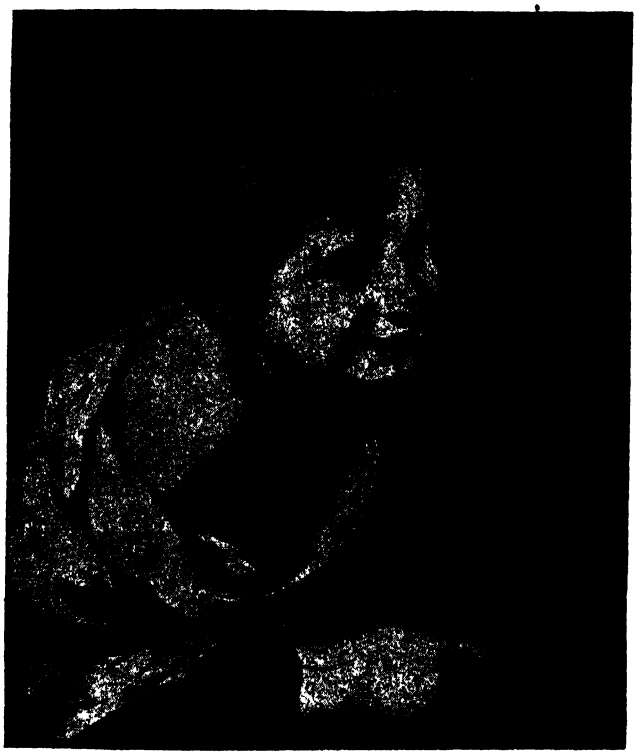
"Oh, if only I could paint like that!" he would sigh.

And down he would sit, with a scrap of crumpled paper picked up from the rubbish-heap, and try to copy some beautiful picture of Jesus as a little child.

Murillo's father and mother were poor working people, but they were very proud of their little boy, and they saved all the money they could in order to pay for him to be taught painting when he grew older. A terrible plague, however, broke out in Seville soon after Murillo reached his eleventh birthday. Both his father and his mother were killed by the plague, and Murillo and his baby sister were left sad, and lonely, and miserable. Their uncle came to their aid, and took them to live with him. He was also a poor man, but, happily, he knew an artist

in Seville who wanted a boy to help him in his work, and do various odd jobs.

Thus Murillo was set at quite an early age in the path that he had longed to follow. Of course, he was only a kind of little office boy. He had to sweep up the studio of his master, and keep it clean, and brush his master's clothes, and mix his paints, and run on errands for him. But while doing all these humble tasks, he watched with bright, eager eyes the way the painter worked, and in his spare time he lovingly copied everything his master drew. His master was really one of the worst painters in Seville, but little delighted Murillo did not know this. It was happiness enough for him that he was now able to pick up some knowledge of the art that he had always passionately loved.



A SPANISH PEASANT BOY—BY MURILLO

The painter was struck by the boy's great talent, and when he had no order for a picture he used to give him lessons in drawing. Fortunately, Castillo, as the painter was named, could draw and design very well; it was his bad colouring which prevented him from winning wealth and fame. Murillo quickly became a credit to his master, and at the age of fifteen one of his paintings was bought by a church in Seville.

Castillo was very angry at his own want of success, and he put it down to the bad taste of the people of Seville.

"They don't know a good picture when they see it," he used to exclaim. "I have a great mind to leave this ungrateful city, and go to Cadiz."

And one morning he packed up all his things, in a great passion, and set out for Cadiz. He wanted Murillo to follow him, but Murillo now had his little sister to keep and look after. So he preferred to stay in Seville, where he was well known. As, however, he still painted in the poor style of his old master, nobody cared to buy his pictures. He was too poor to pay for any more teaching. It was, indeed, a very hard struggle for him to earn enough money to get food and lodging for himself and his little sister.

At last, finding that nobody would buy his paintings, he resolved to do the cheapest sort of work. Every Thursday a fair was held in a slum in Seville. It was a poor sort of fair, where old clothes and cheap fruit were sold at rough stalls by gipsies and costermongers. Murillo bought some yards of rough bunting, and cut this into strips, and painted bright, gaudy pictures on the bits of bunting. Then he made a stall—such as costermongers use—and covered it with bright cloth, and took it to the fair, his sister trotting beside him with the pictures he had painted. Murillo made his stall very bright and garish, and he soon had a large crowd collected round it.

The pictures had been drawn rapidly and broadly, and, though Murillo did not know it, they were often better and more vivid than the poorly coloured things which he had copied from Castillo. He offered them to the people for a few pence each.

"And if you don't like a picture," he cried, taking out his brushes, "I will alter it in any way you wish."

The people were delighted to find a young painter so ready to oblige. They got him to put brighter colours on to the sketches—good, rich reds and blues and yellows; and then, seeing the wonderful ease with which he painted, they asked him to draw something new for them. The market-place was full of noisy, merry little beggar boys, many of them looking quite handsome in spite of their rags. The contrast between the beauty of their faces and their tattered clothes struck Murillo vividly.

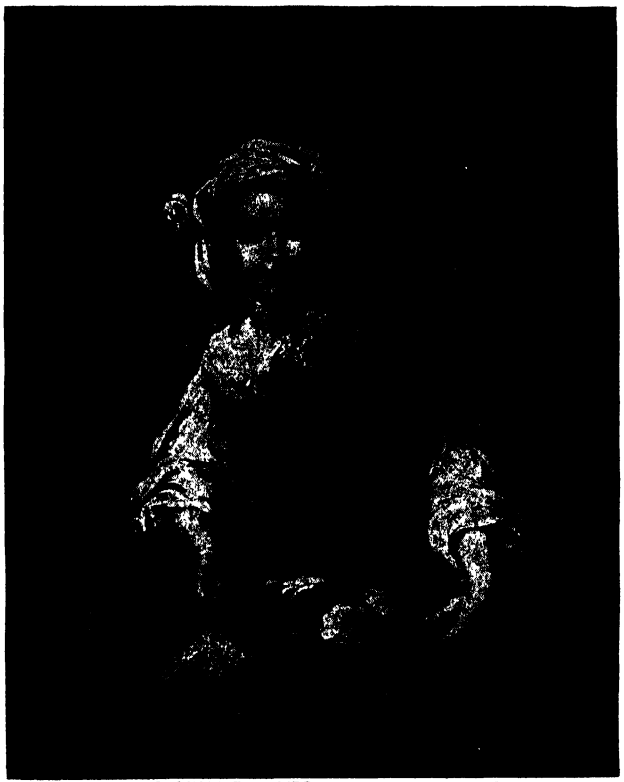
"I will draw you some of your own boys!" he exclaimed.

And with his brush loaded with paint, he dashed off sketch after sketch of the picturesque little urchins of the slums of Seville. In a week or two he was the most popular painter in the lower part of the town. Every Thursday he was to be found at the fair. On other week-days he would roam, now in the slum sketching his beloved beggar boys, now through the churches copying all the most beautiful pictures of Jesus and His mother, Mary.

Then merchants began to come to him with orders for large quantities of his cheap bunting pictures to send to the Spanish colonies. In spite of the very small price he obtained for his work, Murillo was now able to live comfortably with his sister, and he might not have risen above the level of a cheap painter of pictures at the local fair had he not chanced to meet an old friend, Moya of Grenada.

Moya had studied with him under Castillo, and had then gone to fight in Flanders. Seeing there some pictures by Sir Anthony Vandyck, he crossed over to England, and called on Vandyck, who was painting for King Charles I., and asked the great artist to take him as a pupil. Moya was not a good painter, but Vandyck was a kind-hearted man, and he took the young Spaniard as a pupil for six months, and taught him to use colour in a softer and more delicate way, and many other things.

On returning to Seville, Moya showed Murillo some pictures he had done in the new manner. Murillo, who had never had a man of genius to teach him, was astonished at the progress Moya had made. He resolved at once that he also would obtain better teaching. He purchased a great quantity of bunting and spent weeks in transforming it into market pictures, and he sold all the work to a colonial agent. With part of the money he arranged for his sister to stay at the house of a friend for three years; then he disappeared from Seville. No one knew where he had gone.



A SPANISH FLOWER GIRL—BY MURILLO

At the end of three years he returned. Instead of going back to the Thursday fair, he took a house in a good part of the town, and brought his sister to live with him, and waited for an opportunity of showing his fellow-townsmen what he could now do. He had not long to wait. Some begging friars wanted a series of pictures to decorate their little cloisters. They were very poor, and the money

they offered was exceedingly small. The worst of it was that they wished to obtain with this paltry sum eleven large pictures. They went to artist after artist, but no one would do the work.

"Why, the money won't pay for the paint and canvas," said one.

Meeting Murillo, he told him of the joke. Murillo at once hurried to the friars, and offered to paint the pictures for them. But they remembered him as the costermonger artist, and refused to give him the order. At last, with a very ill grace, they told him he might go on with the work. The fact was, he was the only man they could find in the whole of Seville who was willing to carry it out.

A few weeks later some artists came to the cloisters to see how the costermonger painter was getting on. They expected to be amused at his bright bad colours and wrong drawing. When, however, they saw the pictures, they shouted with joy. At a leap Murillo had become one of the greatest painters in the world!

THE BEGGAR-BOY PICTURES THAT NAPOLEON CARRIED OFF TO PARIS

His grace of style and his beauty of colouring were finer than that of any painter living; and in particular he had invented a strange, sweet, luminous golden tint that seemed like the very air of heaven. In one of these pictures some poor little beggar boys were asking a saintly man to give them some food. They were the same boys that Murillo had often drawn on Thursday at the fair; but his wonderful art now transformed them into charming, roguish urchins, whose beauty shone through their dirty, tattered rags. In a short time the cloisters that he decorated were famous throughout Spain, and when the French entered them, in the days of Napoleon, the pictures were carried off in triumph to Paris.

Where had Murillo been in his exile of three years? All his friends were now anxious to know, so he told them. He had gone to Madrid, and called on the king's painter, Velasquez. Velasquez, touched by the genius hidden in the young man's crude pictures, gave him a room in his house, and obtained permission for him to study all the masterpieces of painting in the royal galleries. Very kindly he pointed out to Murillo his defects, and advised him to copy the works of the great artists until he thus learnt to paint better himself. For two years Murillo lived in the royal galleries, working every day as long as the light lasted. When at the end of two years he showed Velasquez some original work, the king's painter drew out a large bag of gold.

"You are now a man of genius," he said. "Here is some money for you to travel to Italy, where you will be able to study the Italian artists."

HOW MURILLO WENT BACK QUIETLY TO HIS OWN PEOPLE

But now that Murillo knew he could paint he wished to get back to his little sister at Seville. He would not even stay at the Spanish Court, though Velasquez introduced him to King Philip and the chief Minister. That was why he came back quietly, and without any boasting, to Seville. His native city rewarded him for not deserting her. Wild with joy at having at last produced a really great painter, the people lavished upon him their love and admiration.

Murillo himself was a simple-minded and affectionate man, with a sweetness of nature that nothing could alter. The fame, the wealth, and the honour which he won never spoilt him. Much of his early earnings were spent in founding a school of art for poor boys—such as he had been. One day a poor man who used to bring him his meals at a church where he was painting asked Murillo for something to remember him by.

"What's that you have in your hand?" said the painter.

"Your dinner-napkin," said the servant. "What a pity you won't come here for dinner now that you have finished the painting!"

"Give me the napkin," said Murillo, "and let me thoroughly enjoy the last meal you will cook for me."

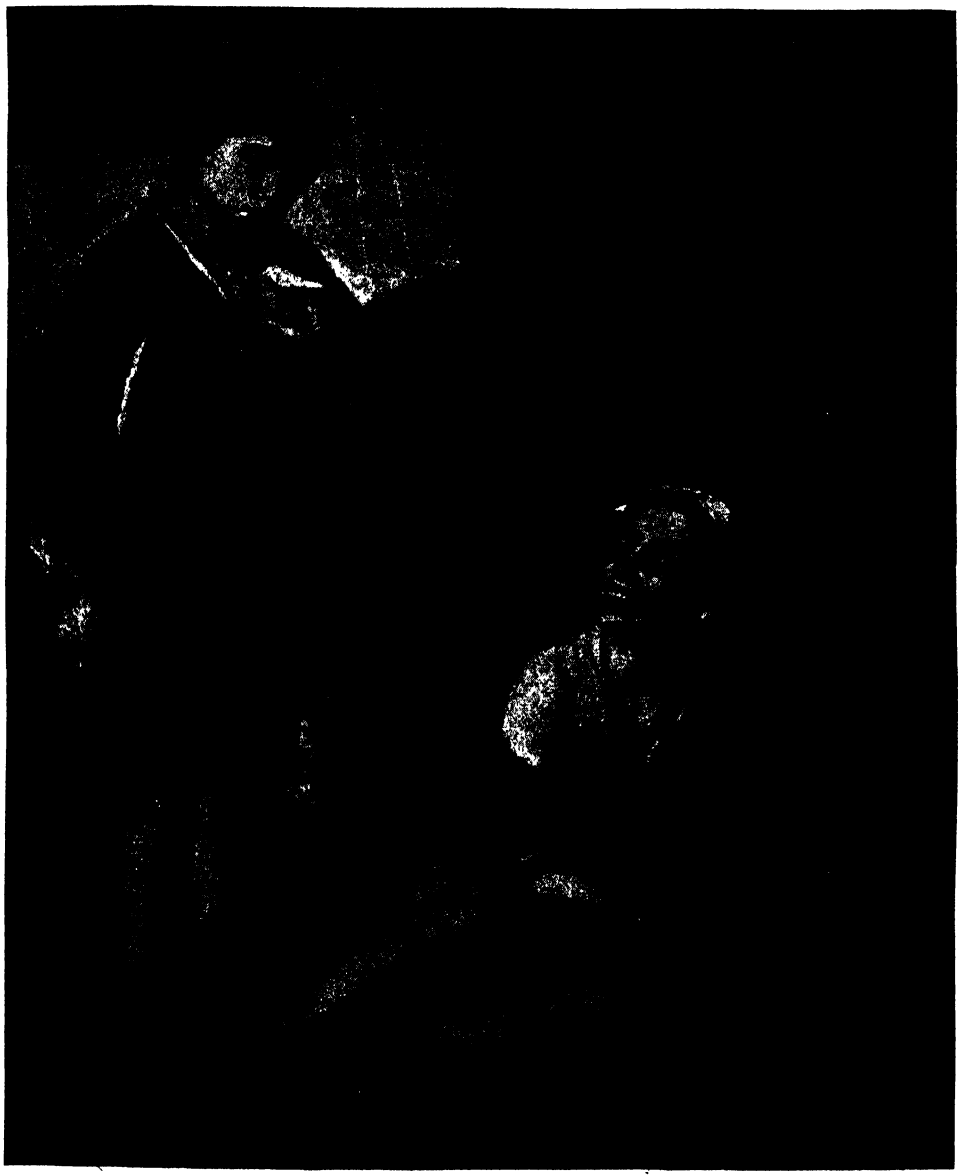
HOW MURILLO FOUND THE FACE OF AN ANGEL

When the servant came back to remove the things, he found the napkin nailed up tightly on the wall. On it Murillo had painted one of his finest masterpieces, which is still known as "The Virgin of the Napkin."

When the paint was dry, he gave it to the servant as a keepsake.

One day Murillo was in another church painting a large picture. He was trying

to draw the face of an angel, but he could not give it the heavenly loveliness that he wished to portray. So he gave up painting for a moment, and, turning round to rest his eyes, he saw a beautiful lady of noble birth enter the porch and



MURILLO'S FAMOUS PICTURE OF "THE BEGGAR BOYS"

come forward and kneel down and pray. As he looked, Murillo said to himself:

"I have at last found my angel!"

And he painted the lady without letting her see what he was doing. A little while afterwards he met her at the house of a friend, and, finding that she was as good as she was beautiful, he loved her, and she became his wife. When Murillo was sixty-five years of age, he went to Cadiz to paint a large picture above the altar of a church. In order to enable him to paint in comfort, a scaffold was built over the altar, but the scaffolding gave way, and he fell to the ground and died. This happened in 1682, but even at the present day the most ignorant beggar boy in Seville remembers the name and the work of the great artist.

ELIZABETH FRY GOES THROUGH THE DOOR WHICH MADE A STRONG MAN TREMBLE



ON THE SPOT COVERED BY THE DOME WHICH THE EDITOR SEES FROM HIS WINDOW, THE BRAVE ELIZABETH FRY FACED THE MOB OF PRISONERS IN THEIR CELLS AT NEWGATE, WHERE THE GOVERNOR FEARED TO MEET THEM. This impressively beautiful picture is reproduced by courtesy of the artist, Mrs. E. M. Ward.

BRAVE ELIZABETH FRY

PRISONERS have many friends in these days, when justice is tempered with mercy and prisons are meant to reform the fallen, not savagely to punish, maim, cripple, and infect with the germs of disease. Our prisons are models of cleanliness and healthiness, where, if the discipline is rigorous and severe, the treatment has the golden thread of mercy woven through the texture. It would not be worth while to recall these things, for they are well known to us all, were it not that they mark a marvellous step forward since the days of Elizabeth Fry.

In those times our prisoners were treated with less kindness than domestic animals. A horse or a cow had a money value, and was well fed and stabled. But who cared for a poor prisoner? No matter whether he were guilty or innocent, once arrested he was treated as if he were guilty, was thrown into a vile den already overcrowded, and left there to take his chance of life—to gain his freedom if some miracle should help him, to die of disease if it did not.

Men, women, and children, wrongfully arrested, pined and died in prisons little better than the Black Hole of Calcutta. Nobody thought it wrong that they should; nobody realised the awful truth, or, if they did, they certainly did not try to better things. They looked upon prison life, and all its accompanying terrors, as they looked on plague and smallpox—as dreadful scourges which must be avoided if possible, but must be endured if they could not be avoided.

We say that nobody cared, and that is true of generation after generation of our ancestors. It was true of all the civilised world; it is true today of many Eastern lands. But there came at last two generations which produced two crusaders against this awful state of things. First came John Howard, the apostle of prison reform; after him came Elizabeth Fry, who followed in his steps.

It is difficult to understand her life and work without first knowing what John Howard did. He was a man of wealth, whose attention was turned to prison abuses through his having been captured at sea by French privateers and thrown into gaol until he could be ransomed. The horrible life that he led in his French prison made him wonder if similar conditions existed in England, and he devoted his after life to investigating the state of prisons. He found that his worst suspicions were justified.

Men and women, innocent or guilty, were herded together in underground cells into which water and sewage penetrated, with beds on the damp and filthy ground, and there, amid pestilence and fever, they dwelt until death mercifully released them. That would have been terrible enough had only the guilty been subjected to these shameful conditions, but their fate was shared by people as innocent as little children. The prisons were in the hands of gangs of brutal warders, who lived on money extorted from their prisoners and were not paid by the State. Men actually paid to be allowed to act as warders, and derived their profits from the prisoners themselves, who had to obtain the money from their friends outside.

The pinnacle of villainy was reached when an innocent man was not allowed to go, but was dragged back to prison by the warders because, while awaiting trial, he had run into their debt for food or light, or perhaps for the right to share a cell in which there was a little window. Now, until that sum was paid the warders would keep the innocent man in prison. If the man were poor, as would most likely be the case, he would pass practically the whole of his life in gaol, for,

while he was paying off the arrears due to his rascally captor, he would be incurring fresh debts day by day, and so might become a captive for life. The more horrible the warder made life for the prisoners, the more readily they would seek to pay for the abatement of their sufferings.

John Howard threw his searchlight upon these abuses, and so roused the country that Parliament was forced to act. It abolished the old underground cells. It paid salaries to the warders, no longer leaving them to prey upon the prisoners, and ordered that when an accused person was found innocent he should be set free in court, and not sent back to the gaol.

THE GREAT WORK OF JOHN HOWARD WHICH ELIZABETH FRY TOOK UP

These and other things were done at the instance of John Howard, and so promising were the reforms thus begun that it makes us rub our eyes to find that another life's work had to be spent in the same cause to sweep away other abuses. It remained for Elizabeth Fry to complete Howard's work.

The lives of the two overlapped, for when Howard died, in 1790, little Elizabeth was nearly ten. But she had never heard of Howard or of his work. She was born at Earlham, near Norwich, on May 21, 1780, one of the large family of John Gurney, a rich and worthy Quaker banker. Elizabeth seems to have been specially endowed with those beautiful qualities of heart and mind which distinguish great spirits. She and her six sisters grew up bright, clever, lovable girls, fond of music and dancing and other innocent gaieties, and the happiness of Elizabeth in her romping youth made her anxious that others about her should share her joys.

Now, with all her golden qualities, Elizabeth did not know how to mould her life until she had reached seventeen. Then suddenly there came into her life a sobering yet mellowing influence.

THE HAPPY RICH GIRL WHOSE HEART WAS STIRRED WITH PITY FOR THE POOR

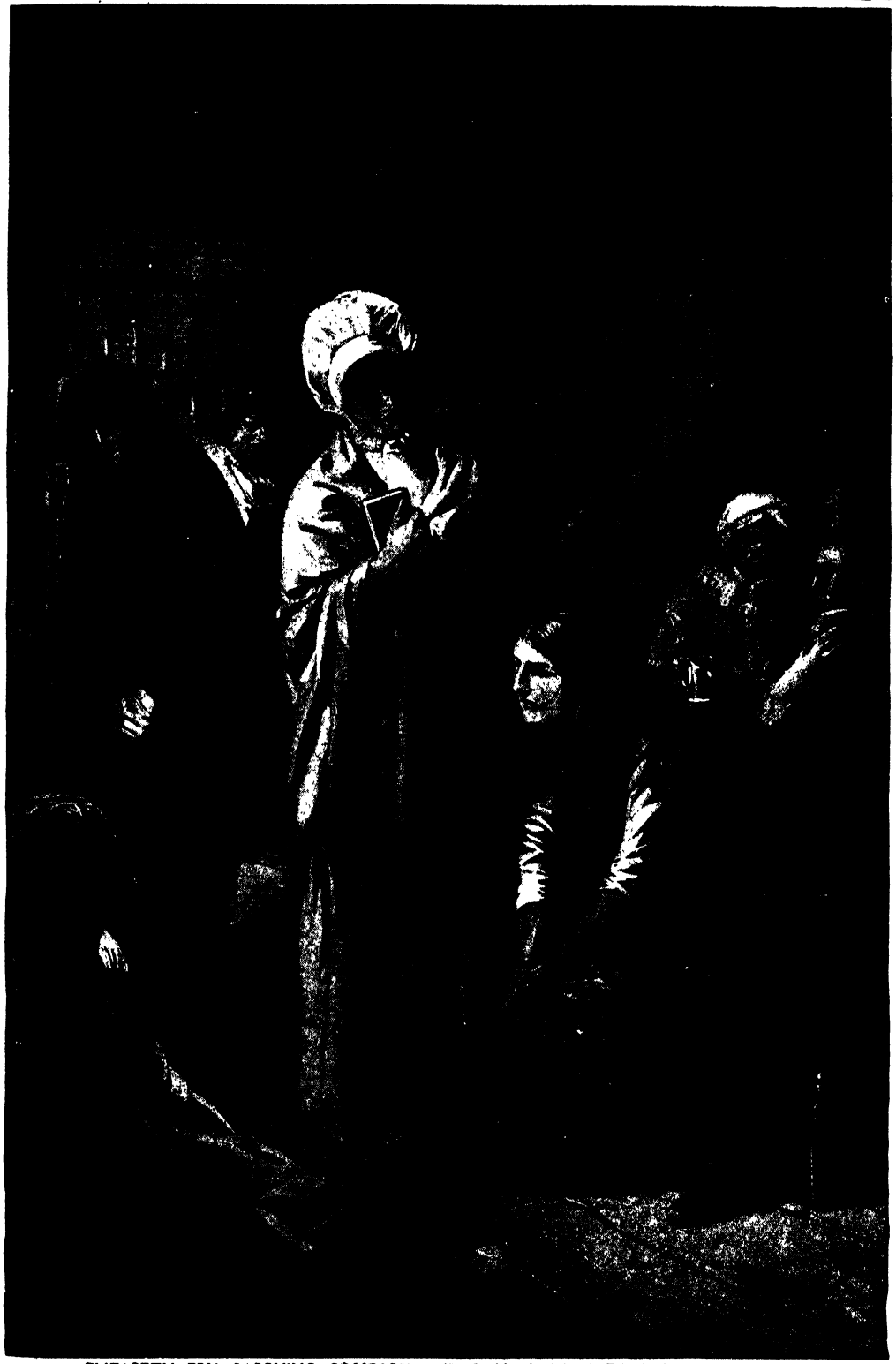
She was deeply impressed by a series of addresses which she heard from an American Quaker named Savery, and the effect of his teaching altered the character of Elizabeth's daily life. None of the joyfulness and sweetness of her character disappeared; she simply applied these qualities to the help of others. She began to interest herself in the lot of the poor, and she soon saw that the only true remedy for poverty and ignorance was to be found by educating the victims. And she was wise enough to realise that, while we cannot bend the great oak, we can train the sapling. So she started a school for poor children, taught in it, and managed it entirely herself, even when she had over seventy scholars. That was a wonderful thing for a girl of seventeen to do, especially at a time when education had hardly begun, and she had her own plan to think out and carry into effect.

When she was twenty, Elizabeth Gurney became Elizabeth Fry, marrying a rich London merchant named Joseph Fry, whose father's home was at Plashet, in Essex. Until the death of her husband's father she lived in London, a strange dwelling-place for this beautiful wild bird from the country. It is sometimes difficult to understand the changes and chances which seem to direct the order of our lives; and friends of Elizabeth Fry must have thought the alteration of her circumstances very sad and bad. She was snatched from her fine work at Norwich and shut up in London, where, though there were many abuses to redress, the work of one woman seemed hopelessly inadequate to bring about any improvement. And her friends must have wondered, too, whether she had not been ill-advised in her choice of a husband, for Fry was a chilly, spiritless man, with none of Elizabeth's fiery glow and solicitude for her fellow-creatures.

THE GREAT WORK THAT AWAITED ELIZABETH FRY IN THE PRISONS OF ENGLAND

But it is probably true that if she had not married him, had not come to London and learned in that great world of conflicting interests how to serve her generation, the world might never have heard of her; humanity might have waited an age for the coming of one of its most brilliant torch-bearers.

Little as she knew it, there lay a great work awaiting her in London. She was to extend to the capital the work which, in a quiet way, she had begun in the country. For at Norwich she had visited the local prison, and had seen evils which had been left unreformed even after the work of John Howard; and after she had lived some time in London a pitying curiosity led her to visit the notorious Newgate Gaol. She found that, in the greatest of all English prisons, conditions were worse than at Norwich, and forth-



ELIZABETH FRY CARRYING COMFORT AND CONSOLATION TO UNHAPPY PRISONERS

with she became the most ardent of prison reformers, the most devoted friend of the unfortunate. John Howard had brought about reform in the law respecting warders; he had practically done away with underground dungeons, with the chaining of women and children, and with many of the dreadful conditions which made the gaols into fever-pits. But with his death the reforming zeal had halted. Elizabeth Fry took it up again.

But what had she to do, seeing that Howard's work and memory were still



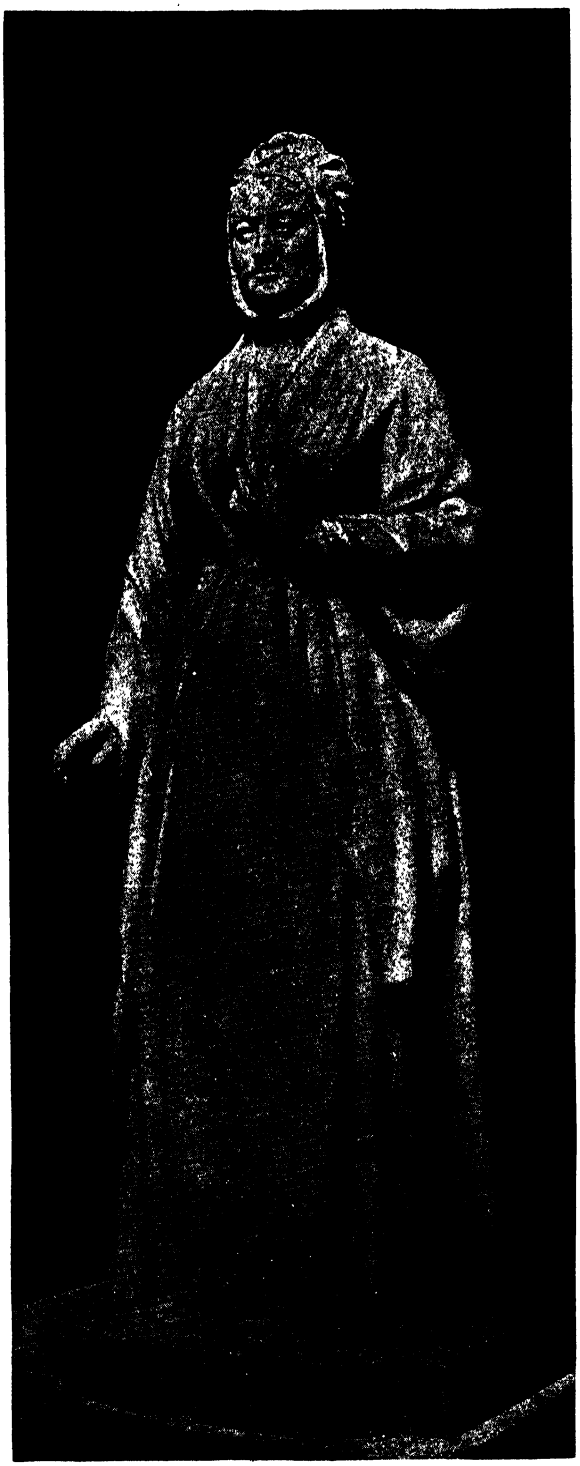
WHERE ELIZABETH FRY PREACHED HER LAST SERMON—A BEAUTIFUL GROUP OF ALMSHOUSES, WITH A FRIENDS' MEETING HOUSE ATTACHED, NEAR MARGATE

green in the public mind? Let us picture, from her own telling, something of the conditions she found at Newgate. The state of the prison at first struck terror to her heart; the scene might have leapt to life from a picture painted in the gloomy ecstasy of Dante. In one little section of the prison she found 300 women and children huddled together, like caged beasts—wild, lawless, more or less starving, without bedding, without proper clothing, with no proper accommodation for washing. Hungry, hopeless, shut off from the sweetness and light of freedom, there these poor creatures were huddled together like savages in a barbarian prison. There were people of all ages and of all types. There were the wicked, desperate women whom brutal laws had hardened into callous villainy, there were shrinking girls cast into prison at their first false step, there were those who were merely arrested on suspicion, and those who were there because mothers or sisters or other relatives upon whom they depended were there already. And among this medley were babes and little children, in an atmosphere of oaths and blasphemy and obscenity such as can hardly be imagined today.

Elizabeth Fry was a brave woman to enter the prison. She did what the governor himself hardly dared to do, for he simply left his wild captives to themselves. When the lady and her friends arrived, they were told that it was quite unsafe for them to enter. But virtue and courage fear no evil, think no wrong, and Elizabeth Fry went bravely into this den of infamy and suffering. The sight that met her eyes never left her memory. Long afterwards she told a committee of the

House of Commons of her experiences. "The begging," she said, "the swearing, the gambling, the fighting, the singing, dancing, dressing up in men's clothes, were too bad to be described, so that we did not think it desirable to take young persons in with us."

But for herself she was not frightened. She went boldly yet modestly among the prisoners, and learned the story of their sufferings and their needs. She began forthwith to clothe the naked and feed the hungry. But she saw that she must not be content to deal with effects; she must strike at the cause. So she did a thing such as had never before been dreamed of in the history of prisons. She set up a school for the children and a factory for the grown-ups actually within the prison walls. The children became scholars, their relatives became industrious. She brought into the lives of the sufferers that kindling spark of human love to which they had long been strangers. There were among the prisoners, and especially among the younger girls, those who had never heard the name of God except in blasphemy, and Elizabeth Fry taught these poor, semi-civilised creatures the meaning of religion. She had a beautiful voice, and marvellous eloquence, not the eloquence of words and phrases, but the eloquence which in simple yet glowing language reaches the heart as sunshine reaches the darkest corner of a garret.



THE BEAUTIFUL FIGURE OF ELIZABETH FRY WHICH HAS BEEN SET UP IN LONDON ON THE SITE OF NEWGATE PRISON, THE CENTRAL SCENE OF HER LABOURS

No wonder the fame of her work spread far and wide. The hearts of princes and people were stirred by the direful tidings she had to tell and the glorious work of reclamation she was doing. Great men went to see her, to learn the truth for themselves. The American Ambassador in England at the time expressed his wonder in that strange way which Americans sometimes affect, yet his tribute was fine, although he spoke of the Quakeress as a curiosity. "I have seen within the last two days," he said, "the greatest curiosity in London, ay, and in England, too, compared to which Westminster Abbey, the Tower, Somerset House, the British

Museum, nay, Parliament itself, sinks into utter insignificance. I have seen Elizabeth Fry in Newgate, and I have witnessed there the miraculous effect of true Christianity upon the most depraved of human beings. Yet the wretched outcasts have been tamed and subdued by the Christian eloquence of Mrs. Fry."

Yes, tamed and subdued. The phrase is striking, as showing us the condition from which Elizabeth Fry redeemed these poor upon God, soothed by her voice, animated by her look, clinging to the hem of her garment, and worshipping her as the only being who has ever loved them, or taught them, or noticed them, or spoken to them of God—this is the sight which breaks down the pageant of the world!"

It is due to such tributes as these that the memory of Elizabeth Fry is kept green, but her work itself lives, embodied in the reforms which have made our prison



IN THE BAD OLD DAYS—MRS. FRY READING THE BIBLE IN A PRISON CELL

lost souls. A greater man than the ambassador, Sydney Smith, one of the brightest wits and scholars of his age, said this, in a noble sermon that he preached in London about this time: "There is a spectacle which this town now exhibits that I will venture to call the most solemn, the most Christian, the most affecting which any human being ever witnessed. To see that holy woman in the midst of the wretched prisoners, to see them all earnestly calling

system, with all its shortcomings, the comparatively humane institution which it has now become. For Mrs. Fry did not rest content with her work at Newgate. Newgate was merely a characteristic example, not the only case of the evil she had found. She devoted herself to rooting out the whole vile system under which the conditions found by herself were possible. She travelled over much of the ground which John Howard had covered years before. She

visited all the chief prisons for criminals, and other types of detention houses then existing. Wherever she went she found need of reform such as she had introduced into Newgate. She formed associations of workers, who brought about amendments upon which the very foundations of prison reforms have since been laid. That terrible picture in Newgate was ever before her eyes, and she was determined that it should never be possible again. She brought about the separation of women prisoners from men, and the separation of the worst types from those who were more unfortunate than bad. She brought about a system of supervision of women by women. When she began the governor of Newgate was afraid to go among his prisoners. Elizabeth Fry so reformed his prisoners for him that women warders mixed with them freely. It is one of the most striking examples in the world of the marvellous power a woman has. All over England and Scotland and Ireland this wonderful woman went, advising the local authorities, calling public attention to evils she found, beginning reforms and forming associations everywhere to carry on the work she had started. And then she extended her field of operations to the Continent—to France, Belgium, Holland, Germany, Russia, and Denmark. Her mission was always the same—the relief of suffering prisoners. Astonishing success resulted from her labours. Kings and queens, princes and nobles, hastened to do her bidding. The Emperor of Russia was so much impressed that he gave up a royal palace and made it into a prison. Elizabeth Fry, however, did not desire that sort of thing. She desired to bring about the sort of system that we have in this country now; and she lived to see the harvest of her labours. People in authority from all parts of the Continent consulted her—and acted on her advice. She had friends everywhere, in all walks of life, so that one day she would be entertaining a king at dinner, and the next day taking tea in a little garret with a poor cobbler, who was prouder to have her at his house than he would have been to have a king.



ELIZABETH FRY ON A CONVICT SHIP

The experience she gained in prisons enabled her greatly to assist the hospitals of the country by remodelling their methods of nursing, and she did valuable work in that direction, too. Nor did her labours end there. Outside the prisons proper were the dreadful convict hulks and transportation ships. A hideous system existed at that time, under which prisoners convicted of certain trifling offences could be banished from the country. They were transported for life, collected like cattle, thrust into ships, and carried away to Australia. They were given, like furniture, to the governor of the colony to which they were sent, and were put to labour like beasts of burden. The conditions under which they travelled were terrible; horrible criminals were turned loose in a ship

with boys and girls sent out of the country for the most paltry offences.

Mrs. Fry threw herself with eager zest into the work of removing these cruelties of the law, and she roused a public opinion which made the Government provide proper accommodation and supervision for the voyage, arrange for the separation of sexes and classes, and provide homes and employment for the people when they reached their destination; she brought about, indeed, a system in which the unhappy prisoners were treated no longer as animals, but really as human beings with human feelings.

All this time, with so much public labour, Mrs. Fry combined the duties of a large household. She had eleven children, and was an ideal mother. It is always the busiest people who find most time to do good, and she was of that type. She had wealth, and spent it ungrudgingly in furthering her projects. She had wisdom, too, and, though she would deny herself to help the deserving, she had the eye of a detective for a dishonest case.

It is sad to have to record that, just when it seemed that her sun would set upon a happy and successful life, there came to this heroic soul a terrible misfortune. In the midst of her work a private blow which would have stricken many a man fell upon Elizabeth Fry. Her husband lost his fortune and became bankrupt, and for the last seventeen years of her life this noble woman was very poor. The stroke would have shattered the life of an ordinary woman, but it had little effect on Mrs. Fry. Henceforth she could only give herself; she had no money to give, nothing but personal service and love and deeds of kindness. In place of gold from her purse she gave of the gold of her heart, and none bemoaned the exchange. She continued to minister to the prisoners, to help by her kindly counsel those who stumbled by the way. Her mission of mercy was borne to the end of her days, and when she died at Ramsgate, on October 12, 1845, men and women felt that civilisation had lost its noblest figure.

Elizabeth Fry was one of the most far-sighted and warm-hearted women who ever engaged in public work. We trace her influence right through our social life to-day. She ministered to the poor and suffering upon lines which all rightly organised societies still follow. She helped prisoners to help themselves back to honesty and virtue in the way that is done today by societies that carry on her work. She befriended the homeless and starving of the streets, and provided the first soup kitchens and night shelters and situations for the sufferers to fill. We do all these things as a matter of course today, but we do them largely because Elizabeth Fry showed us the way in the years now past. She was of greater importance to Europe than many of its monarchs, and she will be crowned for ever in human memory as a queen of golden deeds.



JOHN HOWARD VISITING THE SICK IN A PRISON OF THE 18th CENTURY

BENJAMIN FRANKLIN

THE POOR BOY WHO CONQUERED

EVER since man began to reason about things, the spectacle of a crashing thunder-cloud has struck him with wonder. The sudden outburst of power in the sky has always awed the human mind. Even yet ignorant people fancy that the heavens open when the thunder rolls overhead and the great sword of electric fire darts from the clouds and strikes earthward ; so that it is not strange that in the old days men felt that the power of the lightning would for ever remain a mystery to mankind.

But the mystery was cleared up at last by the son of a poor English candle-maker who went to America in search of religious liberty. With the simplest of instruments—a bottle of water and a glass tube—he showed that lightning was only an electric spark; then he sent up a kite during a storm and proved that the electric energy producing the lightning could be collected from the heavens and brought down along a string into a bottle of water.

The whole civilised world was struck with admiration for the man who conceived this thing. Of all the triumphs of the human intellect, this capture of the power of the lightning is perhaps the most sensational, and Benjamin Franklin, who carried it out, ranks among the greatest of all Americans.

Born in the days when Americans and Britons were united under the rule of Queen Anne, Benjamin Franklin was the descendant of a long line of village blacksmiths in Northamptonshire. His father worked as a chandler in England until a Puritan preacher converted him, when he found that America offered more religious freedom than Britain did. So he sailed to Boston in New England, and in this little seaside town, where bears used to prowl around the wharf, Benjamin Franklin was born in January, 1706 The boy had only two years at school, and at ten he began to work in his father's shop, making candles and running errands. But he did not like this way of life, and begged his father to let him be a sailor. Living near the sea, he spent most of his play-time in swimming and boating, but his father was determined to make a tallow-chandler of him, and Ben was kept at candle-making until he was twelve.

The boy, however, became an excellent scholar, teaching himself with books until he was able to write on various subjects better than most grown-up people could. He had also a remarkable talent for invention. For instance, instead of flying his kite in the ordinary way, as other boys were doing, he sent it above a large lake and tied the ends of the string to a stick. Then he undressed and floated out on the water, with the stick between his hands, and the kite towed him over the lake for a mile. Many years afterwards, when he was still fond of swimming, he dreamed of crossing the English Channel from Dover to Calais by using a kite to pull him along, but, being then a very prudent and cautious old man, he did not attempt this extraordinary feat, though he still believed it could be done by anyone who knew how to manage a kite from the water.

The boy's longing for a sea-life grew stronger, and his father saw that he would soon run away from home and become a sailor if he were kept at making candles. He therefore resolved to put Ben to some trade he really liked, and, seeing that he was extremely fond of reading, he apprenticed the boy to his own elder brother, James, who had set up as a newspaper printer. Ben found his brother a hard master, and it was with difficulty that the little lad found time to improve his education. But by rising in the morning an hour earlier than anyone else, by reading by candle-light late into the night, and by going without meat to save money for books, the boy made himself one of the most brilliant writers in America. He then offered to write for his brother's newspaper, but James Franklin had all the wits of Boston writing for him, and he laughed at the boy of fifteen and told him to go on learning to set up type.

A day or two afterwards a very brilliant article was found in James Franklin's letter-box, and the elder Franklin was so pleased with it that he read it to some of his contributors when they called at the office. Little Ben was working in the room, and he smiled to himself when the men began trying to guess at the author. For the piece was so good that they all said that only some man noted for learning and talent could have written it. The writer's name remained unknown, however, and for more than a year the mysterious contributor continued to send humorous and witty articles to the newspaper. Then, at last, Benjamin Franklin mightily astonished his big brother by telling him that he was the unknown author. The result was that at sixteen Benjamin was welcomed in his own name as a writer for the most spirited and wittiest paper in the American colonies — the NEW ENGLAND COURANT.

A few months afterwards Ben was made the editor and manager of the famous newspaper. It is doubtful if any other boy of sixteen ever held so important a position, and when it is remembered that he had had only two years' schooling, and had to educate himself while working all day at a printing press, his first remarkable achievement will seem still more remarkable. It cannot be entirely explained by the qualities on which Ben used afterwards to pride himself—his perseverance, his steadiness, and his thoroughness. These, of course, had something to do with it, but the main thing was his miraculous gift of genius. This cannot be produced by training and study, or all learned scholars would possess it. It cannot be won by experience and knowledge, or men of the world in positions of high power would gain it. What usually passes for genius in men of rank and wealth is often only talent in a golden setting. The mysterious faculty of genius falls, as a rule, on some lad of the working class, or the class just above it, by reason of the fact that the workers form the largest part of a nation, and are brought continually close to the great realities of human life.



BENJAMIN FRANKLIN MAKES AN EXPERIMENT

As in the case of other boys of genius in a humble position, Ben had to make his way in the world before he could put to great use any of his marvellous gifts. There was no opportunity for him in America to rise suddenly into fame and fortune as a writer, for the settlers were then fighting for mere existence on the edge of a wilderness inhabited by warlike savages. The colonies were but a remote outpost of civilisation, where almost everybody was busy labouring at the foundations of a mighty empire of the future, and had no time for the cultivation of the arts and sciences. Had Ben been bred in England, or in France, he might have worked his way to the front as a writer, but in his newly settled country a young journeyman printer was more assured of a livelihood than a brilliant author. So when Ben ran away from his quarrelsome brother, as he did at the age of seventeen, he called on some of the scanty master printers scattered about the coast lands, and after much trouble obtained employment in the little Quaker town of Philadelphia.

He arrived worn out with hunger and want of sleep, and with only a Dutch dollar in his pocket. He was in his working dress and grimed with his journey. Stopping at a baker's, he bought three long rolls for threepence, and, putting one under each arm, he ate the remaining roll as he walked along. By the door of a house in Market Street, a pretty lass, Deborah Read, noticed the runaway apprentice, and laughed at his odd appearance. It was her future husband she was laughing at, but, of course, she could never guess that as she looked at the poor, hungry young vagabond who was walking about with his three rolls of bread, wondering where he could find a place to sleep. Ben finished his roll, and went down to the river for a drink of water,

and, seeing a poor woman and her child, who had come down in the boat in which he had travelled, he gave the rest of the bread to them. Then he went into a Quakers' meeting-house, and slept there until the meeting broke up, and the next morning he got the promise of work at a printer's, and was soon earning enough to keep himself.

A printer in those days was regarded with considerable respect. The wonder of the printing press had not faded from men's minds, and even a young apprentice at the art was treated as a man whose life was nobly dedicated to the work of spreading knowledge throughout the world. And as Ben, in spite of his youth, was the most scholarly printer in the American colonies, many people of importance were glad to make his acquaintance. Sir William Keith, the governor of the province, was especially friendly to him, and often invited him to his house. He offered to set him up as a master printer, and induced Ben to sail to England, giving him letters to the King's printer in London, and to certain merchants there, who were to supply him with a good printing press and types and paper without payment. Ben had no money at all, but it was understood that the governor would stand as security for him.



BENJAMIN FRANKLIN IN COURT DRESS

Ben was radiant with hope when he set out for London, a boy of eighteen, but when he arrived in the English capital he made a discovery which filled him with despair. For Sir William Keith had deceived him; he was a man whom nobody would trust, and the letters he had given the boy were worthless.

"What shall we think," said Franklin, "of a governor imposing so grossly upon a poor ignorant boy? It was a habit he had acquired. He wished to please everybody, and, having little to give, he gave expectations. He was otherwise an ingenious, sensible man, and a good governor for the people." This passage is one of the glories of Benjamin Franklin's life. It shows how just he could be to a powerful man who had done him a great wrong and sent him in the wildest and most heartless way across the world in an impossible attempt to better his fortune.

Franklin had brought a friend with him, a handsome and ambitious American poet named James Ralph. Ralph had no money whatever, but Ben had managed to get ten pounds. This sum he gave to his companion, who could not find employment, and Ben, with a trade at his finger-ends, was able to earn thirty shillings a week. He was one of the swiftest of compositors, and had no difficulty in finding work at a London printing firm. Then in his spare time he wrote a pamphlet on liberty which attracted attention, and brought him some acquaintances among writers and men of science. Unfortunately, a good deal of his wages as a printer went to support his poetic friend Ralph. Ben seldom had more than fifteen shillings a week to live on, and, giving up all hope of making the smallest fortune in London, he accepted the position of clerk to a merchant who was going to America to open a shop in Philadelphia.

So, at twenty, the boy returned to the little Quaker town where he had made his first start. He was richer in experience than many a man of middle age, but in almost everything else he was hardly better off than at sixteen. But during the voyage home Franklin, by a remarkable effort of will, changed his character. He hardened himself, and drew up a system of mental discipline which he intended should convert him into a successful and cautious man of business. He won the respect of his fellow-townsmen, and obtained from some of them the loan of a fairly large sum of money, with which he started as a master printer. He was everything that makes for success in business—thrifty,

prudent, hard-working, and wholly concentrated on the task of money-making. He collected hundreds of proverbs bearing on success in life, and printed them in an almanac which became famous throughout America. "Poor Richard's Sayings," as the proverbs were called, did much to shape the shrewd, keen character of the Yankees. And Ben showed that he could put his ideas into practice, for in twenty years he built up a business worth nearly three thousand pounds a year—an extremely large sum in those days, being about three times the salary paid to the governor of the colony.

But though Franklin, through harnessing his remarkable genius entirely to the task of making money, has since been often scorned for misusing his powers, he knew the exact worth of the money he made, and valued it for no more than it was really worth. He wanted to be independent so that he could devote himself to study, and at forty-two, having achieved the kind of success at which he aimed, he sold his printing business to his foreman and took up the science of electricity.

He was a man with an unusual power for studying natural objects. He noticed details that most other people missed; he saw them in a flash, and then reasoned about them in his own mind with surprising results. For instance, in his almanac he had given the time at which an eclipse of the moon would occur, and he went out at nine o'clock one night to observe it. Before the time arrived, a violent storm arose that darkened the sky and prevented the moon from being seen, but on receiving the newspapers from Boston Franklin was astonished to find in them a description of the eclipse as well as an account of the storm. It appeared that in the northern town the eclipse occurred one hour before the storm began in the south. That was a piece of unexpected knowledge for Franklin, and on these two facts he built up a theory of the origin and movement of certain storms that formed his first important contribution to science.



BENJAMIN FRANKLIN STANDS UNMOVED BY INSULTS IN THE OLD HOUSE OF LORDS AND SILENTLY RESOLVES TO SET HIS COUNTRY FREE

BENJAMIN FRANKLIN ON THE WAY TO FAME

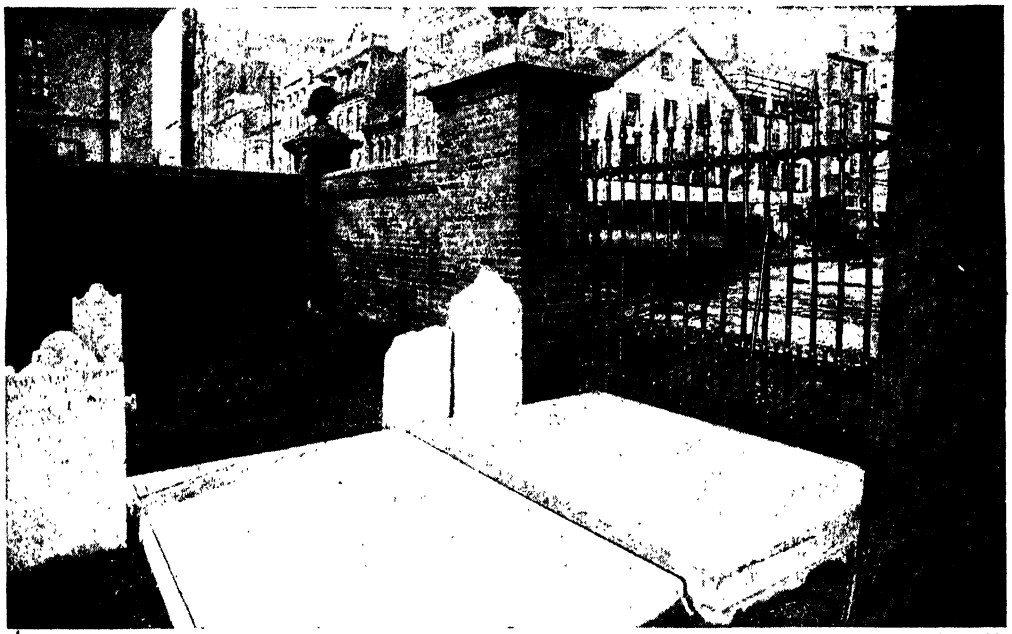


IN HIS DAYS OF POVERTY THE GREAT AMERICAN ARRIVED IN PHILADELPHIA LIKE THIS, AND THE LADY IN THE DOORWAY OFTEN RECALLED THE SCENE, FOR SHE BECAME HIS WIFE

Then, taking up the study of electricity in the winter of 1746, he again studied the stormy sky with a view to explaining the origin of thunder and lightning. It took him a year or two to connect his little experiments on his electric machine with the sublime manifestations of energy seen in the fiery thunder-cloud. He first discovered how to protect buildings and ships by means of lightning conductors, and afterwards explained how a pointed rod would draw the electricity out of the cloud and enable it to be studied in safety.

Then in 1752 he thought of an easier way of stealing the lightning from the sky and capturing it in a bottle. He made a kite from a large silk handkerchief and fastened a piece of sharpened iron wire on to the top. When a storm approached, he went with his son to an old cowshed on a neighbouring green, and then flew the kite on a long string, with an ordinary iron key tied to the end. The key was placed in a bottle in the cowshed, while Franklin kept the line taut by means of a strong thread of silk, tied to the string and held in his hand. The storm swept overhead in a flurry of rain, and a dark thunder-cloud passed above the kite, yet, to Franklin's dismay, no sign of electricity appeared. But, just as he thought the experiment was unsuccessful, he saw the fibres of the hempen string begin to rise, and with an eager, trembling hand he applied his knuckle to the key. Out of it came a little electric spark, and then a long succession of tiny lightning-flashes. The bottle was charged with the electricity of the heavens, and when Franklin and his son discharged it they both received the most thrilling electric shock ever felt by man. They had captured the power of the lightning and felt it as a harmless force in their bodies!

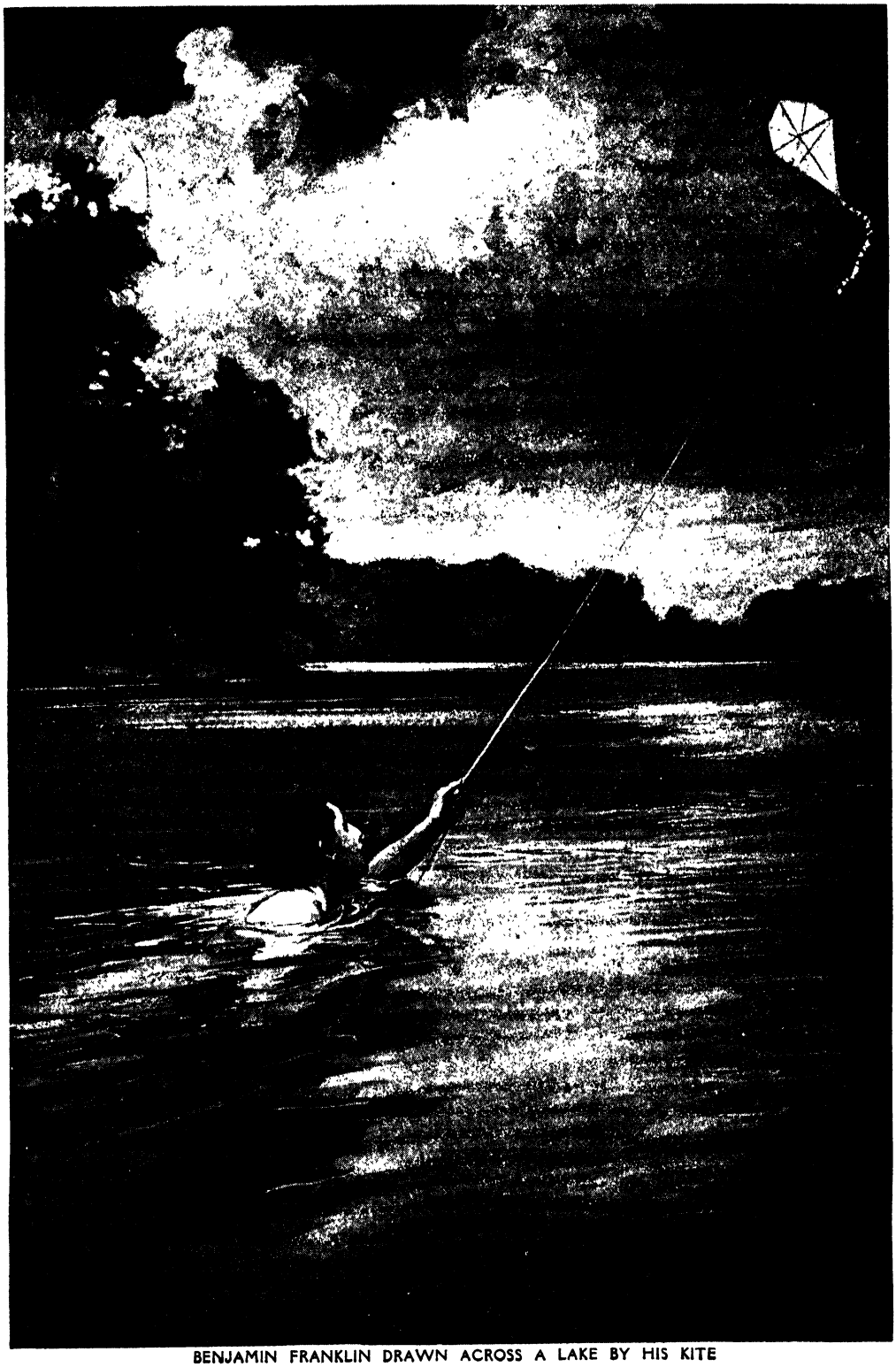
In the meantime men of science in France had also carried out the experiment according to the instructions published by Franklin some years before. They erected a pointed iron rod on a hill, and found that when a thunder-cloud passed overhead a current of electricity could be obtained. One Russian professor at St. Petersburg was too daring in his investigations. He brought from the clouds so large a quantity of electric fluid that it produced a shock which killed him. But in the summer of 1752 men of science of every country of Europe were safely tapping the thunder-storms in Franklin's way, and the name of Benjamin Franklin was known throughout the civilised world.



WHERE THE FEET OF THOSE HE FOUGHT FOR ECHO ROUND BENJAMIN FRANKLIN'S TOMB—THE PLAIN GRAVE OF A GREAT MAN IN THE STREETS OF PHILADELPHIA

It is very strange how things far apart in themselves are connected by fateful chance. If Benjamin Franklin had not drawn down the power of lightning from the sky, it is quite possible that the whole of North America might still have been a

HOW BENJAMIN FRANKLIN CHAINED THE WIND



BENJAMIN FRANKLIN DRAWN ACROSS A LAKE BY HIS KITE



OUTWORN AND HUNGRY, BENJAMIN FRANKLIN FALLS ASLEEP IN A QUAKERS' MEETING HOUSE

part of one great English-speaking empire. But, owing to his great fame throughout the world, Franklin was sent to London to look after the interests of some of the American colonists, at a time when the Mother Country and the young American nation were quarrelling over a little tax that came altogether to only a few hundred pounds a year. Franklin got possession of some private letters written to a man who had died, and, as the letter showed that some of the Americans themselves were in favour of strong measures being taken to maintain the authority of the Mother Country, he sent them to America, and their publication produced an outburst of indignation among the colonists.

In England Franklin was severely blamed for the way in which he had used the letters ; in America he was hailed as a great patriot who had saved the colony from some of its traitorous sons. Unfortunately, the British Government was violently angry at the conduct of Franklin. When Franklin appeared before the Lords of the Privy Council, he was bitterly attacked by a member of the Government, who called him a thief. The Council laughed and applauded, but Franklin stood unmoved, no muscle of his face showing how much the outrage



BENJAMIN FRANKLIN CALLING AT HIS OLD MASTER'S PRINTING WORKS IN LONDON

hurt him. He was wearing a plain brown suit of velvet, and when he got home he took the suit off and carefully put it away for a future occasion that he had in his mind. As Horace Walpole wrote:

> Sarcastic Sawney, swol'n with spite and prate,
> On silent Franklin poured his venal hate.
> The calm philosopher, without reply,
> Withdrew, and gave his country liberty.

Nine years and a half afterwards, Benjamin Franklin put on the suit that he had worn before the Privy Council of England, for he had then completed the negotiations which ended in the British Government signing the treaty of American Independence.

Benjamin Franklin was then 77 years of age, famous throughout the world as a man of science and a statesman. On returning to America he was made President of Pennsylvania, and at the age of 81 he took an active part in bringing about the union of the States under a central government. He died on April 17, 1790, as a good old man falls into gentle sleep. He was probably the greatest man who has yet been born in the New World. He had some faults and some failings, but his power was so great in so many ways—in science, in government, and in literature—that he commanded the admiration even of his enemies.

A HERO'S LAST SALUTE OF THE BRITISH FLAG



LA PÉROUSE LEAVES BOTANY BAY, AND TAKES HIS LAST LEAVE OF HUMAN BEINGS BEFORE PASSING TO HIS UNKNOWN FATE

A GREAT MAN LOST

HOW LA PÉROUSE SOUGHT AN EMPIRE AND FOUND A GRAVE

A captain in the Southern Seas has found two ships in ruin on a coral reef. This is the story of how the ships came there.

OVER a hundred years ago a gallant man set out to find a continent, but found a grave instead—a grave on a coral reef, in a wild, lone sea, far from the track of ocean-going ships. Within the past few years the captain of a ship in the same seas has come back to Europe to tell us that he has found, half buried in the sand of a little barren island, the wreckage of what must have been one of the two ships with which our hero sailed.

Every boy who loves a hero knows the name of Count de la Pérouse, though some of our greatest newspapers seem strangely to forget him. The reports which tell us of the new discovery speak as if only one attempt had been made, and that without success, to gather news of the unfortunate man who was lost with all his crew, although, as a matter of fact, there was a series of searches lasting half a lifetime. The quest of the lost explorer was one of the saddest of all the romances of the sea. There had been nothing like it before; there has been nothing like it since, except the expeditions sent out to seek Sir John Franklin and the one hundred and thirty men who lay dead in the Arctic night beside him.

Apart from the appeal to the heart which the search for men lost in the trackless ocean aroused, there was an added interest in this long hunt for La Pérouse, for he was one of the most striking and picturesque figures of his age—an enemy of England whom England honoured, a man for whose sake the rules of war were suspended so that if he still lived in any sea he should be free to come and go wherever he might. Of all the ships of France and of her allies against England, those of La Pérouse alone were to escape. The man who was thus distinguished, for whom so many ships went out to search, was to France what Captain Cook was to England, and it was Cook who inspired him. It is good to remember that when Cook was on his voyages France spared his ships, though she was at war with England, and that when La Pérouse, the French explorer, was missing, England, though at war with France, declared that the ships of La Pérouse should go free if they were found. Even in war these great nations respected the heroes of mankind.

Jean François de Galaup, Count de la Pérouse, was born near Albi, in the part of France called Tarn, where his family had a small estate. The year was 1741, so that great wars were looming ahead. Like most youths of his time, he had to bear his share in the strife which raged between France and England, and at eighteen, when he should still have been at school, he passed through the horrors of a great naval battle, was badly wounded, saw his ship captured by our own Admiral Hawke, and was himself made prisoner. He was soon set at liberty, and for some years later was engaged in naval fighting in various parts of the world.

During all the earlier part of his life France was too eagerly engaged in war to trouble about explorers, but when the war was over she began to reflect. She recalled what Columbus had done for Spain, what Da Gama had done for Portugal. One had discovered a New World in the West, the other had found a sea-way to the Old World in the East. And Cook's marvellous voyages had been widely discussed throughout Europe. He had failed to find a way round from the Pacific Ocean to the Atlantic, but he had revealed much of Australia to the world and had given this new continent to England.

France was jealous of this extension of British territory in India, in America, in Australia; she realised that while she had been seeking false glory in war, England had made herself mistress of a mighty empire. What was there

remaining in the world that France could discover and claim for her own? Captain Cook had been sent to seek a mighty continent far down in the southern half of the world, and had found nothing but ice. Surely, the wise men of France argued, there must be a continent there; there must be a continent unknown—a sort of southern cap of the world. La Pérouse, daring and untiring, was the man they chose to go forth and seek what was to be found, and not only to seek it but to take it in the name of France. France must have an empire over the seas, and La Pérouse must go out to find it.

And so the brave man went out to find an empire for his country. They fitted out two fine ships—the Boussole and the Astrolabe — as ships had never been fitted before, at such cost and with such thoroughness as had never been known. La Pérouse was told to sail round the world, and to survey it and measure it, to hoist the French flag over all the new lands he could find, to get to know their peoples, to learn their habits and customs, to ascertain what strange animals they had and what unknown things they had produced. They sent with him men to sound the depths of the ocean, men to catalogue the stars, men to measure the earth at its greatest diameter. He was to find and sail through the North-West Passage; he was to seize Australia if the British were not in actual possession; and he was to find and take the unknown continent supposed to exist in the icy seas stretching away towards the South Pole. With him in his two ships went navigators, scientists, mechanics, scholars—never to come home. It was a splendid expedition, with a programme extensive enough to have gratified the ambition of an Alexander, and when the two ships set sail from Brest, on August 1, 1785, the people of France felt that a second Columbus was leaving their shores.

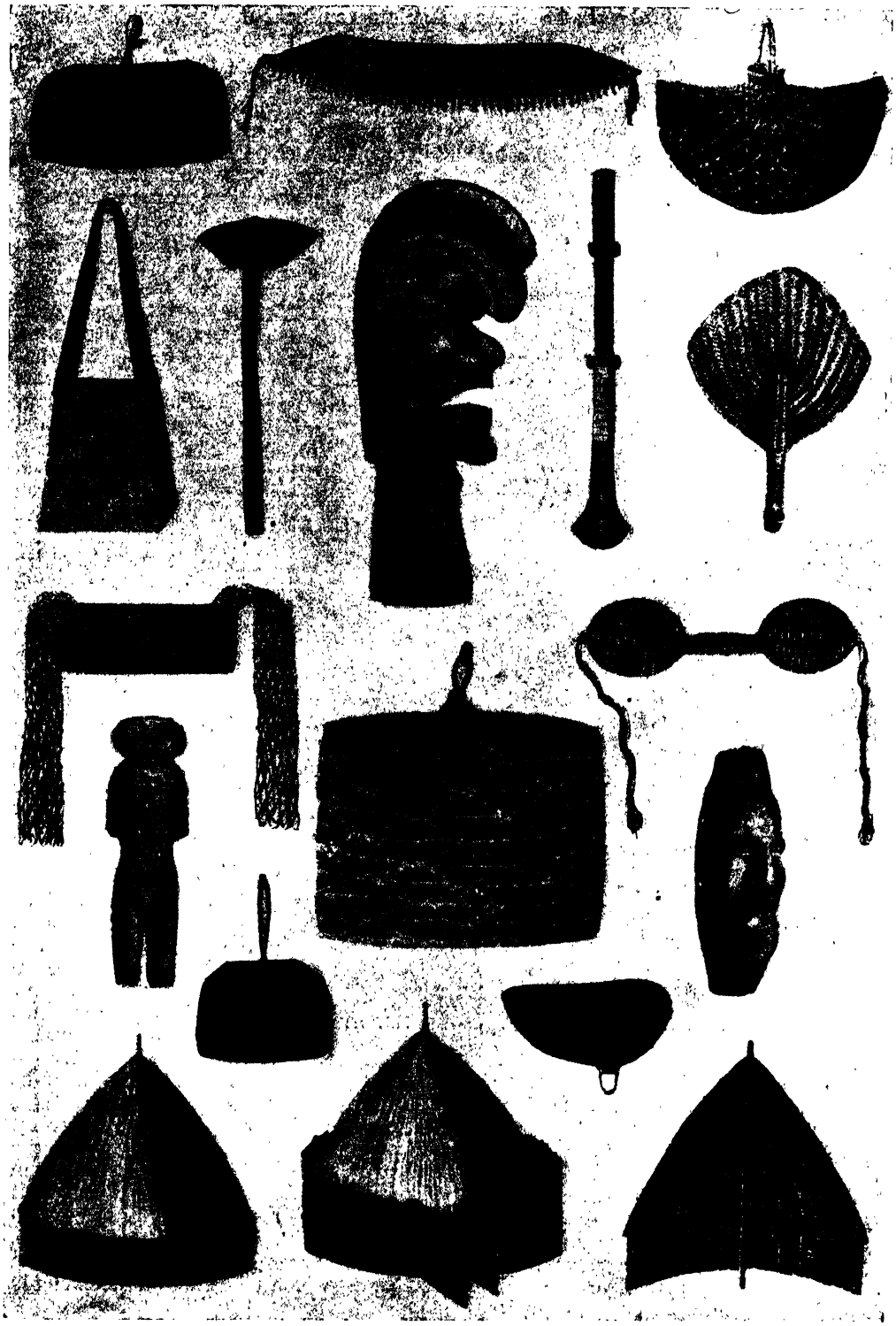


THE KIND OF WOMEN LA PÉROUSE MET ON HIS JOURNEY

La Pérouse did his work thoroughly, so far as it went. He sailed down the east coast of America, round the dreaded Cape Horn, which had so terrified the sailors of Magellan; and then, crossing the Pacific, he explored the north-eastern coast of Asia, where he left his name for ever on the map. Sailing between the islands of Saghalien and Yezo, he showed that they did not form a great part of a continent, as had been supposed. Like the two islands which constitute New Zealand, between which Cook had sailed, Saghalien and Yezo are divided by open water, and through this La Pérouse sailed, and gave his name to the strait. Important discoveries rewarded his search in these waters, and he was a happy man when he reached Kamschatka, for he and his comrades had then travelled round the world.

In these days, when wireless telegrams carry the news and fast steamships carry passengers into every sea, we think nothing of communicating with ships far out on the ocean, but in the days of La Pérouse it was all very different. There were no steamships, no telegrams, no trains to race across a continent then. It is interesting, then, to note that the French Government thought so well of La Pérouse that they had prepared for his arrival at Kamschatka, and had sent letters to await him there.

THINGS LA PÉROUSE SAW ON HIS LAST VOYAGE



QUAINT AND BEAUTIFUL THINGS MADE BY NATIVES OF THE ISLANDS AT WHICH LA PÉROUSE CALLED
Most of these drawings are by members of his expedition. At the bottom are drawings of native houses.

In these he was informed that he had been promoted to the rank of commodore in the French Navy. The Empress Catherine of Russia, to whom Kamschatka belonged, had been expecting him, too, and had ordered that he should be received with the highest distinction. When, therefore, it was known that La Pérouse had received promotion from his Government, the Russian naval authorities made a festival day of the occasion, and fired all their big guns in his honour. Had they known what lay in store for him they would have fired the guns with even greater zest, for that was the last tribute this heroic figure was ever to receive.

We might almost fancy that the explorer had some sort of dim foreboding that ill was to befall him, for while his ships were being refitted he sat quietly down and wrote a book, a long journal in four volumes, telling of all that he had seen—how he had sailed round the world and measured it, how he had sought and failed to break through from the Atlantic to the Pacific and from the Pacific to the Atlantic.



THE TYPE OF MEN LA PÉROUSE MET AT KAMSCHATKA

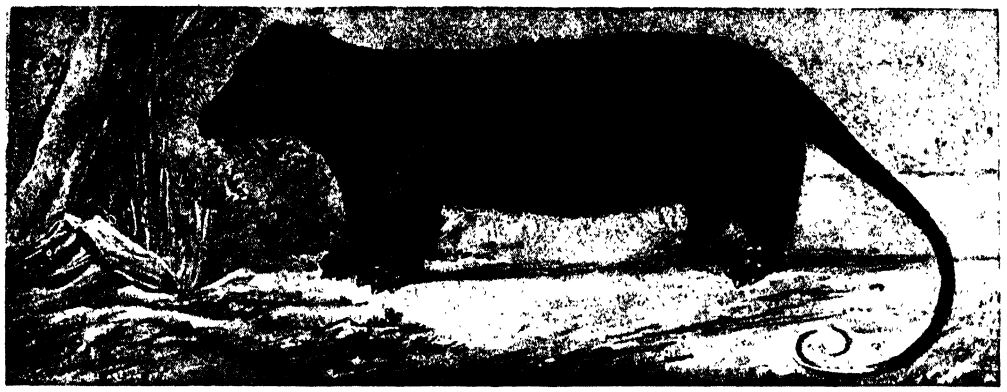
La Pérouse wrote his book in far Kamschatka, and it was, in effect, his last will and testament, for, with the exception of one short letter, nothing else from his hand was to reach the outer world.

His work, however, was but done in part. He felt that, if death awaited him in the strange seas to which he was now to sail, mankind should at least have the advantage of such knowledge as he had already in his power to give them. He wrote his book, and sent one of his officers home with it, an amazing journey in the days before railways, a journey across the desolate continent of Asia, across Europe, and on into France. The messenger discharged his trust. He reached France, and laid his precious burden at the feet of the man to whom it was addressed.

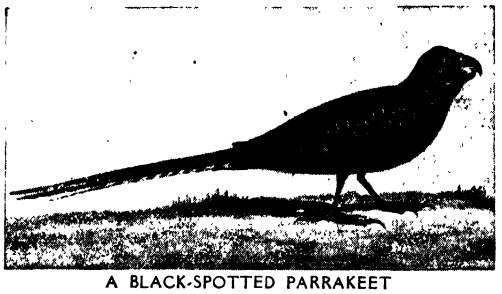
We may wonder if ever, before or since, any book has come to the world in such strange circumstances. The bones of La Pérouse were bleaching on a coral strand when the book was published, but when it appeared men felt that he had not died in vain. That, at least, was the conclusion they reached when they were forced at last to admit that he was dead. But that was many years after his valiant spirit had departed. His ships newly fitted and his book well written, he sailed away for Australia, to hoist the French flag upon its soil if he found it possible to do so. On the way he called at Manua, in the Samoan Islands, his first stop after a voyage of nearly four thousand miles, and here his first disaster overtook him. Of his two ships, one, the Astrolabe, was commanded by Captain de Langle, who, going ashore, met a fate similar to that of Captain Cook. With ten of his men he was murdered by natives. Sad at heart, but undeterred in purpose, La Pérouse set sail afresh, and on January 26, 1788, two and a half years after his departure from France, he sailed into Botany Bay, his entry completing one of the strangest pictures in the history of the British Empire. The English were just sailing away from the colony which La Pérouse was sailing in to seize for France!

Seventeen years before, Captain Cook had first landed on Australian soil, on the

QUAINT CREATURES THAT LA PÉROUSE MET



AN OPOSSUM OF VAN DIEMEN'S LAND, NOW CALLED TASMANIA



A BLACK-SPOTTED PARRAKEET



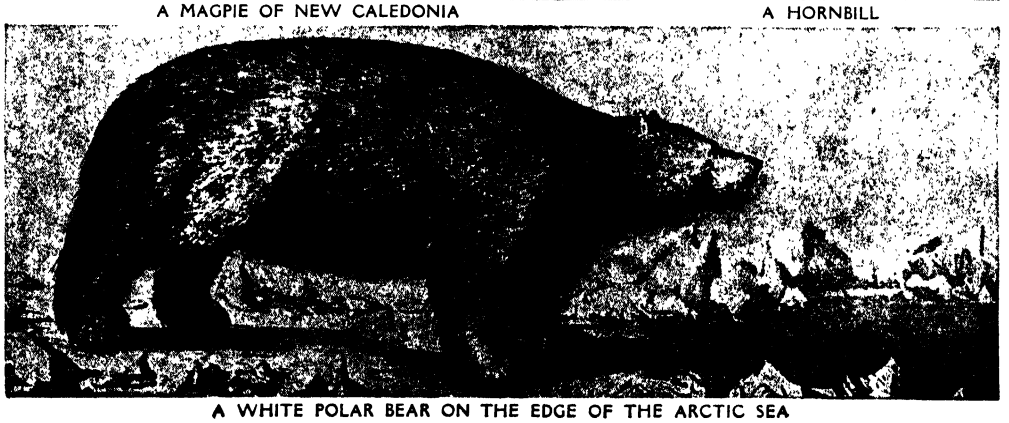
A BLACK SWAN OF CAPE DIEMEN



A MAGPIE OF NEW CALEDONIA

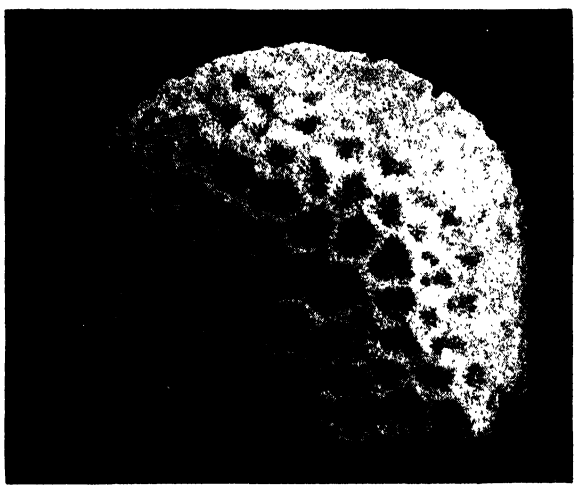


A HORNBILL



A WHITE POLAR BEAR ON THE EDGE OF THE ARCTIC SEA

very spot which the two French ships were approaching. It was unknown land, and Sir Joseph Banks, a fine-hearted naturalist who accompanied the expedition, fell in love with it because of its abundant vegetation, and called it Botany Bay. Should we ever have colonised Australia, one wonders, but for this ardent traveller? He preached the doctrine of empire extension when he reached home, and, finding other means unavailing, declared to the British Government that the new land was an ideal place to which to send *convicts*. The Government listened to that, and colonised a new continent—as a convict prison! That is the simple, almost unbelievable truth. Punishments of frightful severity for trifling offences were so numerous in England at that time that the nation could not keep all the suffering prisoners in English gaols. She used to send them as slaves to the thirteen colonies which afterwards grew into the United States, and the West Indies, too, were then peopled very largely from the gaols. The islands had been "found" by men from gaols, for Columbus, it will be remembered, filled his discovery ships with felons, and Sir Martin Frobisher, one of Queen Elizabeth's warrior sea-dogs, used to carry gaol-birds out with him to man the garrisons at the places he discovered. But when war between Great Britain and America broke out it was no longer possible to send convicts to the western continent, and the Motherland became overcrowded with prisoners.



THE BEAUTY OF A PIECE OF CORAL

And so it is that the idea of sending them half-way round the world, to Australia, was adopted. The splendid discoveries of Captain Cook were crowned with infamy; his new world was converted into a colossal torture chamber for the poor wretches sentenced to living death by our wicked laws. When La Pérouse sailed into Botany Bay to hoist the flag of France, he found the British flag already flying, but it was flying over a tiny company of English slaves. And as the two French ships moved into the harbour, they found the little colony in the act of sailing out! In fact, Captain Arthur Phillip, the first Governor of New South Wales, had already sailed away to what is now Port Jackson, there to found a colony with his 720 convicts and their 443 gaolers. La Pérouse was only two days late in arriving. Had he reached the bay two days earlier he might have seized the continent he had journeyed round the world to possess. It was the convicts on their miserable ships lying in Botany Bay who raised the cry of welcome as the French craft hove in sight.

The sailors were delighted to see the French explorer, and La Pérouse was given the most friendly reception. He stayed for some weeks, and then started again out to sea to look for the Promised Land. Before he left he wrote his last letter to the French Government, stating that he intended to explore until December, when he expected to arrive at the Isle of France. It is pleasant to think that, though La Pérouse set forth on his world-wide quest as an enemy of England, all his experiences of our countrymen were of the friendliest kind. He parted on the best of terms with the colonists, and English voices —though but the voices of convicts and their guards—were the last to cheer him on his way to his mysterious fate.

What happened after he left the settlers will never be known. We can but guess. We have to imagine that he sailed to the Santa Cruz Islands, in the Southern Pacific, and that both his ships were wrecked on the same deadly reef. Perhaps they were driven by a hurricane to destruction; or, keeping close company in unknown waters, they may have crashed in the dark on to the hidden reef. The one thing certain is that the brave explorer was never heard of again. He went out from the little harbour on the eastern coast of Australia, with all his men, and sailed to death. People in Europe waited anxiously for news of him, but no news came. A year passed, two years, three years, then the French Government

SCENES IN THE LAST JOURNEY OF LA PEROUSE



A HARBOUR IN KAMSCHATKA, IN WHICH LA PÉROUSE ANCHORED NOT LONG BEFORE HIS DISAPPEARANCE



THE HOME LIFE OF THE PEOPLE WHO RECEIVED LA PÉROUSE WITH REJOICING IN KAMSCHATKA



NATIVES DOING HONOUR TO A KING'S SON ON THE ISLAND OF TONGATABU, IN THE PACIFIC

sent out an expedition to find him. But what could be done in that silent southern ocean? A dozen fleets could be lost in it now if there were no wireless telegraphy to betray them; in those days scores of ships could have been there for years without discovery. The admiral who made the search did not know where to sail, and had to return without tidings, good or bad.



A CORAL ISLAND IN THE PACIFIC OCEAN

Years more passed, and the fate of the missing vessels still occupied the public mind. War between England and France was renewed, bitter and remorseless, war on sea and land, and in this war the sinking of the enemy's ships, no matter what the cost in life, was the certain way to win reward. But Sir Joseph Banks, the man who named Botany Bay—the man who laughed at the idea of ships driven by steam—believed in little wooden sailing ships and in the undaunted courage of La Pérouse. La Pérouse would not be beaten, he said. He must still be alive, and would some day reappear with glorious news for the world. Therefore Sir Joseph Banks determined that the weary little ships of La Pérouse should be safe upon their way back to civilisation, and he worried the British Government with entreaties until they promised that no English craft should harm either La Pérouse, or his ships, or his men. They were all, if living, to enjoy the same freedom from harm which the French, years before, had granted to Captain Cook. And Banks's goodness did not end there, for whenever a vessel was sailing to the great south sea, he paid the captains to seek for the lost ships and their crews, and, if possible, to bring them safely back to a friendly port. In every sea and in every port the search went on, year after year.

And at last, nearly forty years after La Pérouse had sailed out of Botany Bay, a ship came home to report that the captain had seen, in the possession of islanders of the Southern Pacific, a cross and some medals which must have belonged to La Pérouse. A French ship was sent out to bring in fresh tidings, but in vain. Then an English captain heard a story of two wrecked vessels in the New Hebrides, the islands Captain Cook had discovered. He was despatched to make a special investigation, and at last, in 1826, the truth was known. The captain found the wreckage of two ships, the Boussole and the Astrolabe. They lay shattered on a reef of the island of Vanikoro, in the Santa Cruz group. What had happened to their captains and their crews no man could say. Had they been

drowned when the ships struck, or had they succeeded in getting ashore, only to die of starvation? Whatever their fate, we may be sure that La Pérouse would meet his end with calm courage. That was the feeling of all Europe when the sad news crept across the land. France sent out a unique expedition, which, under Dumont d'Urville, visited the scene of the dismal tragedy, and there a monument was set up in honour of the leader and his comrades.

That was nearly ninety years ago. Yet of such small account is fame in these hurried days that a captain who in our time saw the wreckage of these ships on Santa Cruz is regarded as having solved the mystery of La Pérouse! That is as curious as if, in a hundred years, some relic of Captain Scott should be found in the Antarctic and announced as first news of the lost expedition. We who have lived through the story of Captain Scott are not likely ever to forget it, and we who have read the story of La Pérouse will not forget its lasting pathos or cease to be moved by it.

It is strange that men should forget such a wonderful meeting in the Pacific Ocean as the meeting of La Pérouse and the coral reef on which his fate was sealed. If we think of it, there have not been many things more dramatic in the history of the world. We see a string of pretty coral beads hanging round a little girl's neck and we think how beautiful it is, yet that pretty necklace has some sort of relation with the rock on which our hero foundered. It took millions and millions of years for Nature to build up a race of men who would traverse the seas and discover new lands, and at last there came our hero La Pérouse, a man skilful enough, daring enough, imaginative enough to forsake the ways by which all other ships had passed, seeking the unknown in perilous waters. And all through these ages, while the earth was rolling on its way through space, there was growing up, in the depths of that warm southern sea, an enormous fabric of coral reef.

Age after age these creatures of the sea were building up their marvellous coral fortresses. These curious little animals, only very slightly advanced beyond plant life, were extracting mineral properties from the foaming sea and transforming them into the tiny shell structures which we know as the homes of coral-builders. Through age after age these tiny structures, millions and millions of structures, joined together to form islands and barriers and reefs, raised from the bed of the shallow ocean and forced up to the surface by the moving tides.



A TRAVELLER IN KAMSCHATKA IN THE DAYS OF LA PEROUSE

And at last, after all the centuries, the men and the coral-builders met; the brave men sweeping the seas, seeking new lands for human habitation, foundered on the reef raised by the little creatures of the reef. The little coral-builders, almost the lowliest of all the creatures that have life, wrote a page of history which all the ages to come will read, for the story of La Pérouse and his brave men will not perish. In the long adventure of the men who have made the world known, there have been no truer heroes than these.

BRUCE ASTONISHES THE ABYSSINIANS



SHOOTING A CANDLE THROUGH A TABLE

BRUCE OF ABYSSINIA



"WHAT I told you about James is all true, with this difference only, that you may say, as the Queen of Sheba said of Solomon, the half has not been told you, for I never saw so fine a lad of his years." There is the testimonial of a friend to a father concerning a 14-year-old boy at Harrow. Passing strange that his name should be linked with the Queen of Sheba in this first reference to him, for this boy was to stride famous through the ages as the audacious traveller who revealed to us the land of this queen who travelled to the court of Solomon. He lived the brave life of an explorer in an ancient and romantic land. His name was James Bruce.

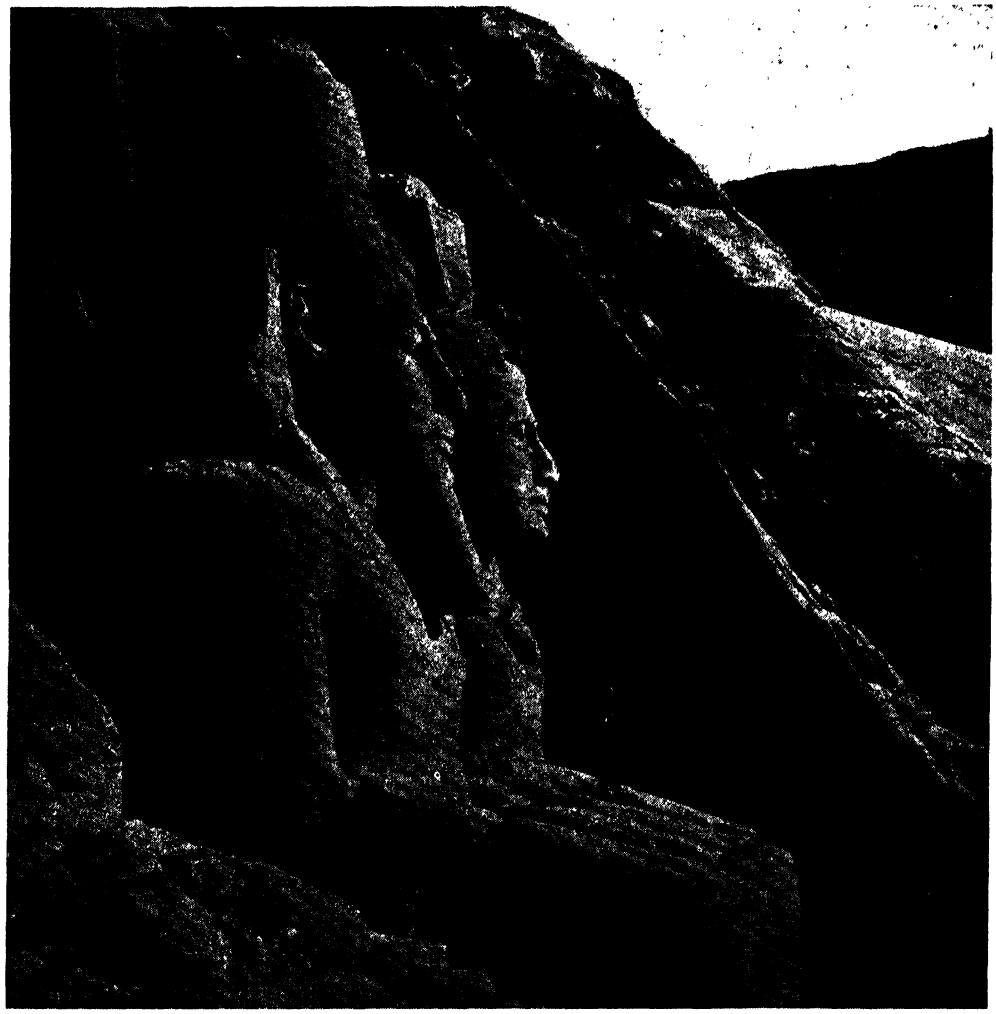
We call him Abyssinian Bruce, the greatest explorer and investigator of his age, whose life and adventures come down to us rich and rare as the classical records of ancient pioneers, romantic as the tales of the "Arabian Nights," and heroic as anything in human story. His travels were unrivalled in his day, his narration of them a great prose poem, a source of inspiration to all great travellers since. The very wonder of his experiences caused him to be disbelieved. He was contradicted by the learned, derided by the sceptical, parodied and lampooned by the vulgar and the ignorant. He passed to his grave unbelieved; wounded, but proud and defiant to the last.

He was born at Kinnaird, Stirlingshire, in December, 1730, but, losing his mother early in life, he was sent to England to school, and was at Harrow during the dreadful days of the Scottish rising in 1745.

Passing out of Harrow at 16, he continued his studies in languages and mathematics and drawing, and unconsciously laid a good foundation for what was to follow. He was to have been a preacher or a lawyer; but he grew into a great, gaunt boy, and ill-health drove him into the open air, where he developed a splendid manhood, six feet four inches in height, with great physical powers and endurance. But something had to be done in the way of a profession, so, as his romantic imagination had become fascinated by the thought of India, he came to London to obtain a post under the old East India Company. Instead of going to India he fell in love with a beautiful girl, and married her when he was 23. Her widowed mother was a wine merchant, and as the bridegroom had no profession she made him a partner in a business for which he had no taste. His young wife lived less than two years after the wedding, and to forget his grief he went abroad. Intending to look after the interests of the business there, he made himself master of Spanish and Portuguese.

His visit to Spain may be said to have fixed his destiny. The Moors had not ruled in Spain for eight centuries without leaving their impress on manners and customs, on all the architecture, literature, and traditional lore of the land. Precious stores of their learning lay in Spain unexplored, and Bruce mastered Arabic in order to ponder these relics of a culture which the Arabs alone preserved when barbarism was elsewhere rampant in Europe. Then he wandered on through Europe, arriving in Holland in time to see a battle. His father died while he was

abroad, and he inherited the estate, which was suddenly enriched by the discovery of coal. Throwing off the shackles of a distasteful business, he returned to Spain to continue his studies, but, learning that war between that country and ours was imminent, he hurried to England and laid before the authorities a plan by which we might win. Nothing came of the matter, but the result was important to Bruce, for his name became known to statesmen, and, to his delight, he was invited to go out to the coast of Barbary to act as consul, and at the same time to conduct explorations. Magnificent relics of former grandeur still existed in that land of bloodthirsty corsairs, to whom they were no more than palaces would be to pigs, and Bruce was enraptured with his opportunity. On the way out he studied art assiduously in Italy, and at 33 he reached the court of the Dey of Algiers.



ONE OF THE GIGANTIC RUINS BRUCE SAW IN EGYPT

This man was a bloodthirsty monster. How the Barbary rulers so long maintained their hold is one of the mysteries of the ages. Every court sent its envoys, who were imprisoned, robbed, insulted, dismissed, even killed. Bruce found the Dey busy strangling a man here, dismissing an ambassador there, hacking

and beating English sailors, and ordering that all ambassadors should be changed every two years, so that newcomers might increase the store of presents he was accustomed to receive. He sent a mangled sailor to Bruce to show " that he cared neither for the King of England nor his consul," and made ready to bastinado our vice-consul to death for some pretended fault. Free men were made slaves after being beaten and weighted down with chains.

The Ogre who Gave the Explorer Letters of Friendship

Such a monster it was who ruled Algiers, who *sent his love* to George III., whom England tolerated and treated as a sovereign! A worthy member he was of the royal caste that produces kaisers. It was long before Bruce could get away, but he did not let time hang heavily on his hands.

He worked hard day and night at Arabic and the Moorish language, and mastered Greek. Then, with amiable letters of recommendation from this extraordinary ogre Dey, he set out to explore Tunis and Tripoli, to examine and draw the old monuments of the past, measuring and sketching architecture which in other days had sheltered men such as Cato, and mixing with savages who paid no tribute because they lived on the flesh of lions, and so " ate up the enemies of the State." Ancient Rome was here crumbling into the desert, with barbarians roaming in ignorance.

How Bruce was Shipwrecked, Captured by Arabs, and Beaten

For a whole year Bruce lived that kind of life, in peril from robbers, of starvation or death from thirst in deserts, or of a loathsome end from pestilence at Bengazi, in Tunis. Tunis was supposed to be civilised, but we get an idea of its civilisation from the arrangements made to meet the plague.

People died so fast that there were none to produce crops, and the living were allowed by their ruler to hover round the dead. Bruce sought to fly by ship, but was wrecked, and had a desperate struggle for life in the water. When he did land he was beaten and wounded by Arabs who mistook him for a Turk. He was naked, his luggage was at the bottom of the sea, he was almost dead from fatigue, exposure, injury upon the rocks, and the wounds sustained from the Arabs.

But here, as always, Bruce preserved his presence of mind, made friends with his enemies, and finally escaped to Crete. Before his disaster he had fortunately sent his books and drawings oversea, and these he recovered later. He was no sooner safe than off he set for Palmyra, now in ruins, but which 1800 years ago was a superb city. He reached the scene, in spite of the wiles of robbers, and, ascending a height by a winding way, came into wonderland. " There opened before us," he says, " the most astonishing, stupendous sight that perhaps ever appeared to mortal eye. The whole plain below, which was very extensive, was covered so thick with magnificent buildings that one seemed to touch the other—all of fine proportions, all of agreeable forms.

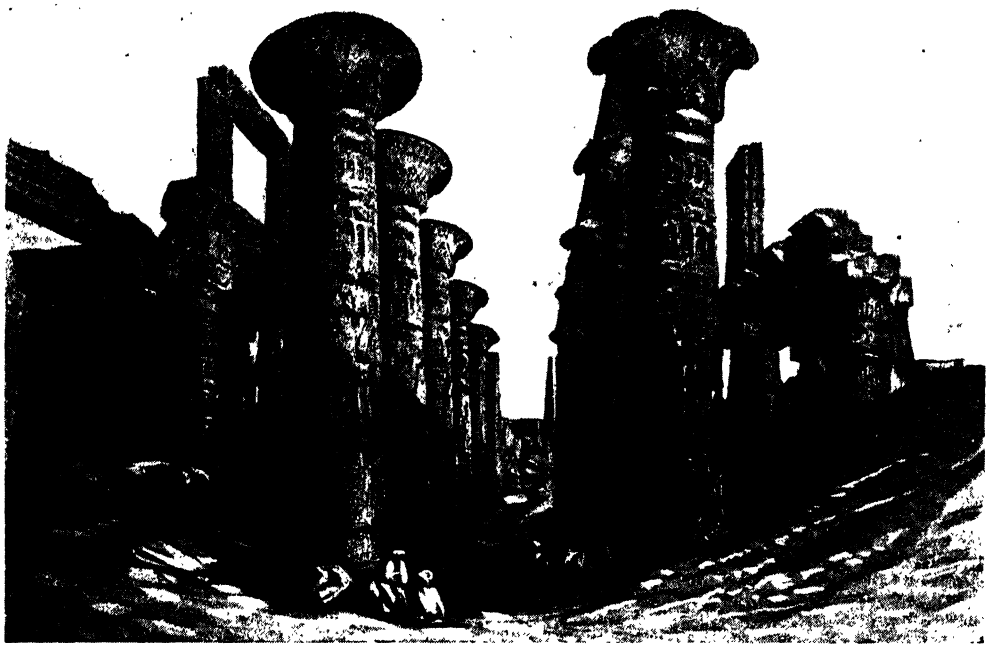
The Great Splendour that Lay in Ruin on the Banks of the Nile

At the end of it stood the Palace of the Sun, a building worthy to close so magnificent a scene." The palace was really the Temple of Baal, in which the Phoenicians worshipped long after Elijah slew the false prophets of Baal.

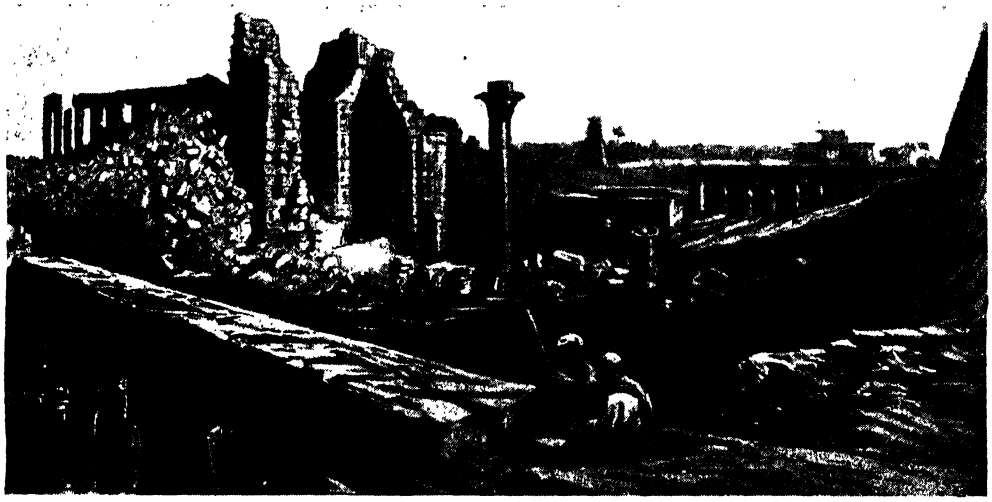
Next he travelled on to Baalbek, the City of Baal, and formerly the finest city in Syria, and, having sketched its incredible splendours—reduced now by pillage and earthquake to a miserable village—he moved to Sidon, where he found new scientific instruments to replace those he had lost.

Now, having added Asia to Europe and Africa, as he said, he determined to visit Egypt. He found, to his great joy, that the Greek patriarch in Cairo was the very man who had taught him Greek in Algiers, and, thanks to honest surgery, friendly intimacy with the patriarch, and other helpful means, he rose to high favour. Announcing his decision to go to Abyssinia to discover the source of the Nile, he received letters of recommendation all round. Before starting on his journey,

Bruce sailed up the Nile and sketched at Karnak and Luxor, an achievement which his critics absolutely disbelieved when he returned to England ; then he explored the Red Sea, the time of Sheba's great queen down to our own day the King of Abyssinia has always been regarded as a descendant of the son of whom she and Solomon were the parents. But they



THE SPLENDID RUINS ON THE BANKS OF THE NILE AS BRUCE SAW THEM



ANCIENT EGYPT AS IT LAY BURIED IN BRUCE'S DAY

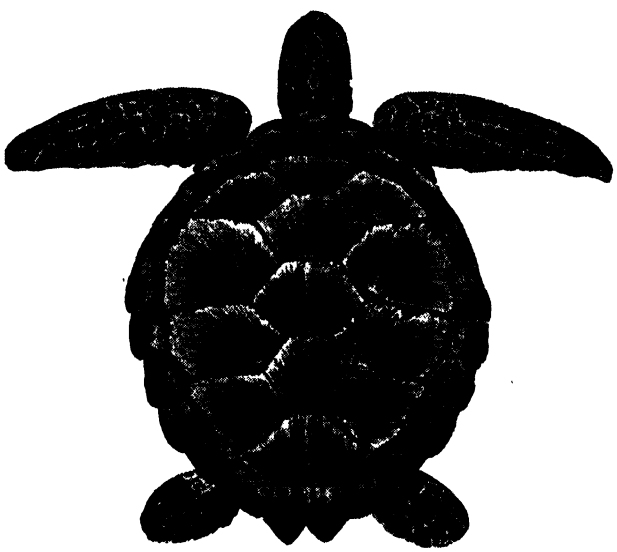
and finally landed at Massowa, the port of entry into Abyssinia.

When the Queen of Sheba returned from her visit to Solomon, she took back Solomon's religion to this land that we call now Abyssinia, and from ruled over a fearful land. In Bruce's time the real ruler was Ras Michael, a Prime Minister who had poisoned one king, assassinated another, and now governed in the name of a third. The land was divided among many re-

bellious potentates, and war was always in progress. Massowa, a den of African savages and degenerate Turks, murderers and thieves almost to a man, was in revolt, under a vile Turkish ruffian. Having quietly defied Turkey, he was now also defying his Abyssinian masters, who were engaged in internal war. There was one good-hearted man in the island, however, Achmet, the nephew of the renegade governor, and as Bruce cured him of an illness he showed noble gratitude in protecting him against the fierce ruler.

But during the three months of his detention Bruce had adventures enough to fill a very good volume. His presence of mind never deserted him; his courage, dignity, and aptitude never failed. He could march from the coral island port by causeway on to the mainland, but the treacherous ruler would not let him go. When at last his faithful friend, Achmet, did get him away, it was by a secret route of terrible difficulty.

" You will be apt to curse me when you are toiling and sweating in ascending Tarenta, the highest mountain in Abyssinia," said Achmet, " but you may then consider if the fatigue of your body is not overpaid by the absolute safety you will find." All other routes lay through territory in which the evil governor had influence, and could cause Bruce and his party to be murdered. Bruce did not curse Achmet, but blessed him for the honest creature that he was, but he had nothing to say in praise of the route. His destination was Gonda, then the Abyssinian capital, not a great journey in miles, but it took him 95 days to arrive. The way was mountainous; tribes were savage and treacherous; scientific instruments were heavy, and only the giant strength of Bruce and one courageous follower could get them up and down the peaks at which the donkeys failed. Five donkeys ran away one day when they were released from their burden. It was not altogether stupidity which caused them to stampede; they had probably smelt hyenas. As the animals descended the hill and began to browse, a number of these fearful animals attacked them, and had pulled one down before it could be rescued. They attacked the camp at night and killed and ate one of the best of the asses. The next morning the ravenous beasts attacked a donkey as it was being loaded, and actually bit off its tail. Lions, too, prowled about the camp, and the presence of crocodiles in the river was a source of constant terror.



A TORTOISE BRUCE MET ON HIS TRAVELS

On the route Bruce witnessed a sight which revolted him. A number of soldiers driving a cow were met by Bruce's own followers, and between them they threw down the cow, cut flesh from its living body, and ate it raw. That statement, when it reached the English public, brought more disgrace upon Bruce than any other that he made. Men who ate game as foul as carrion could not believe that natives ate raw flesh, though they knew that Esquimaux eat it. But the story was made much worse when Bruce reported that, after the cow had been wounded, the savages let the

animal get up, filled the wound with moist clay, fastened down the skin, and drove it on its way. It is terrible, but true, and we may just as well know that these things happened once upon a time.

The Abyssinian capital was reached at last, and Bruce sent forward his credentials. Bruce was received by the queen-mother, who sat with an open Bible before her, and questioned her guest about his religion and the holy places he had visited. He created a very favourable impression, more particularly because he was thoroughly skilled in medicine.

The Terrible Medicine Men in the Palace of the King

Smallpox was rife, and had reached the royal house. The queen-mother had a lovely daughter, Ozoro Esther, who was married to the blood-thirsty Prime Minister. One of her children was smitten, and Bruce, who was to treat the child, was asked to deal with the other people first.

As he was about to do so he was informed that the priests—one of whom was declared never to have eaten or drunk for twenty years—were about to try their arts. The fasting man wrote some mysterious characters in ink upon a plate, washed them off with water, and gave the fluid to the patient to drink, after which a sacred image was laid on the victim, and a cure was pronounced—a miracle! "Yes, it will be a miracle if he recovers," said Bruce. "The ink he has drunk may do him neither good nor harm, but the raw meat with which you have since filled him, to prove that he is cured, will be fatal."

The Frightful Things that were Done in those Days

And so it was. Bruce undertook the cure of the royal child, and succeeded. He opened the palace windows, and washed the child's body, and, to the intense joy of Ozoro Esther, the child recovered. From that moment the lovely Ozoro Esther was Bruce's sworn friend, and we may even suppose that she loved him.

His introduction to the Prime Minister was dramatically ghastly. He was taken to Ras Michael's camp, where the young king also was, and found Ras ordering the blinding of twelve of the chiefs he had conquered. It was done, and the men were turned out at nightfall, blinded as they were, to be devoured by hyænas. Bruce risked his life by saving two of the unhappy wretches, and was rewarded with much important information about their country. Ras Michael proved rather difficult to deal with at first, as we may imagine, and the young king was absolutely indifferent. They both regarded Bruce as a great man, but he had a very dangerous time, in spite of his influence and his medical skill, and success came to him at last in the strangest way.

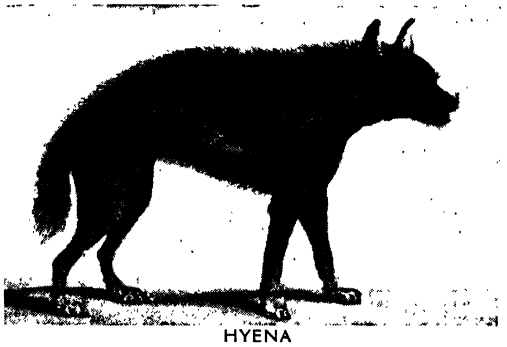
For certain services which he performed, Bruce was made an officer of the royal household, and found a rival in a boastful officer named Guebra Mascal. At their first supper party Guebra vaunted his skill in arms, and professed to be superior to Bruce. The Scot, never unready to take up a challenge, retorted: "The end of a candle in my gun would do more than an iron ball in yours."

The Shout of Wonder when Bruce Shot a Candle Through a Table

Guebra sprang at him with a dagger and wounded him on the head, but Bruce seized him by the throat and hurled him to the ground. It was death to draw a weapon in the royal palace, so Guebra fled, but was captured and put in irons.

Bruce went to the Ras and, telling what had happened, pleaded for the culprit. The matter was settled, but one day the languid young king said to his visitor: "Did you really mean what you said about making a candle in your gun do more than an iron ball in Guebra's gun?" Bruce assured him that he was serious; the king demanded a trial. Bruce sent for his gun and a candle. He cut off one end of the candle, loaded his gun, popped it into the barrel, and fired it through three stout shields placed one behind another. It penetrated them all, and came out with such violence on the other side that it smashed itself to fragments on the wall.

QUEER CREATURES JAMES BRUCE SAW



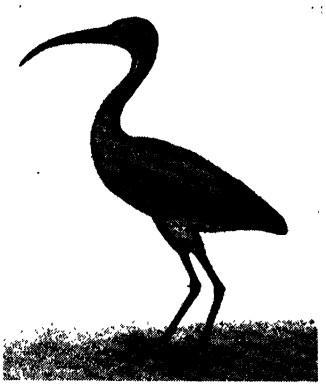
HYENA



RHINOCEROS



CRESTED EAGLE



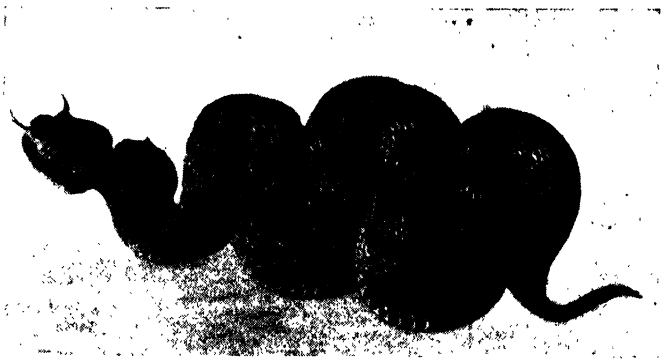
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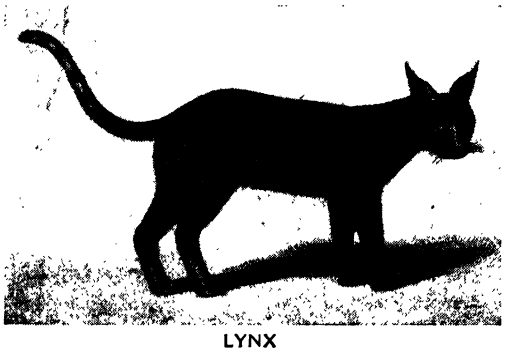
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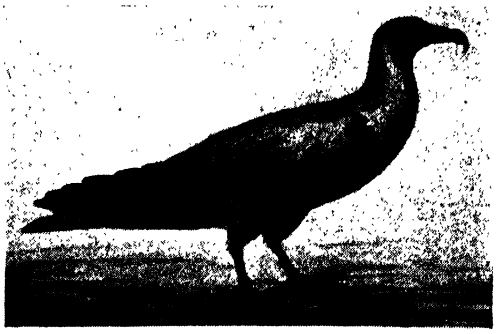
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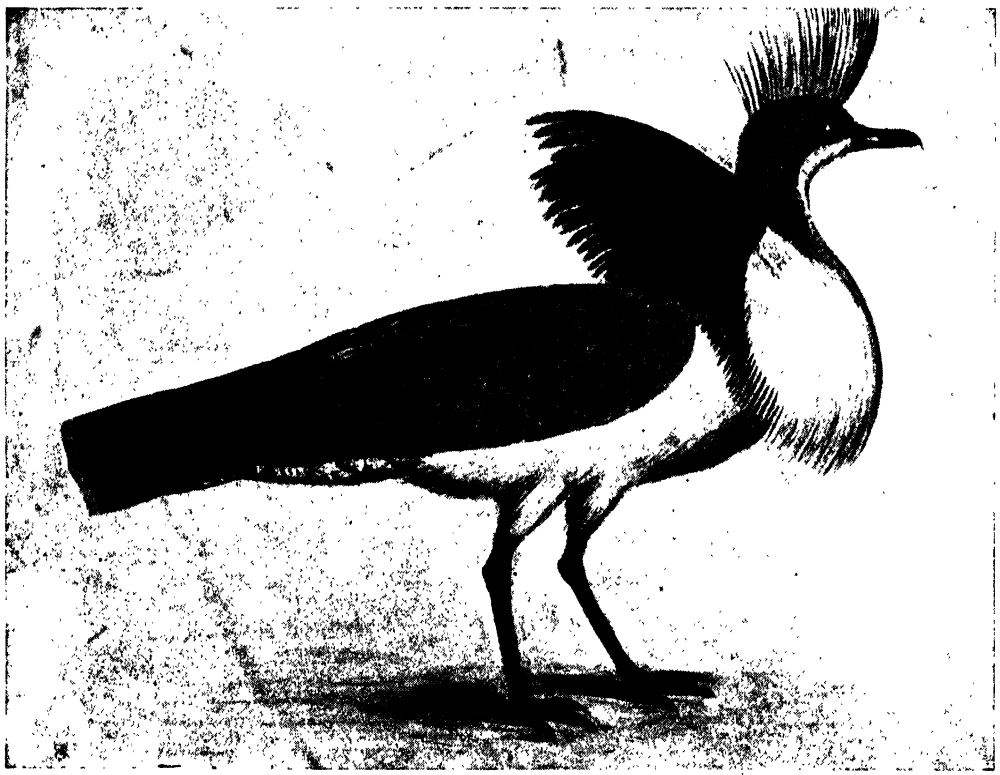


EGYPTIAN VULTURE

A great shout of wonder arose from the thousand people present. But Bruce was not yet satisfied. Placing the remaining end of the candle in the gun, he shot it through a table of sycamore wood. The Abyssinians thought it magic ; readers of Bruce's book thought it untrue ; but it is perfectly simple. The force with which a projectile is fired is the product of its weight and velocity combined, and a soft substance propelled with great speed may have greater effect than a hard body propelled with less speed. Bruce's candle could beat the iron ball of Guebra's gun, because the Scotman's weapon was so much better.

If we were to follow all his adventures it would mean telling the history of Abyssinia in Bruce's time. But we must hasten, and introduce Fasil, a successful rebel. When Fasil received Bruce in his own dominion he behaved rather badly to him, tried to put him off with stories of uncontrollable savages, and finally played a vile trick on him by sending him a savage horse which he declared to be quiet. The superb horsemanship of Bruce mastered the brute, however, to the great astonishment of everyone, and, to complete his triumph, Bruce, while riding, shot several birds on the wing, which was little less than a miracle to the onlookers.

These feats, more than anything else, made Fasil his friend, and then he sent him forth in earnest. He gave



A LADYLIKE BIRD JAMES BRUCE FOUND IN ABYSSINIA

him a passport, surely the strangest ever known. It was a horse. "Do not ride him ; simply drive him before you with saddle and reins ; you will need no other credentials," he said. And so it proved. At the sight of the horse the natives fled in terror for they recognised it as Fasil's, whom they mightily feared. Indeed, so scared were they that they ran away all along the route, hid themselves and their cattle, and actually brought the travellers into danger of starvation. At last Bruce put his own saddle on

the horse and rode it, and in the end he came to the source of the Blue Nile. It was a little stream " not four yards wide and not above four inches deep." He had found, he thought, the spot which had " baffled all the genius, industry, and inquiry of both ancients and moderns for the course of three thousand years," but he was wrong.



THE PICTURESQUE LIFE OF ABYSSINIA—AN OFFICIAL CEREMONY IN THE OPEN

A Jesuit missionary had stumbled on the very same spot in 1615, and apparently thought little of it. It was not this river the ancients had sought to explore, but the White Nile. In any event the Blue Nile is not the source of the true Nile, but that of its greatest tributary.

Still, right or wrong, this was Bruce's goal, most gallantly attained. We have only taken him out; we must leave him to find his way back, away from Abyssinia amid the deep regret of his friends, bearing precious gifts of Ethiopian literature; through perils in forests, amid savage beasts and savage men, through threat of death from thirst and starvation and assassination.

He returned to Europe at the age of forty-three, broken in health, but he rested and recruited, went back to Scotland to look after his estates, and there passed his days in entertaining and writing his great book, five portly volumes of adventures and observations as absorbing as a man ever had to describe. He married a second time, enjoyed his home life, scorned his malignant critics, and left posterity to justify him, as it has amply done. After all his manifold perils in the wilds, death came to him accidentally at home. He fell downstairs, injured his head, and died on April 27, 1794.

BALBOA BEGS A GRANDEE TO TAKE HIM TO SEA



YEARNING FOR A LIFE AT SEA, BALBOA APPEALED TO A RICH MAN OF CADIZ TO ENROL HIM IN HIS COMPANY OF ADVENTURERS

THE GREAT ADVENTURES OF BALBOA

It is said of Diogenes that he lived in a tub to escape the world, and we may say of Balboa that he crept out of a tub to find an ocean.

When we remember that he was actually the first known man of the Old World to march across the New World, and to hoist his sails on the mighty ocean which Drake was the first Englishman to see, we realise that we have a mighty and romantic figure before us. To get him into his tub and out of it again, we must have a glimpse of the wonderful conditions into which Balboa was born, or we shall not understand how it could happen that our man could possibly emerge from his hiding-place, poor but a soldier, despised but brilliant as a leader of adventure, a fugitive yet a supreme master of men and the hero of a thousand friendships.

He was born in Estremadura, Spain, about 1475. The Turks had been less than a quarter of a century in Constantinople, but in that time the cloistered scholars of the old capital had fled across Europe, carrying their knowledge and their precious documents with them to all the outer world. Printing was in its 35th year when Nunez de Balboa first opened his eyes. At that time Columbus was nearly forty, and no one knew of America. Not until Nunez was twelve did a navigator sail round the Cape of Good Hope to find the seaway to India.

The Spaniards were still fighting the Moors. They had been fighting them for eight centuries. Granada, the last of the invaders' strongholds in Spanish territory, was still in Moorish hands. It fell to the Spanish soldiers in 1492, and not till then could Columbus find support for his voyage of discovery. He sailed out into the unknown that very year, and after crossing the dreaded Atlantic he reached the islands which he called the West Indies. For he sailed out to the West to find the East, and he thought he had found the western shores of India. His later voyages revealed the mainland, and he heard whispers of a great ocean which he could not find. He explored the narrow isthmus dividing North America from South America, firmly believing that a strait led through it to this rumoured ocean—the Indian Ocean, with its riches in gems and spices and drugs, as he thought. His last disastrous voyage was in quest of that very ocean, but Nunez was the man destined to make the grand discovery.

Once Columbus had found the way to the land he believed to be India, many were eager to imitate and rival him. The bishops did not like Columbus, so that they gladly helped his rivals. They had told him that he was an evil man for declaring the earth to be round when they knew that it was flat, and, in spite of his new-found world, they would not forgive him. There were multitudes of men ready to venture in his track. Spain was a soldier nation; war had made her so, for, after the protracted war with the Moors, practically every man in the land was a warrior. With the discovery of America, they transferred to the sea the zeal and daring and chivalry which had marked their war on land.

Every wealthy grandee kept great state, and maintained a sort of military court, much as our old feudal barons did. Nunez de Balboa was descended from one of the fine old Spanish families, but war had made his home poor instead of rich, so he fought under the banners of other men instead of under his own. And when the chance came to transfer his energies from fighting the Moors to fighting the heathen, he crossed the sea with swelling heart and teeming brain, and resolved to make a name and a fortune with the best of them. Roderigo Bastides, of Seville, was his leader, and Balboa in his company made notable voyages of discovery

to the American mainland. Bastides, on sailing back from the mainland to Haiti, which Columbus had named Hispaniola, or Little Spain, fell into the clutches of the ruffian Bobadila. This was the miscreant who put Columbus in chains, stole his arms and gold and secret papers, and sent him, loaded with ignominy, to Spain. So choice a rascal could not resist the temptation to arrest Bastides, who had met with some success ; and him, too, he clapped into gaol. This left Balboa impoverished, so that, instead of conquering realms of gold beyond the main, he was glad for the time being to convert his sword into a ploughshare and take to farming in Hispaniola.

A certain touch of splendour remained always undimmed in the broken man's heart, and he thought much more of what he might attempt than of the things fate for the present bade him do. The result was that he sank into debt, and if he did not lose hope he certainly lost credit. There he was, mured up on his profitless farm, increasing the debts which in his careless earlier days he had already made. That he was in youth " a rash roysterer," as old Peter Martyr called him, there is not the least doubt ; but that he had a noble imagination and a splendid, chivalrous resolution is equally certain.



BALBOA AS AN OLD ARTIST PICTURED HIM

It was these best qualities that sent him into his tub. Some of the most extraordinary characters who ever lived were at this time pouring out of Spain into the supposed India, this America which Columbus thought to be the " earthly Paradise " of the ancients, and among them was Martin Fernandez Encisco, a Spanish lawyer who was persuaded to invest all his fortune in a ship and stores, and to sail to a land flowing with milk and honey.

After long delay, Encisco fitted out his ship and got his crew of adventurers together. Poor Balboa sought to go, but he was in debt, and the Spanish usurers would not hear of his departure. They kept watch upon the vessel, and got an armed ship to convoy Encisco's small craft out to sea, so that no erring debtor should escape. Poor Balboa was to return dejected to his farm, and Encisco put out to sea, a lawyer-captain, mightily proud of his expedition. The ship was well provisioned, and among the things on board were certain casks of foodstuffs brought down from Balboa's farm and laboriously rolled on to the ship. When the vessel had shaken off her armed convoy and was well out on the sea of great adventure, one of the casks seemed to come to life, and, if you please, out popped a great strapping fellow of fine, handsome features, a perfect picture of a cavalier trained to swordsmanship and every form of military exercise, yet with the very nicest manner in the world. It was the runaway debtor, Balboa. How angry the lawyer-skipper was !

To think that the fellow should outwit him was intolerable. "At the first uninhabited island I will put you ashore to starve and die!" he said. But he did nothing of the sort. There was so much grace and charm and hardihood in the well-bred swordsman that Encisco kept him alive and kept him gladly, and it was well for him that he did.

The Men who Waited for Death to Reduce Their Numbers

Now we come to one of the magic touches of this history. The little ship reached the harbour of Carthagena, where tidings were discovered of terrible losses suffered by battle and privation by the expedition. Encisco was supposed to be following up the expedition of Alonzo de Ojeda. Almost at the same time there sailed into the bay an armed brigantine bearing the survivors of that expedition. Ojeda had gone home to obtain succour, if possible, leaving these newcomers at the fort he had built at San Sebastian. They had had to wait fifty days for help, and if it were not forthcoming, then they were to set sail. They had waited the stipulated time, but when they came to sail they found that they were too many for the boats, so they had calmly waited until death by starvation or from the poisoned arrows of the Indians should have reduced them to the right total; then, killing for food the four mares they had preserved alive to terrify the natives, they had set sail. And the man who had sustained their courage and brought them here was none other than the terrible Francisco Pizzaro, destined a few years later to make his astonishing and dreadful conquest of Peru. Neither spear, arrow, starvation, storm, nor tempest harmed this amazing man, though hundreds perished around him.

The Search for the Land where Gold Flowed Down the Stream

One of the fine things Balboa had learned of his old leader, Bastides, was how to treat the natives. The nature of Balboa was as kind and chivalrous as it was fearless and enterprising, but his leader, Encisco, was a man of a different type. Making up the coast, he heard of mountains so rich in gold that the natives caught it in nets as it flowed down the streams, and of the graves of departed chiefs opulent with the same precious metal. So Encisco read the usual proclamation to the Indians. It was an astonishing document. It told the natives that God had made all mankind one family and appointed the Pope His regent on earth with power over all lands; that the Pope had given "these islands and continents" to the King and Queen of Spain, and that if the natives were good they should be spared to receive all manner of rights, but that if they did not bow to the new rule they and all their womenfolk and children would be put to death by fire and sword.

The Old Indian Chief who Thought His Land Belonged to Him

Now, the native chief was something of a philosopher, and, answering through the interpreter, he said: "The assertion that there is but one God, the sovereign of heaven and earth, seems good, and such must be the case. But as to the doctrine that the Pope is regent of the world in place of God, and that he has made a grant of our country to the King of Spain, the Pope must have been mad to give away what was not his, and the King must have been mad to ask at his hands what belongs to others. We are the lords of these lands, and need no other sovereign, and if this king of yours should come to take possession, we will cut off his head and put it on a pole, that being our method of dealing with our enemies." So saying, he pointed Encisco to a row of grisly heads impaled near by. Of course, there was a battle, and some of Encisco's men, shot by Indian arrows, died raving with torment. Nothing came of the fishing for gold with nets, nor of the search for the dead kings' golden tombs, but Balboa had here a good example of how not to deal with the natives.

Disaster followed the expedition, which was now joined by Pizzaro's

men, for they struck an unknown rock, and the treasure and stores of the ships were lost, and all Encisco's wealth disappeared before his eyes. They landed at San Sebastian, and found it a howling wilderness, infested with Indians enraged by Ojeda's rough treatment, and yielding only a starvation diet of roots and an occasional wild pig or two. Then out spoke Balboa, when death was staring them all in the face.

How Balboa Led Them from the Brink of Ruin to a Place of Safety

"Several years ago," he said, "when I sailed with De Bastides, we explored the whole gulf of Uraba, and I well remember an Indian village, situated on the western bank of a river which the Indians call the Darien. The country round is fertile and abundant, and is said to possess gold; and the natives, though a warlike race, never make use of poisoned weapons. I can guide you to the place, where we may get a supply of provisions and even found our colony."

So spake the man from the tub, and Encisco thankfully acted on his advice. They sailed to the land of promise, took possession, and founded a town they called Darien. They had barely settled down when Encisco proved so tyrannical that the expedition deposed him. Encisco was tried and condemned, and sent back to Spain, while Balboa was made head of the colony. A born governor, his first care was to extend his boundaries and get in touch with the Indians so as to secure food. He was induced to plan an attack on a powerful tribe, whose chief was a man named Careta.

The Village that was Surrounded in the Quiet of the Night

The chief received him hospitably, but declared that he could not furnish food, so in the middle of the night Balboa surrounded the village and made prisoners of Careta's wife and children. "What have I done," said the despairing chief, "that you should treat me thus cruelly? None of thy people came to my land who were not fed and sheltered and treated with loving kindness. When you came to my dwelling, did I meet you with a javelin in my hand? Did I not set meat and drink before you, and welcome you as a brother? Set me free, therefore, with my family and my people, and we will remain your friends. We will supply you with provisions, and reveal to you the riches of the land. Do you doubt my faith? Behold my daughter! I give her to thee as a pledge of friendship. Take her for your wife, and be assured of the fidelity of her family and her people."

The opening sentences of the appeal would have sufficed to turn the heart of Balboa, for there was true gold in him. Treachery was foreign to him; he had been driven to this stratagem in order to get food to keep his people alive. The chieftain's daughter was very beautiful, and he loved her. She was destined to bring him to death, but it was in part his fault. In the eyes of her people and her own she became his true wife, but the time arrived when, in spite of his love for her, he was prepared to set her aside and marry a great lady of Spain.

The Man who Knew of the Mighty Sea Beyond he Mountains

Balboa now entered into friendly relations with a neighbouring tribe, one of the sons of whose chief presented him with four hundred ounces of gold, over which the Spaniards quarrelled. The young savage, a splendid, loyal fellow, was grieved at the dispute. "Why should they quarrel for such a trifle?" he said to Balboa. Note what follows. "If this gold is indeed so precious in your eyes that for it alone you abandon your homes, invade the peaceful lands of others, and expose yourselves to such sufferings and perils, I will tell you of a region where you may gratify your wishes to the utmost. Behold those lofty mountains," he went on, pointing to the south. "*Beyond these lies a mighty sea,* which may be discerned from their summit. All the streams which flow down the southern side of those mountains into that sea abound in gold; and the kings who reign upon its borders eat

and drink out of gold vessels. Gold, in fact, is as plentiful and common among those people of the south as iron is among you Spaniards." He told of the difficulties in the way, but volunteered to accompany Balboa.

The mention of this mysterious sea impressed Balboa even more than the story of gold. He baptised the chief and his sons into the Church; he sent home a great store of gold as a present to the king, with a tale of the new unknown sea and the treasures associated with it, and asked that a thousand men might be sent to him, for that was the number the young Indian said would be necessary for the task of winning a way to the fabled ocean. While he was awaiting a reply Nunez met with many adventures and underwent terrible privations. Once his life was saved by a beautiful Indian girl, who warned him of a great conspiracy against him by Indians whom some of his followers had ill-used. Worst of all, tidings came to him from Spain that Encisco had reached the Court and told such a tale against him that he was to be deposed and punished. Balboa therefore decided to find his ocean and so have a great prize to lay in the lap of the king when his time for sentence should come. Needing a thousand men, he set out with 190 to find the Pacific, to cross a continent in its most



BALBOA LOOKS OUT UPON THE GREATEST SCENE OF HIS LIFE—THE DISCOVERY OF THE PACIFIC OCEAN

pestilent part, and to win an empire with a beggarly handful of desperadoes.

It was a terrible journey, through barren lands, swamps, and tropical, fever-haunted jungle, through hostile country where terrible savages had to be fought and overcome. By the time the foot of the last mountain height was reached only 67 of the 190 men were able to put forth the final effort. The leader was the sustaining spirit and inspiration of the party, and carried them through everything.

Balboa Climbs to the Height and Sees the Great Sight of His Life

At daybreak on the morning of September 26, 1513, the weary, wayworn adventurers struggled up the mountain-side, and saw before them a bare peak out-topping all. Balboa bade his men remain where they were. Then, with a palpitating heart, he walked alone up the crowning height. He looked down the southern side of the mountains they had climbed, and saw before him rolling forests and green savannahs far outspread; and there, in the distance, rolled the great Pacific Ocean! Balboa sank upon his knees and poured out thanks to God, then he summoned his men, showed them the new ocean, and addressed them in a noble speech. They sang a psalm of thanksgiving, and wondered what mystery lay behind the marvellous waters, whether it were the Indian Ocean, with all its riches, or some narrow, unknown sea girt about with strange countries and strange peoples.

The Starving Men who Gave the Pacific Ocean to the King

It was the sublimest moment of Balboa's life

when with eagle eyes
He stared at the Pacific—and all his men
Looked at each other with a wild surmise—
Silent upon a peak in Darien.

In these splendid lines Keats mistakenly attributes the feat to stout Cortes, but here we have the actual man and his achievement. He knew he had done a great thing. With extreme solemnity he took possession of the sea, its islands and surrounding lands, in the names of his sovereigns; and a lawyer who was of the company wrote down the declaration, and the sixty-seven starving men who were with him all signed it. They cut down a tree and fashioned it as a cross, and set it up with a cairn of stones, and cut the names of the king and queen upon the trees near by. Then a party was sent to find a way to the coast, and one, Alonzo Martin, finding two empty canoes on the shore, entered one of them and proclaimed himself the first Christian to float upon this new South Sea, as indeed he was, and Blas de Etienza, his companion, was the second. Balboa, on reaching the shore, came to a bay and named it St. Michael's Bay, after the saint whose anniversary it was. Then, with his country's flag unfurled, with his shield on his shoulder and his drawn sword in his hand, he plunged into the sea, and in tones of thunder challenged the whole world in arms to wrest the ocean from his master.

The Great Gift of Gold that Softened the King's Heart

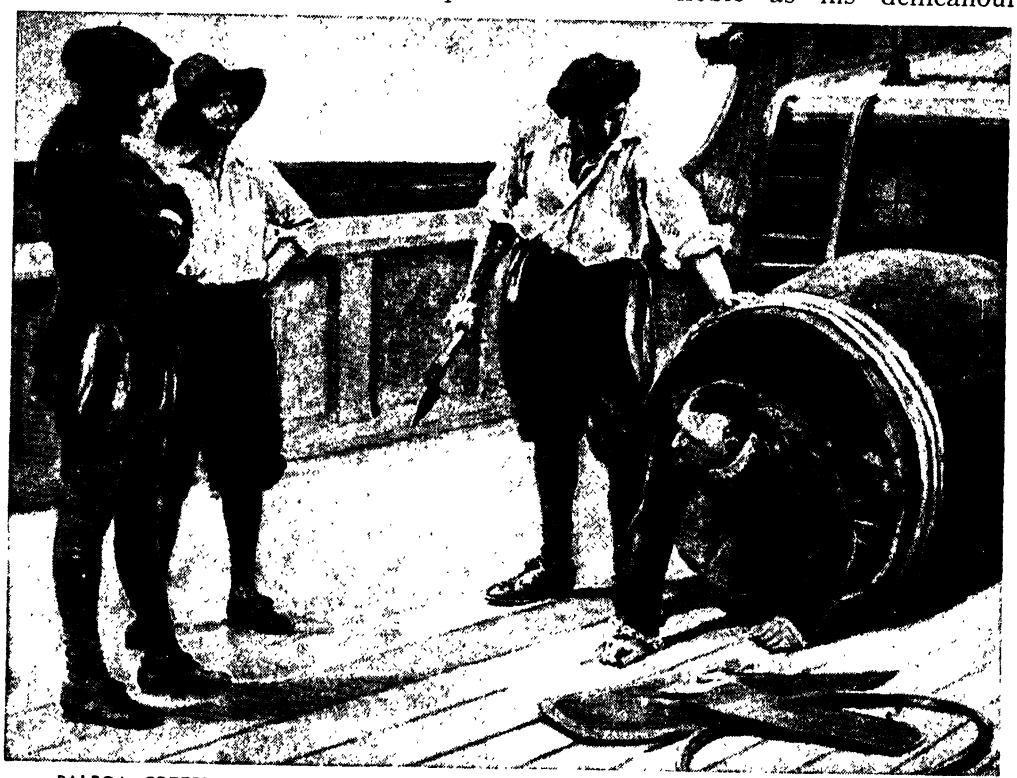
We must hurry through the last scenes, the getting of gold, the fights with Nature in her wildest guise, and the even greater menace of political events. The dreaded sentence of the Court fell before the tidings of Balboa could reach Spain. Pedrarias Davila was appointed to succeed as Governor of Darien, and he arrived even while the second message of Balboa, telling of the finding of the Pacific Ocean, was speeding eastward to Madrid. The explorer sent to the king with his despatch a huge gift of gold and pearls, and the greedy heart of the king was touched. He sent forth new letters appointing Balboa Admiral of the new South Sea, and investing him with powers making him the equal of Davila. The letter of Balboa made all Spain ring, and it was said that now the Spaniards would have pearls more precious that Cleopatra's, " and will not need hereafter to mine and dig into the earth nor cut asunder mountains for gold, but will find it plentifully on the upper crusts of the earth, or in the sands of rivers dried up by the heat of summer." When Davila, with a monstrous train of grandees, arrived in quest of the man who had wrought

this wonder, and secured such wealth and dominion, he found him, not a blustering warrior, maintaining barbaric state, but a plain, unassuming man, clad in a dress of common cotton and hempen sandals, quietly instructing Indians in the art of thatching the hut in which he lived, with nothing to eat but roots and fruits and maize and native bread. Such were the conditions in which the discoverer of the Pacific Ocean lived.

Davila was as false as he was cruel. He gained from the frank and open-hearted Balboa all the details of his expedition, the route, the riches, and then he made him prisoner. Before anything worse could happen, the new decree of the king arrived, and the upshot of many schemes was that Davila offered Balboa his daughter in marriage. She was in Spain, and was sent for. Before she could arrive, Balboa planned to navigate the Pacific. By incredible labour he cut down trees, and built his little ships, and away he went, the first white man who ever sailed that boundless sea.

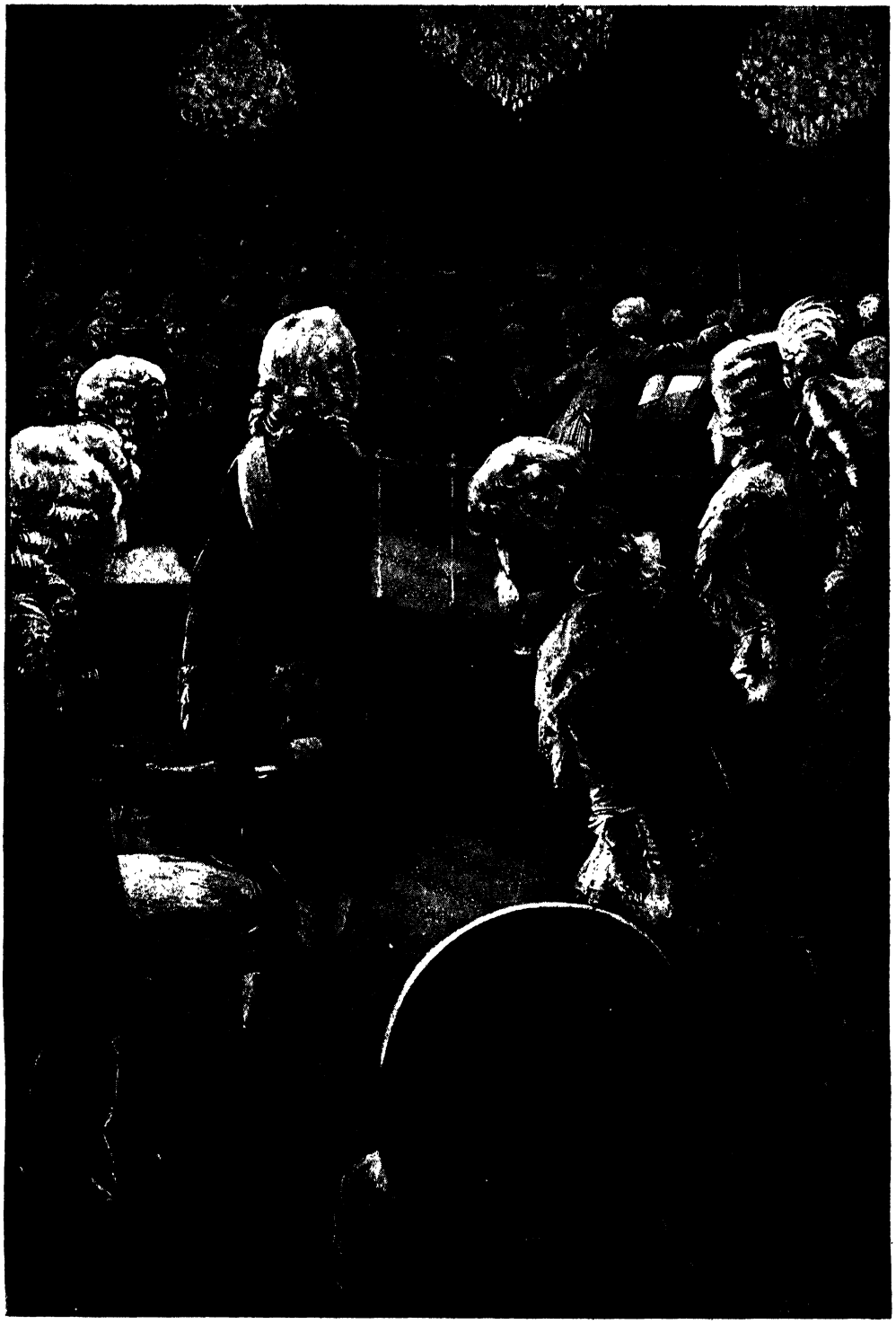
But new troubles came. A treacherous follower stirred up Davila's anger against Balboa, who was lured back across the isthmus, and there, at a mock trial, was sentenced to death on the charge of making himself ruler of new domains and throwing off his allegiance to the King of Spain. It was a frightful miscarriage of justice, but Balboa was sent to the scaffold and beheaded. His end was as dignified and noble as his demeanour throughout the trial; but the enmity of his persecutor followed him even after death, for Davila caused his head to be placed on a pole in the public square.

So passed, in his forty-second year, in the full splendour of his intellectual and physical vigour, this strange, tragic, and heroic soul who set out, hidden in a barrel, to one of the grandest discoveries in the history of the world, and passed from that discovery to an ignominious tomb.



BALBOA CREEPS OUT OF HIS TUB—HOW HE AVOIDED HIS CREDITORS AND JOINED AN EXPEDITION AT SEA

"HE SHALL REIGN FOR EVER & EVER & EVER"



The glorious music of Handel's "Messiah" came upon the world like a triumph song from heaven, and King George the Second, captured by the transcendent strains, leapt to his feet and stood while the Hallelujah Chorus was played. Ever since then it has been the custom for the audience to stand while listening to this triumphant chorus.

HANDEL, KING OF MUSIC

WHEN a poor barber manages to rise to the position of royal surgeon to the Duke of Saxony he naturally regards himself as a person of importance, and the worthy Mr. George Handel, of the quaint, old-fashioned town of Halle, was undoubtedly a person of importance. He was the friend and physician of several dukes in Germany ; and when a baby boy was born to him on February 23, 1685, he naturally planned a fine career for his son.

"We must make him a great student of books," he said to his wife, "and I will send him to the University to study law, and before I die he shall be a royal councillor."

But George Frederick Handel, as the little boy was called, took not the slightest interest in the study of books. One day his father entered the nursery to find out the cause of the noise continually going on there. The place was full of drums and trumpets and musical toys. Not a book was to be seen. Every penny that had been given to George Frederick had been spent in buying musical instruments.

"Music ! What is the good of music ? Does music help a man on in life?" said the royal surgeon angrily to his wife. "You ought to know better than to encourage the child to waste his time on this rubbish. He shall go to school at once and learn something useful."

And, sweeping up the drums and trumpets, Mr. Handel threw them on the fire and waited to see that they were all properly burnt. The next day George Frederick, who was hardly more than five years old, was marched out to school. But it was a very miserable little boy who returned home that evening. Now that his musical instruments were gone, he had lost his interest in everything. He obeyed his father and laboured at his lessons, but his mother grieved at the change that had come over him. As the weeks wore on he became more listless, and the face that used to be so bright and animated grew pale and sorrowful. At last his mother could bear it no longer, and when they were alone together she asked her little boy what was the matter.

"My music ! I cannot live without my music ! " he sobbed, as his mother took him in her arms.

Mrs. Handel did not know what to do, and, after vainly trying to comfort her little boy, she called upon his Aunt Anna, who loved him dearly. "Will your husband be at home this afternoon ? " said Aunt Anna.

"No," said the mother, "he is going to see one of the young dukes." Aunt Anna smiled, and in the afternoon a cart drew up at the house of the royal surgeon, and a large box was taken out of the cart and carried to a garret at the top of the house. Mr. Handel was tired when he came home, and after a good meal he fell asleep. Taking her boy by his hand, his mother led him up to the garret, and it was quite a long time before he went to bed. The next morning all the colour and brightness were back in the child's face.

"There ! What did I tell you ? " said Mr. Handel to his wife, when George Frederick had gone off skipping to school. "In less than a fortnight the child has forgotten all about those foolish toys of his, and begun to take a pleasure in his lessons. I shall see him a royal councillor yet before I die."

The mother gazed at her husband curiously, and smiled. In the afternoon Aunt Anna looked in. "How did the darling take it ? " she whispered to Mrs. Handel. "Went mad with joy," said the mother, "and promised me that when he was at school he would try to be as good a scholar as his father wished." In the garret Aunt Anna had smuggled a clavichord, a kind of old-fashioned piano. In the stillness of the night, while the rest of the household was lapped in sleep, the tiny boy would creep into the garret,

often in his nightdress, and practise to his heart's content. No better instrument for his midnight concerts could have been devised than the clavichord, which has a sweet, soft, muffled tone that is barely audible a few yards away.

When Handel was seven years old, his father went on a journey to a town some forty miles away. He wanted to visit a relative who had a position in the household of Duke Johann Adolf, and also to see the young duke himself. Boy-like, little George Frederick wished to go, too, and as his father would not take him in the carriage he ran behind it, and did not show himself until he was too far away from Halle to be sent back alone. So his father was obliged to take him to Court with him, and the boy's genius for music won the hearts of all the musicians in the duke's orchestra. On Sunday, when the service was over and the organist had gone, the boy climbed into his seat and began to play the organ.

The young duke, who was a great lover of music, chanced to hear him playing, and was captured by his genius. "The child has a genius for music," he said to old Handel. "You must have him taught."

THE BOY WHO PLEASED THE KING AND QUEEN AND ASTONISHED THE PROFESSORS

George's father at first would not give way, but the duke would not let him go until he promised to let the boy study music under a good master. "Well," said Handel at last, grudgingly, "if I find his music does not interfere with his school lessons, I will let him go on with it."

So little Handel was allowed to go for music lessons to one of the organists of his native town. Under him the boy worked with amazing energy. Every week he composed a church cantata, and submitted it to his master. Some trios that he wrote while he was a boy of ten years still exist, and they are the best possible proof of his astounding cleverness. As the work of a boy ten years old, they stand alone in the history of music; even Mozart wrote nothing at that age which can be compared with them for freshness of melody and maturity of composition. Three years of hard work gave Handel all the learning his master could impart, and the boy looked around for more worlds to conquer.

Berlin was at that time the goal of every ambitious German musician, and in 1696 Handel induced his father to take him there. His visit was a triumph. The King and Queen of Prussia fell in love with the wonderful boy, and their courtiers vied with each other in singing the praises of the child whose playing upon harpsichord and organ put to shame the grey-haired professors of music. The king offered to send Handel to complete his musical education in Italy, and give him an appointment at Court on his return. But the rough old surgeon of Halle was as obstinate as ever. He still dreamed of legal honours for the child of his old age, and could not bring himself to part with his son even for a few years. So they returned to Halle together, and the next year the old surgeon died, and Handel and his two little sisters were left dependent on their mother.

HANDEL MAKES UP HIS MIND AT LAST AND BECOMES A "SECOND FIDDLE"

Happily, the mother was a capable woman, and from her training Handel received that strength of character which afterwards distinguished him. Following out his dead father' wishes, he kept to his lessons, and in February, 1702, he passed into the University of Halle as a student of law. But the musical work which he did in his spare time was already beginning to make him famous, and while studying law he received an appointment as organist at a church in Halle, where he formed a choir of University students, for whom he wrote many pieces. Then, one fine summer morning, after he had been studying law for some years, Handel came to the conclusion that he would be either a musician or nothing; and as there was no field for him in his little native town he went to Hamburg, the most important musical centre in Germany, where he obtained a position as "second fiddle" in the Opera House.

By sheer ability he became conductor of the orchestra in the following year, and on January 8, 1705, he produced an opera of his own, which raised him, at twenty, into the front rank of living composers.

HANDEL GOES TO COURT AT FLORENCE WITH "ROSES, ROSES ALL THE WAY"

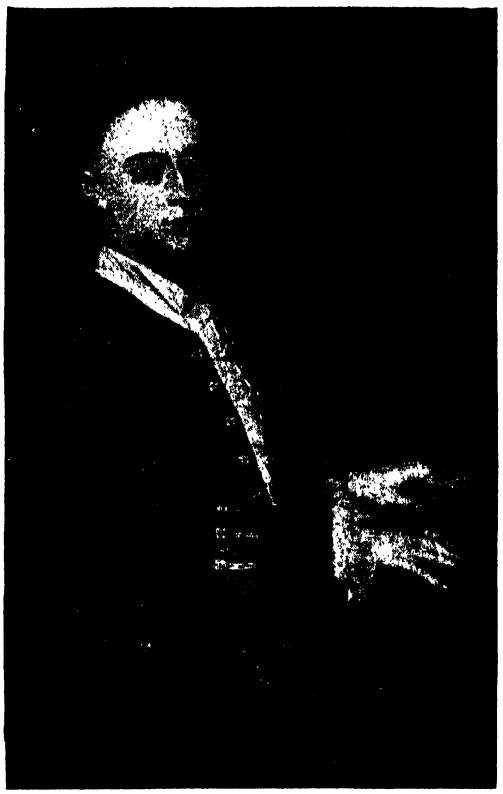
A second opera, the music of which has perished, was equally successful, and in the summer of 1706 Handel had saved enough money to do for himself what the King of Prussia had wanted to do for him—he was able to go to Italy and complete his musical studies. One of the sons of the Grand Duke of Tuscany passed through Hamburg, and was struck with admiration by Handel's genius, and he invited him to go with him to Florence, where the Grand Duke held his Court.

He went, and in Italy the handsome young Saxon had a splendid time. Cardinals

wrote plays for him to set to music; the best Italian composers were proud of his friendship; and the gondoliers of Venice went wild with excitement when one of his new operas was performed in their city. It was roses, roses all the way for the " dear Saxon," as Handel was called. Returning to Germany fresh from this Italian triumph, the young composer received a Court appointment in Hanover, and in 1710 he paid his first visit to London, where he received a commission to compose an opera for the Queen's Theatre, in the



HANDEL THE BOY



HANDEL THE MAN

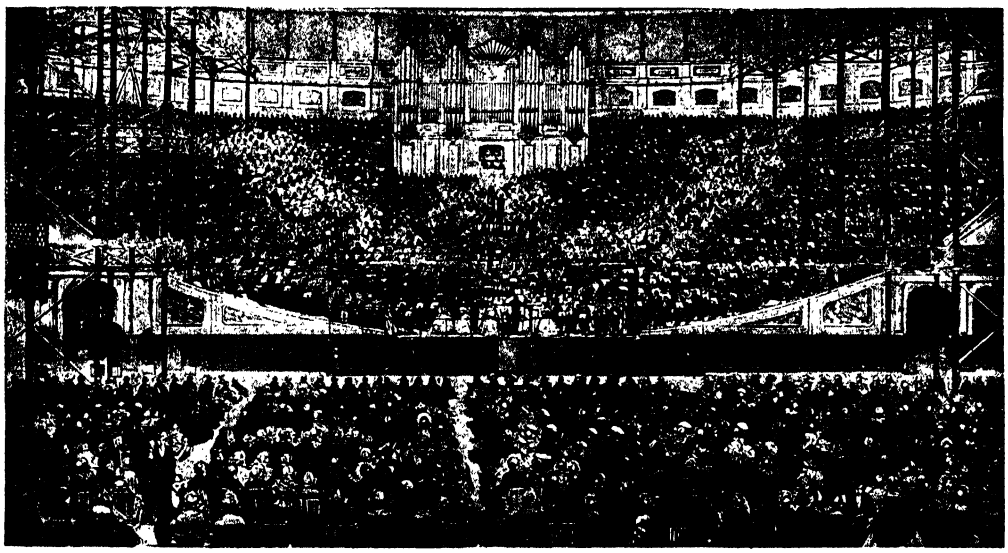
Haymarket. It was so successful that the famous English essayist Addison, having written the words of an English opera which had failed, tried to darken Handel's fame by ridiculing him in a paper in the " Spectator."

It was a pitiful thing. But ridicule cannot damage a fine work of genius, and Handel's opera, " Rinaldo," was performed in London for many years. So pleased was Handel with his success among the English people that at last he settled in London, in a house in Brook Street, which remained his home for the rest of his life. He was made chief musical director of the King's Theatre, in Covent Garden, and a famous Italian musician, Bononcini, was associated with him. The two men each wrote an opera, which was duly produced, and long before the end of the season the lovers of music in London were divided into two parties—the Handelians and the Bononcinists. For some time Handel's fame was obscured by that of his rival. His own work was excellent, but he could find no singer to do it justice. He might then have left England, and lost his title to enduring renown, had it not been for the ingenuity of one of his assistants. Handel sent him to the Continent to bring back the finest woman singer he could find in Italy. At the first nothing could induce the lady to come to London, but the impassioned Handelian made a proposal of marriage to her, and brought her in triumph to Covent Garden as his wife. But she was still very wilful, and refused to sing the song Handel had written for her.

You will either sing that song or I will throw you out of the window " exclaimed Handel, furiously; and the good lady sang

it and became the darling of the Londoners. By showing how Handel's music should be sung, she put an end to the war between the Handelians and the Bononcinists. Handel was seen to be without a peer.

The English people at that time, however, had no real taste for opera. There was only a fashion for it, and the fashion soon passed; and when Handel took over an opera house of his own he had a very bitter and wearing struggle, which ended, in spite of all his efforts, in bankruptcy and disaster. He tried to save himself from ruin by turning out new operas at the rate of one a month, while engaging in the work of training and rehearsing his singers. But, in spite of the fact that he was a very strong man he could not stand the strain



THE GREAT SCENE AT THE FIRST HANDEL FESTIVAL AT THE CRYSTAL PALACE

he imposed upon himself. First came a nervous breakdown, and then, as he went on with his work, a stroke of paralysis crippled his right hand and so injured his brain that he was reduced to a state of utter helplessness. This happened in 1737, when Handel was fifty-two. He lost the savings of a lifetime, amounting to £10,000, and still had not sufficient money to pay his creditors.

Everybody thought that his career was over, and there seemed an end, indeed, of the great Handel. But his career was only beginning. In this hour of defeat and ruin, with his mind wavering between madness and sanity, Handel rose at last to the full height of his genius. Throwing aside the art of the opera that he had brought from Italy, he invented a new form in music—the oratorio—in which he humbly tried to interpret, in harmonious melodies, the fine, deep spirit of the English people, instead of endeavouring to impose upon them a foreign form of art for which they were not ready. He found that in the season of Lent the English people preferred to listen to religious music rather than go to theatres, and, to keep his singers employed, he began by writing sacred oratorios for performance during Lent.

It may be said that the English nation largely inspired him to enter the noble field of art in which his greatest work was done, for, by thronging in greater numbers to his oratorios than to his operas, his audiences directed him into his true path. But it was the people of Dublin who gave Handel the means of recovering himself and devoting all his energies to religious music. In 1741 the Duke of Devonshire invited him to Dublin Castle. Handel arrived in November, with the "Messiah," which he had begun on August 22 and finished on September 14. He gathered a company of singers together, and, with the help of two Dublin church choirs, the "Messiah" was performed for the first time.

The touching loveliness of its melodies and the sublime grandeur of its great choruses worked deeply into the hearts of the Irish people. Handel, always a very generous man, received £400 from this performance of his great masterpiece, but he gave the money for the relief of prisoners in the Dublin gaols and for the support of some hospitals in the city. In London the

" Messiah " became associated with the Foundling Hospital, in which lost children of the streets were brought up and educated. Every year Handel gave at least one performance of his famous oratorio in the Foundling Chapel, and each performance brought in £500, which the composer gave to the foundlings. To these little ones, also, he left, on his death, the right of performing the oratorio. At his own expense he built a new organ in their chapel, and attracted crowds of music-lovers to this noble charity by playing on the organ himself.

Handel was a very good man—with many of the faults of good men ! His face was a true indication of his character. It was bright and handsome in the golden days of his youth, but it became full of a stern, resolute strength when his soul was tried in the fire of disaster and crippling disease. And it must be admitted that he had a fiery and violent temper. He was said to have the worst temper of any man in England; but at the bottom of his heart he was the kindest of men, and when he smiled the sternness of his face vanished and a winning expression appeared. It was like warm sunshine breaking through a grey, cloudy sky.

He never lost his sense of fun. But his jokes were very hard to follow, for it was necessary to know English, Italian, French, and German to understand them, as he used a mixture of all these languages when he was in any way moved by a funny thought, a flow of feeling, or an outburst of passion. If he was not the greatest composer of music who ever lived, we may certainly say that he was the greatest man who ever wrote music. It is his own personality that inspires his finest works. Sometimes it flashes out in strange and overwhelming power, as in the great choruses of " Israel in Egypt." These choruses are Handel at his highest, and there is nothing to equal them in Bach, Beethoven, or Wagner. The infinite tenderness of his nature is revealed in such melodies as " He shall feed His flock." Never till Jesus Christ was born had the conception of a God of Pity dawned upon the world, and never till Handel wrote the " Messiah " had Music clothed with her conquering magic the figure of the Divine Comforter, whose message is to them that labour and are heavy laden.



HANDEL PLAYING TO HIS FRIENDS

The end of the life of this great man, who deepened and enlarged the feelings of the English people, was sad and noble. Recurring attacks of palsy crippled him, and while he was bravely fighting against this terrible disease his sight gave way. Like Milton, whose poetry he had set, to

incomparable music, he ended his days in darkness, but, like Milton, he submitted to his fate with sublime patience, and made up his mind, in Milton's words, to

> Argue not
> Against Heaven's hand or will, nor bate a jot
> Of heart or hope ; but still bear up, and steer
> Right onward.

With the help of a friend, he continued his oratorio concerts, playing the organ in the interludes of the performances. Once, when his famous work "Samson" was being given, the tenor sang with great feeling the air in which the Jewish leader laments his loss of sight. The lines in which he sings of his calamity run—

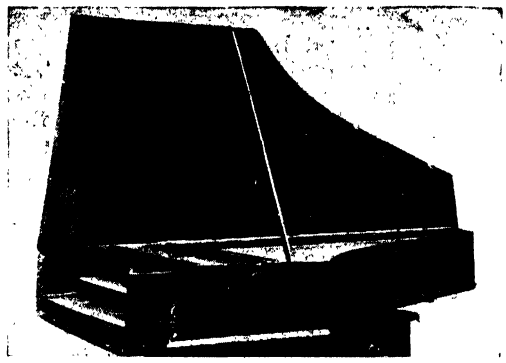
> Total eclipse ! No sun, no moon !
> All dark amid the blaze of noon

and the spectacle of the blind composer seated by the organ, listening to the strains in which he seemed by some prophetic touch to have bewailed his coming affliction, so wrought upon the audience that many were moved to tears.

But, dark as was the path along which Handel groped through his old age, it was smoothed for him by the universal recognition of his genius and the enormous popularity of his oratorios. He lived very quietly, absorbed in music and surrounded by a few old friends. When his end was approaching he gave one more performance of the "Messiah," and then, seized with faintness, he was carried to his bed, and died at eight o'clock on the morning of April 14, in the year 1759.

His body rests in the Poets' Corner in Westminster Abbey, and it is fitting that he should sleep there, for he was a poet, and a great poet, though he used sounds instead of words to express his high feelings and glorious ideas. In powers of imagination he stands between Shakespeare and Milton. Trained in Germany and Italy, and coming among the English people at a time when they had lost their taste for high music, he yet received from them the inspiration for his greatest works. And he gave them a noble gift in return for theirs to him, for he broke through the shell of cold, narrow common-sense in which the genius of our nation had become imprisoned, and he did more than any other English writer of his time to free our national powers of imagination and set them again working on high and glorious things.

So that Handel sleeps rightfully by the side of our poets, in the home of our heroes.



HANDEL'S HARPSICHORD



HANDEL'S MONUMENT IN WESTMINSTER ABBEY

THE GREAT COBBLERS

THERE is an old saying that the cobbler should stick to his last, but it is fortunate for the world that some cobblers left their last behind them.

From the ranks of the cobblers have sprung many notable men—men whose fathers have been cobblers, men who themselves have been cobblers. To be a little more polite we should have to adopt the language of their handbills, and describe them, not as cobblers, but as—shall we say?—" anatomical boot and shoe makers." But " cobbler " is a good old word, and we use it here as a friendly and affectionate term for the men of a calling which has given us valiant heroes, profound scholars, saints and scientists, poets and preachers, all from the lowly cobbler's stall.

The cobbler and the tailor are, as a rule, the brains of our little villages. They are the thoughtful, reflective men, as the blacksmith is the type of good humour and rugged strength. The village cobbler has often more influence in his district than his member of Parliament. Like old Trotty Veck in the story of " The Chimes," he reads his paper diligently, and turns over and over again in his mind the things he has read, so that, when Hodge goes in to have his boots patched and to enjoy a little gossip, the cobbler pours into his untutored mind the results of deep ponderings upon heavy things.

A typical English cobbler in every German village would more quickly convert the German people to a hatred of war and a love of liberty than all the ambassadors and White Papers in the world. They are a thoughtful race. They sit in their stalls and think hard, and bang away at their boots as if they would whack common-sense even into well - tanned leather. Some scientists say that cobblers cannot help being thoughtful; that the position in which they sit, hour after hour, day after day, tends to the development of brain. Be that as it may, from the cobblers spring St. Crispins, Cloudesley Shovels, Kit Marlowes, William Careys, George Foxes, and Whittiers.

When Henry V. led his unconquerable little army on to the field of Agincourt, it was to a consecrated cobbler that he bade them turn their thoughts, for it was St. Crispin's Day, the anniversary day of Crispin, the noble Roman whom religious persecution drove, eighteen centuries ago, to Soissons, one of the battlefields of the Great War, Thrust out from his native city, Crispin returned to his trade, that of an honest cobbler, and mended the sandals and shoes of the people of Soissons, until a new persecution arose, when he was taken, with his brother, and flung into a cauldron of boiling lead. All the cobblers reverently remember Crispin, and the cobbler's awl is " St. Crispin's lance," the ancient implement of the first of the great cobblers. St. Crispin left behind him in the world a fine spirit which has produced, since his day, not a few worthy to bear his scutcheon.

Such a worthy cobbler was born in 1761—William Carey, son of the man who kept the village school at Paulerspury, near Towcester, in the boot county of Northamptonshire. Little William's father gave him as good an education as the other boys of the village received, but, though the lad showed a great faculty for learning, the elder Carey thought it better for him to woo fortune at the cobbler's last rather than at the master's desk, and apprenticed him to the village cobbler at Hackleton, near by.

William was an honest and industrious boy, and, as Livingstone studied Greek when working at the weaving machine, so Carey studied Greek and Latin and Hebrew while plying the awl in his humble stall. He was always proud of having qualified in the cobbler's stall. Once, when he

was a great man in India, he heard an offensive young officer ask, "Wasn't this fellow a shoemaker?" and Carey answered, with proud humility, "No, sir; only a cobbler." He studied the dead tongues, not simply to make himself a scholar, but that he might read the Bible in Greek, the language into which it was first translated from the Hebrew; and he mastered Hebrew so that he might go right to the fountain of knowledge itself. Having gained this great joy, he longed that all men should share his treasure.

While still a cobbler he became a Baptist minister, married, and set out to preach the Gospel in India. He and a friend were the first Baptist missionaries to visit that land. When he reached Calcutta he found that his means would not allow him to live as a missionary; his little store of money soon went, and the man who had gone to carry good tidings to the people of India was absolutely starving. He was driven to take a position as manager of a factory, and, fortified in this way with money, he began his mission work as a mill-director. Even then he could not go on, for the land, with its many tongues, was a veritable Babel to him. It is useless to preach if those who hear you cannot understand what you say. So Carey mastered the native languages as he had mastered the dead tongues, and, having got a grip of them, set up a little church near his factory, and preached to the natives. He set up a school and a printing press as well as a church, and made his first translation of the Bible, which he produced in Bengali, the language of the great mass of the people of Bengal. Other translations followed, language after language, until no fewer than twenty-six were completed.



THE COBBLER WHO SIGNED A KING'S DEATH SENTENCE

An old cartoon of Colonel John Hewson, sold in the streets of London during his lifetime

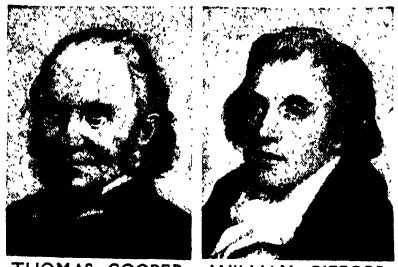
That was the work Carey had to do in order to be able to reach the ears and hearts of the people. What a task! If a cobbler from another country were to come to Great Britain to teach a new religion, he might well think the task beyond his power, for he would have to learn four languages to address all the people. He would have to learn English, the common tongue, but he would also have to learn Irish, Gaelic, and Welsh, for there are in our islands a quarter of a million British-born subjects who cannot speak English. There are over 190,000 people in Wales, for example, who speak nothing but Welsh; there are over 18,000 Scots who speak nothing but Gaelic; there are over 16,000 who speak nothing but Irish. But Carey had twenty-six languages to learn, and he did learn them. He not only translated the Bible into those tongues, but became in other ways so renowned as an Oriental scholar that he was appointed professor of Sanskrit, Bengali, and Mahratta in the new college at Fort William, and produced grammars and dictionaries of the principal languages of India. The greatest of all was, perhaps, one grammar to serve for all languages derived from Sanskrit, but this was unfortunately burned. The rest of his work lived on—the work of his brain as a profound scholar, the work of his heart as a noble-hearted missionary. We cannot doubt that the devotion of India to the British Empire in these dark days sprang in part from some of the seeds which good William Carey sowed. Though Christians in India are only four millions out of over three hundred millions, the noble influence of such a man as William Carey lives long after such a life has closed. Carey the cobbler influenced Europeans as well as the peoples of India, and the righteousness of British rule in the great Dependency is responsible, a thousandfold more than the power of the sword, for the loyalty of the Indian princes and people.

Carey was a gentle scholar, but the cobbler's stall gave us a very different type of teacher in rare, hard-hitting, hard-talking old George Fox, the first Quaker. He was a cobbler, served his apprenticeship to the trade, and worked at it until he was nineteen, when he set out, with a Bible in his

hand, to preach Christianity in what seemed to him its purest form. He disliked paid preachers, and their churches, "steeple-houses," he called them; he loathed all the ceremonies and decorations of religious services; he would have no good thing said of lawyers or soldiers. He would not take off his hat to any man, king or cobbler. He was considered a fanatic, but he was one of the worthiest fanatics who ever lived. In his rough, tough old leather suit, he would break up meetings and services of which he did not approve, and he was always getting himself imprisoned for the "brawling," as it is called. So were the men who, in greater and greater numbers, became his followers.

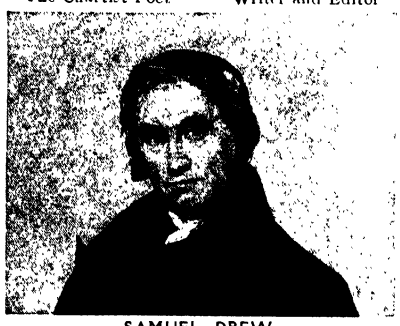
But George Fox had a heart of pure gold. He had a system; every prophet and reformer has had a system. It was much too good a system for his age. It was the age of the degenerate Stuarts, and men were thinking more of civil war than of schemes for social and educational reform. But George Fox worked out his system, and bequeathed it to posterity, and he has been justified by it. It included education for all, the relief of the poor, and, not least important, a scheme whereby the poor should be enabled to help themselves.

He did not preach a smooth and comfortable religion; when the mood possessed him he would suddenly throw off his boots and stockings, and, walking barefooted in the market-place, would denounce all about him for

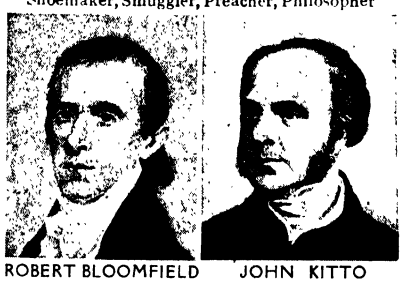


THOMAS COOPER
The Chartist Poet

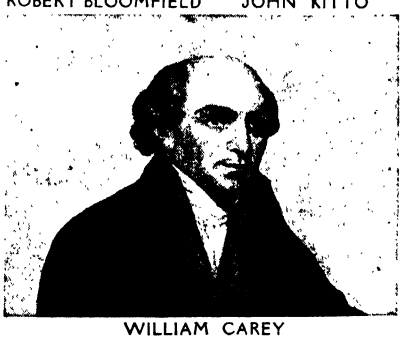
WILLIAM GIFFORD
Writer and Editor



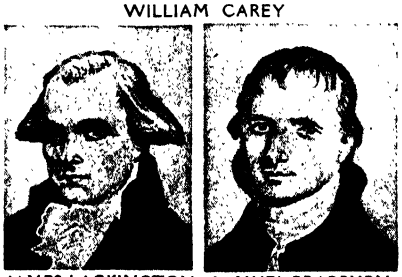
SAMUEL DREW
"Shoemaker, Smuggler, Preacher, Philosopher"



ROBERT BLOOMFIELD JOHN KITTO



WILLIAM CAREY



JAMES LACKINGTON
The Old Bookseller

SAMUEL BRADBURN
John Wesley's Friend

GREAT COBBLERS

their sins, and cry out loudly "woe and bloodshed" upon them all.

Like the great tinker John Bunyan, George Fox made excellent use of his time in prison, for while there he wrote much that has gone into the literature of our land. It was not written for vanity, for it was not published until after his death. Much of it is appallingly difficult reading, but the brilliant and very human pages of his "Journal" are for all time. His "Journal" is the best of all, and, though a little involved, is for the most part in fine English. His model was the Bible. He cared nothing for Shakespeare, who was but recently dead, or for Milton, who was living in the same age, or for Pascal, or for Sir Isaac Newton. He cared for nothing but his Bible and its teachings. He lived as a young man through the terrible Civil War, but not a mention of it do we find in the story of his life. He thought no more of it than of the old Roman road along which he used to trudge near the little town of Fenny Drayton, where, in 1624, he was born, and grew up to make boots and shoes for good Puritans.

Fox was one of the strange, strong men of a strange, strong age, and we find him, in later life, moving about the world, spreading the Gospel in the West Indies, in America, in Holland, in company with Penn and other notable leaders of the early Quaker movement. He was very sure of his own rightness, and of the wrongfulness and unrighteousness of those who opposed him, and great men who have

studied his life feel inclined to say, as Oliver Cromwell once said to another person, "I beseech you, by the mercies of Jesus Christ, think it possible that you *may* be mistaken." But our national life would have been poorer, our literature would have been poorer, and the religious history of the world would have been poorer, had not this sturdy disciple left his cobbler's last, put on his steeple-crowned hat and his leathern clothes, to fare bravely forth into the highways and byways to preach a burning message to all who would listen.

The Merry Cobbler who Made Germany Laugh in Her Nobler Days

Germany, before she became an unscrupulous military power, was a nursery of genius, and in the far-away days, when scholarship was rare, she gave us a cobbler whose memory has been fondly cherished for 400 years—Hans Sachs, the cobbler-poet of Nuremberg. He was born in 1492, so that he was nine years younger than Martin Luther, and lived thirty years after the death of that great reformer, to carry on the work that Luther had begun. Sachs was a truly poetic cobbler, and combined cobbling with art. When he had finished his apprenticeship, during which he had studied as all these hard-thinking cobblers studied, he set out on a tour through Germany, staying at one town after another to improve himself as a cobbler, and also to visit the numerous poetical and musical societies which then existed. Returning to Nuremberg, he settled down to his last, becoming famous locally for the character of his shoes, and famous generally for the excellence of his poetry. Luther was waking Europe with his thunder, and Sachs, being won over by the new school of thought, was greatly attached to the reformer.

How Hans Sachs Preached Martin Luther Better than Luther Himself

Luther was a poet of no mean order, a foremost leader of sacred song, and his noble hymns, intense, rugged, and expressive, have had an immense influence on mankind. Sachs sang a simpler and more gentle song, and captivated the ear and heart where Luther simply stunned, so that it was often said that Sachs preached Martin Luther better than Martin Luther preached himself.

Sachs wrote unwearily for very many years, and came to be the unchallenged poet of his age. The best thing he ever did was his volume of Merry Tales, or "Schwanke," the fun and humour of parts of which have rarely been surpassed.

We cherish the memory of the Nuremberg cobbler, then, as of one of the master-spirits of the Reformation, one of the benefactors of mankind who have endowed the world with honest laughter. Carlyle had a hearty good word for him, describing him as "a gay, child-like, devout, solid character, a man neither to be despised nor patronised, but left standing on his own basis as a singular product and legible symbol and clear mirror of the time and country where he lived." Sachs died in 1576, after seeing and helping to bring mighty things to pass.

While Sachs was still living there came into the world a far greater poet, Christopher Marlowe—Kit Marlowe, as we call him—born into the home of a Canterbury cobbler. Marlowe was not himself a cobbler, however. He went to Cambridge and gained his B.A., and never mended shoes. He was born in February, 1564, and Shakespeare was born two months later. Had Marlowe lived long enough, he might have been as great as Shakespeare. He remade English drama, as it were, at a touch.

The Kent Cobbler's Son who was the Forerunner and Inspirer of Shakespeare

This boy from the cobbler's stall swept away all the meaningless nonsense which had filled the English stage, and in its place substituted his "Tamburlaine the Great," his "Dr. Faustus," "The Jew of Malta," and his "Edward II.," which is preferred by some scholars to Shakespeare's "Richard II."

With his fine scholarship, his sonorous verse, the tender sweetness of his lighter poems, he was the great forerunner of Shakespeare, who modelled his tragedies upon those of Marlowe. Indeed, the two men worked together, the butcher's son and the cobbler's son, for we can trace the hand of Marlowe in at least two of Shakespeare's plays. Shakespeare, in "Love's Labour's Lost," quoted one of Marlowe's lines: "Who ever loved that loved not at first sight?" which occurs in Marlowe's unfinished poem, "Hero and Leander," a gem of unsurpassed beauty. Marlowe died a young man, with his glorious talents in their first bloom, and Shakespeare mourned him deeply. Had Marlowe never lived, Shakespeare might not have reached the true height of his own greatness, for he would have lacked the inspiration of the master upon whose work his own was modelled. It is something to thrill us as we think of it that the guide and inspiration of the greatest master of our English tongue should have been the son of a Kentish cobbler.

The voice of the singer awoke again in the cobbler's stall when Robert Bloomfield was born, in 1766, at Honington, near Bury St. Edmunds. His father, a poor tailor, died when the boy was only a year old. Robert was one of six small Bloomfields left to a widowed mother's care. She faced her task right bravely, and, opening a little school, taught her babies with the rest of the scholars who made up her little school.

The Boy who Read the Speeches of Burke and Pitt in a London Garret

For ten years this courageous woman struggled unaided, but then she married again, and little Robert was sent to his uncle's farm at Sapiston, where for four years he was a real farmer's boy. When he was fifteen, however, he was taken to London to join his two brothers, one a cobbler and the other a tailor. The poor mother thought Robert too puny and weakly for outdoor life, so, with the kindest but most misguided intentions, she devoted him to life in a London garret instead.

In a little garret in which five men worked at their trades day by day, little Robert Bloomfield was to grow up. Happily, they were kindly, thoughtful men about him, and they gave little Robert as much fresh air as possible by sending him on errands. They got him to read the papers to them, and to enable him to master the hard words they bought him an old dictionary for fourpence, so that he could interpret to them the great speeches of Burke and Fox and Pitt, with which Europe was then ringing. These kind-hearted men took him to a chapel where an eloquent preacher was to be heard, and out of their small wages they bought him little works on history, geography, and travel. When, at last, there came into his possession a magazine containing poetry, Robert himself burst forth into song, and, marvellous to relate, had his first poem accepted and printed.

The Great Song of the Fields that Came Out of a City Garret

What a day of gladness that must have been in the little attic when the five workmen heard the boy read out to them his own verses, signed with his own initials! They were as proud as he was, and felt that the lamp of genius kindled in their humble top room was destined to cast a radiance over the whole land.

Except for two months which Robert passed in a return to the beloved life of the farmer's boy, he spent all his youth and early manhood in stuffy London garrets. He married at twenty-four, and managed to furnish a little room in Bell Alley, Coleman Street, where he also shared a garret-workshop with six or seven other men. There, like a flower in a desert, his genius bloomed; there it was that this brave poet, cooped up in a dismal alley, wrote the song of the country, the immortal "Farmer's Boy." It is not one of the greatest poems, nor was Bloomfield one of the greatest poets, but the poem breathes the true spirit of the country, the joy of life of the man on the farm, the wonder of Nature in her changing seasons, the song of a heart answering in its love for the freedom and beauty of the countryside. We remember the lines:

> To plant and sow,
> And reap and mow,
> And be a farmer's boy.

No man ever loved the country better than the writer of these lines. The poem is fragrant with the perfume of the meadow and the flower-scented lane, and it was written in a sweltering garret, on little scraps of brown paper, on the backs of old bills, on paper patterns for boots. When he could not get even this paper, Bloomfield carried his rhymes in his head, and he had the first six hundred lines of his "Farmer's Boy" stored in his brain before he wrote a word. The cobbler's cheery music was received with favour unusual for the work of an unknown man.

The Man who Died in Poverty but will Live as Long as Fields shall Bloom

The publication of the poem at once brought him fame and friends. The Duke of Grafton gave him a little pension, and secured for him an appointment worth six shillings a week. Bloomfield for a time gave up cobbling, and took to making musical instruments and to bookselling, but in neither did he succeed. He became ill and very poor. To the last, however, music still welled from his heart, and his later poems increased his fame, though not his wealth. His last years were made unhappy by ill-health and poverty, but he had the proud consciousness that he had won a place of fame among the less exalted poets of the world, and the world still agrees with another poet who wrote:

> Bloomfield, thy happy omen'd name
> Ensures continuance to thy fame;
> Both sense and truth this verdict give,
> While fields shall bloom, thy name shall live.

But Bloomfield owed his fame to what he did; there is another cobbler poet who owes his fame to what was done for him. This was Richard Savage, who was born in 1697, and declared himself to be descended

from a noble house. He was very poor, and, after an apprenticeship to a cobbler, worked as a journeyman before he made his way to London and began writing for the Press. He had great talent, and this brought him the friendship of Dr. Johnson, who met him when they were both desperately poor; and also of Pope, who befriended him generously. Savage was a bad, unhappy man, who killed a friend in a quarrel and turned his pen to blackmail, yet with all his faults he had gifts and splendid friends, and when he died Dr. Johnson wrote the story of his life. That makes him immortal, for Johnson's Life of Savage is regarded as perhaps the finest short biography ever written in any language.

A much nobler child of the cobbler's stall was Dr. John Kitto, a heroic student and sufferer. He was born at Plymouth in 1804. When he was thirteen, while working with his drunken father, who was a mason, he fell from the top of a house to the ground, and was for the rest of his life stone deaf. Never afterwards did he hear a human voice.

The Brave Poor Boy who Crept Away from His Home to Find Refuge in the Workhouse

From a poverty-stricken home, two years after his accident, Kitto was sent to a workhouse, where he was taught slipper-making, and then hired out as an apprentice to a cobbler, who behaved with such savagery to him that the poor boy crept back to the workhouse as to a harbour of refuge. There he had to work at his trade sixteen or eighteen hours a day, yet he found time to study deeply, and the news that there was a sort of genius in the workhouse roused the sympathies of certain kind-hearted men in Plymouth, who raised a fund, took the boy out of bondage, and placed him in a kind man's home where he was free to pursue his studies unfettered. In his twenty-first year he published a book, which was so promising that he obtained a situation with a missionary society in London, by which he was sent abroad. For the rest of his days he gave all his energies to writing, and his works on subjects connected with the Bible were of real importance and value. A German university conferred on him the degree of doctor, and he was honoured in learned societies in England. He died near Stuttgart, Germany, at the age of fifty, after a career marked by brave endurance in suffering and by valiant endeavour.

The cobblers have their saints and sinners; they have, as we have seen, their own poets; but the most distinguished of all cobblers is the one who sang the song of the cobbler, the anthem of "the Gentle Craft of Leather." This was John Greenleaf Whittier, one of the noblest of America's sons. He was the son of a small farmer in Haverhill, Massachusetts, where he was born in 1807. He helped on the little farm when he was not mending the heavy boots of the labourers, but while he was toiling he was singing, and one day there appeared a little poem in a weekly local paper, signed "W."

The Poet who Mended Shoes and Sang the Merry Song of Leather

The editor of the paper was none other than William Lloyd Garrison, the great and brave friend of the American negro slaves. Garrison tracked out his unknown contributor, and found him, a great, shy lad of nineteen, hoeing turnips in a corner of his father's field. Garrison sought the poet's parents, and told them they had a genius among the boots and beetroot, and that it was their duty to have him properly educated.

"Pooh! Poetry won't buy him bread," said the father.

However, young Whittier did manage to get a sort of education. He made his way into journalism, and took a glorious part in the fight for the freedom of the slaves. It was breathless and deadly work, for he was among rich planters who regarded it as a crime to preach emancipation for the serfs. One night they surrounded his office, wrecked it, and set fire to it, and would have killed him had they been able to catch him. But the great "Quaker poet," as he is called, had a soldier's heart beneath his calm exterior, and there was soldier music in the poems he wrote to stir his country against slavery.

The Cobbler whose Name is on One of the Great Documents of Freedom

"For all his Quakerism," said Walt Whitman, "his verses at times sound like the measured step of Cromwell's old veterans." A true poet was Whittier, a singer of Nature, a singer of noble moral ballads, but heard in his sweetest note and noblest strain when singing the great song of humanity. All the world honoured him in his old age, but he never forgot that he had been a cobbler, and he addressed to his fellow-craftsman a jolly lilting lay which makes us all want for an hour to clap on the leathern apron and whack a good sole and heel on to an honest boot.

Whittier was not the only American cobbler of note, for one of the fine men who helped to give the United States its freedom

was a son of the last. This was honest, clear-headed Roger Sherman, a native of Newton, Massachusetts, where he was born in 1721. Until he was 22, Sherman, after a very slight education, supported his widowed mother, and several brothers and sisters, by his industry as a cobbler. Yet he found time to study to such profit that he became a first-rate lawyer and member of Congress, and was finally made a judge. He was born a British subject, but when England, under a wrong-headed king, sought to impose unjust taxes upon America, Sherman was one of the first to resist to the uttermost. The cobbler of Newton helped to draw up the Declaration of Independence. His signature is still unfaded upon that historic document.



THE COBBLER OF NUREMBERG, HANS SACHS, THE POET FRIEND OF MARTIN LUTHER

But let us return now to our home-bred cobblers—there remains still a fine array. Let us remember, for example, Sir Cloudesley Shovel, one of the greatest of our old fighting seamen.

He was born in 1650 at the little Norfolk coast village of Clay-next-the-Sea, and was packed off, as soon as he was old enough, to learn the art of shoemaking under the care of the village cobbler. He worked hard at his trade, but hated the life when he heard the sea calling him. The call proved too strong, so away he went, and had the good fortune to find himself on board the flagship of Sir John Narborough. He proved a capital little fellow, and Narborough, who remembered the kindness he himself had experienced in his own cabin-boy days, took an interest in this happy Norfolk boy.

He soon had reason to know that his good opinion of the boy was justified, for there came a great battle with the Dutch fleet, which was then our greatest rival at sea. Narborough was in charge of the English fleet, and found his flagship hotly engaged by overwhelming forces. His masts were shot away early in the engagement, and the ship was in great peril. This was serious for the entire fleet. He must have help, but how was he to get it? There was no electric telegraph in those days, and ordinary signalling was hopeless in the smoke of battle. But a signal must be sent to the reserve ships, or the flagship would be sunk or captured. A boat could not carry a message, for it would have been sunk by gunfire. A man must take it; he must swim with it. Narborough wrote his message and called for volunteers. Young Shovel was the first to step forward. The admiral regarded his plucky cabin-boy with pity.

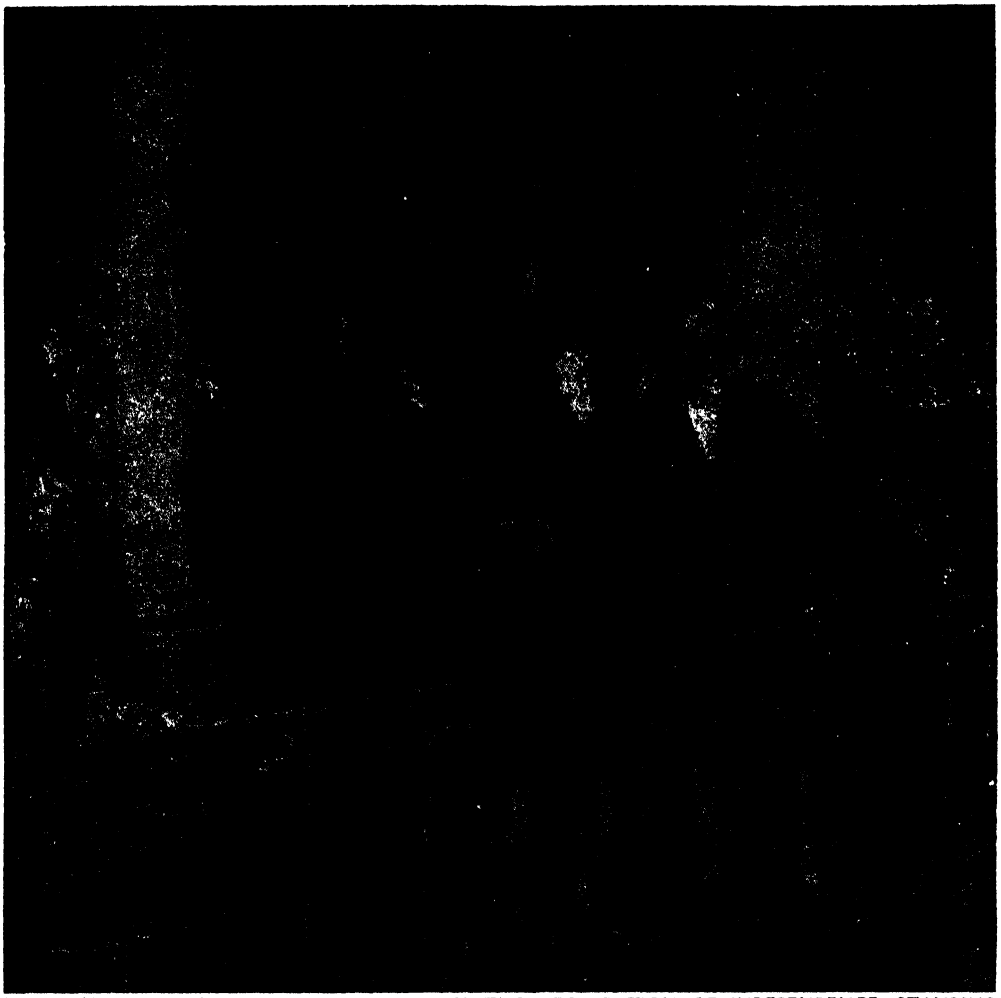
"Why, my brave lad, what can you do?" he asked with great kindness.

" I can swim, sir, and if I be shot I can be more easily spared than anyone else," was the valiant answer.

The admiral was loth to let the lad go, yet instinct moved him to send him.

Cloudesley Shovel popped the precious message into his mouth and sprang overboard. Shots danced about him until the sea seemed to boil, but by ducking and diving he miraculously escaped. He made his way to the ship to which he had been directed, delivered his message, brought up the reserve to the rescue of the admiral's flagship, and saved the day for England. When the battle was over and the victory won, the boy climbed back to the deck of his own ship. Narborough instantly saw him, and, calling him forward, said: " I shall live to see you with a flagship of your own."

And he did. Step by step the courageous young cobbler climbed the ladder, and his admiral entrusted him with important work calling for courage and clear-headedness— " my boy Shovel," as he always called him. Shovel ended his career as a knight and rear-admiral of Great Britain. He figured in all the great sea-fights of that battling age, and died at sea off the Scilly Isles, wrecked one foggy night in 1707 with 2000 of his men. His body was recovered, and the cobbler of other days lies in glory in Westminster Abbey, still honoured and beloved by all who know his story.



ROGER SHERMAN, THE COBBLER WHO SIGNED THE DECLARATION OF INDEPENDENCE, STANDING BY GEORGE WASHINGTON—ON THE RIGHT

Cobblers have, then, helped to lift up our thoughts, to redeem our drama and literature, and to free the slaves. World-figures these men are; let us touch in our picture with the story of a man whom few

people knew, but whose work was as noble and glorious as any, though he wrote no poetry, crossed no seas, fought no battles. He was John Pounds of Portsmouth, the six-feet limping cobbler.

John Pounds was not born to limp ; that misery resulted from an injury, when he fell from a great height, fractured one of his thighs, and crippled himself for life. That

bachelor, but he had a brother whose family was numerous, and John felt that he must help. So he took one of the children, a little boy, for his own. The one he chose was a cripple, to whom John's big heart specially warmed. He could not afford surgical implements for the child, so he himself made him boots with iron supports, and he had the great joy of curing his little friend.



JOHN POUNDS, THE CRIPPLE COBBLER WHO FOUNDED THE RAGGED SCHOOL UNION

was in 1781, when poor John was fifteen years of age. Unable to do heavy work, he set himself down to a cobbler's last, and a cobbler he remained to the end of his days. For a quarter of a century he worked for other cobblers, but when he was forty he was seized with a great fit of courage. He took a little wooden house in St. Mary's Street, Portsmouth, and on a tiny hand-made sign announced that John Pounds was in business for himself. John was a

But the boy had a mind as well as limbs, and this, too, needed treatment. John thought long over the problem, and he decided that he would himself educate the child. But, thought he, a child learns better in company than alone ; he shall have companions for his lessons. So John hunted round, and found other little children who needed teaching, and, starting a little class in the cobbler's den, he began their education from old handbills and a few ragged

schoolbooks. He was successful, and in his delight he felt that other waifs should share the feast of learning in the little shabby old shop. He therefore began a campaign which lasted for the rest of his life. He would hunt through the highways and by-ways, and tempt the little ones to come in. A child had only to be ragged and miserable to master John's great heart.

The Sight of Old John Pounds and His Happy Little Ragamuffins

Ah, but a child may be needy and yet afraid to come under your discipline. How was he to catch these wild, poor things of the streets? A baked potato was the unfailing charm. With a few hot potatoes John would sally out, catch a starveling, and lure him off to his happy den, there to teach and feed and clothe him, and turn the wild, frightened creature into a decent civilised being.

Such work there was in that cobbler's squalid little shop! The class in time mounted up to about forty scholars. The room, which was only six feet wide and eighteen feet deep, overflowed with studious bairns, till they spread out on to the step and out on to the pavement beyond. But John could manage them; he was a rollicking, lovable sort of saint, and the little scallywags worshipped him. He taught them to read and write and sum; he taught the girls to sew and mend their clothes; the boys he taught to cobble. They did everything for themselves—their lessons, their work, their play. They made their own bows and arrows, their bats and balls and kites, their shuttlecocks and battledores; and when they went out to play in the country, with lame John at their head, the very angels must have rejoiced to watch their happy sport. But behold them on Sundays as they marched to the little mission chapel! Such fine folk they were in the old things that he had begged for them, cleaned now and patched and darned. There never was such a sight as old John Pounds and his forty happy little ragamuffins.

The Simple Old Man who Paved the Way for Lord Shaftesbury

Year after year John carried on his work, with none to help. He snatched children from ruin and sent them into the world honest, educated men and women, and when, in later years, they came back to see him, good, honest John Pounds would weep with happiness as he shook them by the hand. For over thirty years John carried on his glorious work, unknown to the wide world, yet admired with generous envy by a few. He died with his little den locally famous, seventy-two years of age, but in spirit as young and eager as when he began. His monument is the noble work that grew from out his tiny shop—the Ragged School, an institution which has brought education, comfort, and salvation to unnumbered hosts of children. Lord Shaftesbury—after whom the Union has now been called the Shaftesbury Society—used proudly to say, "I am a disciple of John Pounds," and so is every one of us who loves a little friendless child and labours for its good. There are many kings among the cobblers, but John Pounds has a realm of his own which no one else had discovered—a realm whose watchword is unmatched in love and beauty: "Suffer the little ones to come unto Me and forbid them not, for of such is the Kingdom of Heaven."

There have been many good cobblers worth remembering for whose story we have no room here—Thomas Cooper, the old poet and Chartist of the days when our grandfathers were young; William Gifford, the old writer who lived in the days of William Pitt and Napoleon and edited a famous review; Samuel Drew, the wise cobbler of Cornwall who began as a smuggler and ended as a local preacher and a sort of philosopher; and two other Wesleyan local preachers—Samuel Bradburn, the cobbler orator from Gibraltar, who knew John Wesley and helped him, and James Lackington, who sold books in London by the hundred thousand in the days when books were rare, and preached in little chapels in the days when chapels were few. Good men were they all.

The Cobbler who Tried a King and Signed His Sentence of Death

One cobbler there was who rose to power, but does not stand in so pure a light in history as these other comrades of his craft. He rose to be Colonel John Hewson, who sat in judgment on his king, fought bravely as a soldier, and died in exile. He lived at Westminster, where he was known as an honest shoemaker, in the days when England drove Charles Stuart from the throne for seeking to rule the nation as the German Kaiser sought to rule Europe—by the sword. Hewson joined Cromwell's army, proved a born soldier, and was noted for his valour and determination. When the king was placed on trial, Hewson was one of his judges, and signed the warrant for his execution.

Perhaps this fact may have much to do with the dark picture of Hewson which his age has bequeathed to us. The lives of Cromwell's men were written when the profligate Charles II. had been called to the

THE FAME THAT CAME FROM A COBBLER'S SHOP



COBBLERS ALL—JOHN POUNDS, CAREY THE MISSIONARY, ADMIRAL SHOVEL THE HERO, BLOOMFIELD THE COUNTRY POET, WHITTIER THE AMERICAN POET, AND GEORGE FOX THE QUAKER. Read from the left

throne, when there was no path more direct to favour than that of the man who reviled and libelled the followers of Cromwell.

The suggestion is that Hewson, formidable as a soldier, was shifty in character, and took bribes as a wage for his support of certain public measures. Seeing, however, that the so-called bribes were only arrears of salary due to him, we may very well question the accuracy of the charge.

Hewson left England after the Restoration, and is said to have died at Amsterdam, somewhere about the year 1666. He was not one of the most lovable of our knights of the leather apron, but decidedly he was a history-maker of the seventeenth century. The portrait of him on another page is an interesting reminder not only of the man, but of the times in which he lived. It was drawn by hatred's hand, showing him as a cobbler-soldier, blind in one eye, with the cobbler's knife in his right hand and the sword in his left. The portrait was exhibited in the streets of London after his action against the apprentices, and in 1660 it was posted up on a gallows erected in Cheapside. But in those days human jackals dug up the remains of some of the noblest men who had given England freedom and power, and nailed up the skull of Cromwell on Tyburn Hill.



GEORGE FOX, THE FIRST QUAKER, THE COBBLER WITH A HEART OF GOLD WHO WOULD THROW OFF HIS SHOES AND STOCKINGS AND CRY IN THE STREETS AGAINST THE SINS OF HIS TIME

AMAZING ISAAC NEWTON

THE widow who lived in Leicester Place of eighteenth-century London had great news to report to a Fellow of the Royal Society who called to see her one day.

"I've got such an entertainment for you!" she said. "There is the craziest old gentleman come to live next door. Come with me, and you shall see him out in his garden now."

They hurried to an upper room and looked out of the window, and lo! in the garden next door sat a mild and innocent looking old gentleman, with a tub of soapy water before him, and blowing bubbles with all his might.

"That's my new neighbour," said the lady. "Every morning, when the sun shines, he takes his seat in front of that tub, and occupies himself for hours blowing soap-bubbles through his clay pipe, and intently watching them till they burst. Do watch him! Is it not great fun?"

The scientist watched the old man with astonishment for some time, and then, turning to his friend, said, in terms of awe:

"Madam, the person you suppose to be a poor lunatic is no other than the great Sir Isaac Newton, studying the refraction of light upon thin plates, a phenomenon which is beautifully exhibited on the surface of a common soap-bubble."

Yes; the crazy old gentleman was Sir Isaac, the greatest mathematical genius the world has ever known, the Columbus of the world of light, the man who read the riddle of the spheres, who discovered how they spin their lonely, everlasting round through quiet, unending space; the man who solved the mystery of the tides and declared the secrets of the moon; the greatest of all our natural philosophers, who delighted to make himself a master-craftsman, turning metal into coins; who wrested from the sunbeam the magic story of its light. The world has never seen the like of Isaac Newton. He towered above his learned fellows, as they towered above the savages of their day. Yet, for all his greatness, our first peep at him in his London garden shows us the mightiest brain in the world intent on the fascination of an old clay pipe and its way with a tub of soapsuds.

Well, all his stupendous results were achieved by means as modest as these. With a pen and a pot of ink, and a few sheets of paper, he would work out a staggering, new mathematical formula, sweeping away hosts of difficulties from the path of the mathematician. With a common glass prism and a hole cut in a shutter, admitting a sunbeam into a darkened room, he solved the composition of white light, and divided it into all the coloured rays of which it is composed. With his own hands he made the instruments with which he wrought his wonders.

He was born a genius. It was at Woolsthorpe, a little place six miles from Grantham, that he first opened his eyes on a Christmas Day in 1642. A gaily grave, freakish youngster was Isaac, clever with his fingers as a little Japanese, and as inventive. He needed all his resources from the very outset, for he was born the weakliest of babes. "I have often heard my mother say," he told a friend, "that when I was a baby I was so tiny you might have put me into a quart pot." At first there was a rare struggle for mere life, yet this mite of humanity grew into a well-built, middle-sized man who lived to see his eighty-fifth year.

Isaac had no father to guide his early footsteps, for Newton the elder died a few weeks before his marvellous heir was born. He left little for that heir to inherit. The small property at Woolsthorpe brought in thirty pounds a year, and there was another tiny farm a few miles away which yielded another fifty pounds a year; so that

the mother and her boy had just over thirty shillings a week for their maintenance and his education. The mother nursed him devotedly until he was three, when she married the vicar of an adjoining parish, and committed her little one to the care of his loving grandmother.

After attending the village school near home, Isaac was sent, at twelve, to the public school at Grantham, where he lodged with a chemist. There lived with them also a little girl named Storey. Isaac had only one love romance in all his life, and the little Storey girl was its heroine. She was slightly younger than Isaac, and he was proud to be her little squire. Her small needs drew out his skill for the making of things. My lady's dolls must be housed, she must have her little tables and shelves and cupboards, her tiny trinkets must have their caskets, and Isaac proudly made them all. The two little people began as sworn comrades; they grew fonder and fonder of each other until Isaac was eighteen or more, and then they were very much in love. But Isaac was desperately poor, the little Storey lassie had no prospects, so they decided that they could remain only friends. And friends they were as long as they lived. She married twice, but that made no difference to their comradeship; and in later years, when his old sweetheart was in trouble, he was proud to be able to help her again and again. His little playmate was his first love and his last.



CRANE COURT, THE FIRST HOME OF THE ROYAL SOCIETY, OF WHICH NEWTON WAS PRESIDENT

But Isaac did not give all those early days to making dolls' houses. He had to make little hammers and saws and hatchets and other tools for the enterprises of his lady love, but his teeming brain turned these tools to further account. He was a wonderful young workman. He made a carriage which could be worked by hand by the person seated in it, probably the first self-propelled carriage ever devised, a rough forecast of the ingenious contrivances in which men crippled in the Great War are still seen riding. On the road between Gunnerby and Grantham millwrights were fitting up a windmill. Isaac watched the work with eagerness, and before the mill was at work on the Gunnerby road his little model of it was at work, perched up on the roof of the house in which he lodged. Windmills should go by wind power, but Isaac was independent of the elements; when the wind refused to blow he popped a pet mouse—the Miller, as he called him—into the machine, and the mouse, turning a wheel inside, made the sails spin rapidly.

Then this stripling must make a highly scientific clock, driven by water, if you please. He begged a box from his landlord's sister, and made it tell the household the time. Every part of it was fashioned by his own little fingers. The hands of the dial were turned by a piece of wood, which either fell or rose by the action of water, which was allowed to drop through a hole from above. The old box of waterworks became the family clock, but it was not good enough for its boy maker; the hole through which the water had to pass became choked up, and so he snatched his time—from the heavens! This little schoolboy had already got his curly head among the stars and planets. He had been observing their motions. He saw that the movements

THE MAN WHO WON IMPERISHABLE FAME



SIR ISAAC NEWTON BLOWING SOAP BUBBLES TO STUDY LIGHT WAS A SOURCE OF GREAT AMUSEMENT TO HIS NEIGHBOURS

of the sun did not vary, though his old box did, and he pinned his faith to the sun. He made a sun-dial, entirely without assistance. He observed from day to day at what hour the sun cast its shadow on a given point. Then he stuck a pin in the spot which marked twelve o'clock, and pins for other hours and the half-hours. And while the family indoors was trusting for the time of day to the waterworks up in the boy's bedroom, the country people round about used to go for the time to what was generally known as " Isaac's dial."



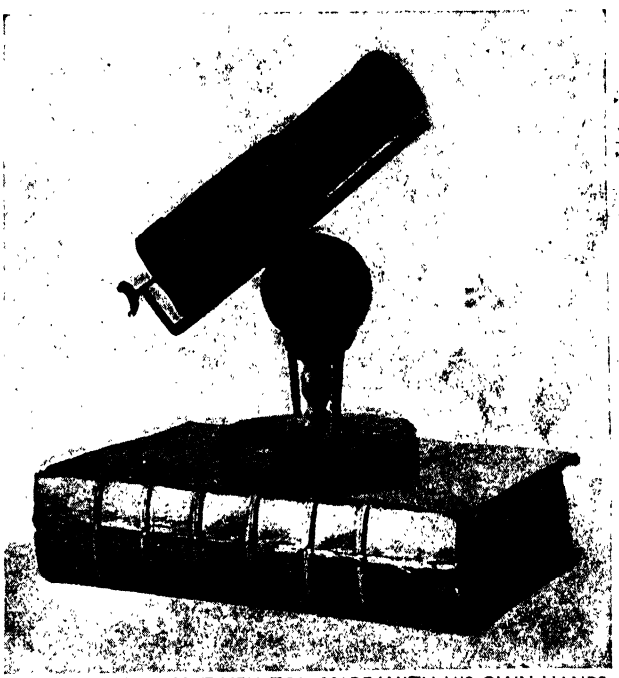
WHERE ISAAC NEWTON STUDIED LIGHT—THE BEAUTIFUL EXTERIOR OF TRINITY COLLEGE, CAMBRIDGE

But at school the clever boy, shame to say, was as bad as he could be. So far as books were concerned, Isaac was idle; he needed a stimulus. He got it. There was a bully in the school, higher-placed than our little man, and he gave poor Isaac his stimulus—a terrific kick on the stomach. Isaac did not kick back, but from that hour he set himself to win his revenge. He won it honourably. He worked so hard, after his kick, that he passed the boy who had ill-used him, and became the first scholar in the school. He was avenged. But for that kick he might have remained a sluggard.

Now another danger threatened him. The mightiest mind in the world was nearly harnessed to a turnip-cart! Isaac's stepfather, the vicar, had died, and Isaac was called back to his mother's home to help to work the two tiny farms, and go to market to sell the produce. He was a poor sample of the farmer's boy, and as a market man he was about as acute as the son of the Vicar of Wakefield, who sold the family horse for a box of green spectacles. So an aged farm servant was sent to market with him to teach him the tricks of the trade. Well, King Alfred burned the cakes, and Isaac left the servant to sell the vegetables while he himself either curled up under a hedge with a book or dodged away to his old lodgings in Grantham, where the chemist's little library was snug beneath the rafters. He could not farm, and he had no ambition for selling turnips. But they knew the young monkey was clever, if only they could think what his cleverness really meant. For he was the life and soul of the village in a certain way. Not for romps and sports was he popular, for he did not join in ordinary games, but he made the boys their kites, the best kites ever seen. They were of paper, but little Isaac experimented scientifically to fix the correct form, the position to which it was best to attach the string, the right type and weight of tail, and so on. A hundred other things he did that

interested everybody. Isaac Newton never saw a gas-lamp; he never saw paraffin oil or a wax candle; the illuminants of his day were crude oil and torches of pine; but he made little wicks and candles and fitted them into lanterns with which to find his way about at night. Better still, he fixed lanterns to his kites and flew them in the dark. The villagers thought they were comets grim and dire; and as kings and country louts used to think a comet was sent from the skies to warn them, the little, aerial lanterns caused many a scare in the cottage homes of quiet Lincolnshire.

The playboy of the village could not grow carrots, and he could not sell them at a profit, but, as he could do all sorts of things that seemed uncanny on a tiny farm, someone suggested that the only thing to do with him was to send him to Cambridge. So to Cambridge he went, as an under-sizar, a poor scholar receiving food and lodging free, and a certain pittance for his studies. The greatest genius that either Oxford or Cambridge has produced entered the university as the poorest student there. He needed no second kick here to make him work. He devoted himself with ardour to the study of mathematics, and soon eclipsed the tutor under whom he was studying; he actually supervised a technical essay which that gentleman was producing for publication. It was on the composition of light and colour, and was ludicrously wrong, but the young scholar passed his master's work, knowing no better at the time. Later he took up the study himself, and gained astonishing results.



THE TELESCOPE THAT NEWTON MADE WITH HIS OWN HANDS, RESTING ON THE MANUSCRIPT OF THE BOOK HE WROTE

What is a sunbeam? White light, is it not? Well, but what is white light? Light which is white. Isaac's tutor said, "White light is that which discharges a copious light equally clear in every direction," which is a learnedly lame way of saying that neither of them knew anything about it. But Isaac soon found out in a series of memorable experiments.

He bought a prism and analysed a sunbeam. Fixing his prism in a dark room, he admitted a sunbeam through a hole in the shutter and made it pass through the prism. The poor sunbeam came out on the other side a shimmering ruin of its former self, revealing all its physical properties on a screen.

White light is simply a combination of all the colours of the rainbow—violet, indigo, blue, green, yellow, orange, red. All the rays combined make up the white light of the sunbeam, and, as the rays have not all the same penetrative power, the prism breaks them up, so that they divide at the obstruction of the prism. The composite ray splits up into its separate parts, and out upon the screen they come, just as they are.

Newton had made a glorious discovery, and to prove that he was right he placed a second prism at a different angle, passed all the rays through that, and brought them out on another screen as—white light again!

The result was to show that mankind could never have a good telescope on the principle then followed. Light reaching the eye from a star must split up under the influence of the lens and present a blur of colours, and Newton came to the conclusion that a telescope of this kind could never be made perfect. With his own hands he made a telescope of his own, the first reflecting telescope in the world. He would not trust glass, but made his reflector of polished metal, and got wonderful results, until all turned dark, when he learned that

the damp of three or four days' wet weather had rusted his reflector.

Enormously important results followed this invention. His first telescope was only a few inches long, and today it remains one of the chief treasures of the Royal Society. Huge reflecting telescopes are made now, but the greatest results in astronomy have been achieved by a modification of the telescope which Newton said could never be successfully used. He thought such a thing could not be done, and for many years men gave up the project.

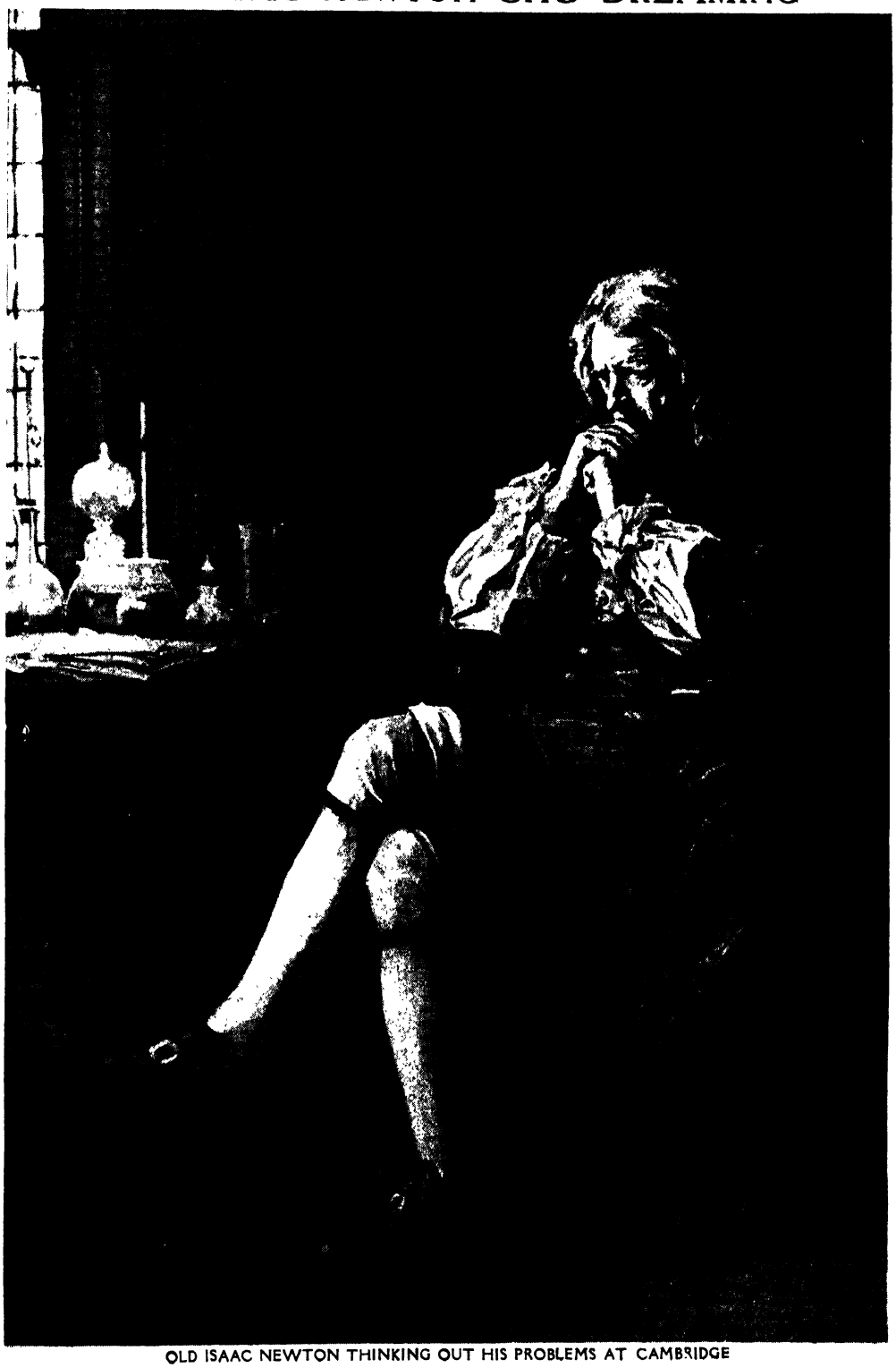
Then it was, when later thinkers began to doubt what Newton had said, that honest John Dollond, a clever optician, whose name we still meet as we go about in London, took up the subject. He believed in Newton, and was indignant that his hero's word should be assailed, and he set to work to prove that the refracting telescope could not succeed. He set out to prove that such an instrument was impossible and—made one! By using ground glass and flint glass of different powers, he produced the very thing which Newton's authority had made him believe beyond the power of human invention. So that Newton was wrong in this view of his, but he gave us the glorious reflecting telescope, and opened up the world of knowledge on the composition of light and colours.

While he was at Cambridge he began to study astronomy, and to speculate on the reason why the heavenly bodies maintain their places and courses. Why did not the moon, which is always revolving around us, dash into the earth? Before he had got far with his studies the Great Plague swept over England, and banished all the students from the university. Isaac went home to Woolsthorpe, and it was while sitting in the garden one day that the famous apple fell from the tree. Why did it fall down? Why should it not fall up, or go sailing sideways? He wrestled with the simple problem of the apple, discovered the secret, and applied the answer to the universe. The earth is a magnet; the moon is a magnet; the sun is a magnet. The apple would have fallen had the tree been a hundred miles high, or a hundred thousand miles high. The greater the distance between two bodies, the less the attraction; but how much less? 'He was unable to carry his theory to its end, for he saw that the results towards which he was tending must be inaccurate. There was no satisfactory estimate of the size of the earth. He realised that the existing calculations must



SIR ISAAC NEWTON AS HE WAS—FROM THE PORTRAIT IN THE NATIONAL PORTRAIT GALLERY

SIR ISAAC NEWTON SITS DREAMING



OLD ISAAC NEWTON THINKING OUT HIS PROBLEMS AT CAMBRIDGE

be wrong, and he shut up his books, put aside the question, and waited.

He waited for seven years, and by that time a scientist named Picard had completed a more exact measurement of the earth's magnitude, and, with this in his possession, Newton set to work afresh. His task was to work out the law of gravitation, the most stupendous achievement ever accomplished by the human brain. He had to make his own instruments for the work, he had to invent new ways of calculating. But as he progressed he saw that he was on the road to the right answer, and he was so excited that he could not trust himself to work out the sum. That he committed to another, to whom, with all Newton's facts and information available, the work was easy.

Why the Moon Does Not Crash Down Upon the Earth

Newton was able to show why the moon does not crash down on us, and how its motion round our planet keeps it in the sky. He was able to show how the attraction of the sun keeps our world in its orbit and prevents us from flying off from somewhere into nowhere, and how and why all the planets and suns keep their regular course through the unbounded heavens. It was an unparalleled feat for a poor young student, worked out quietly by himself, without consultation with anybody, without assistance, with not a word breathed about it. He was too humble to think he had done a great thing, and his enormous discoveries might never have been printed but for a happy accident.

Let us love the memory of Edmund Halley, a younger scientist than Newton. He was the son of a London soapboiler, and was passionately devoted to science. He went to the other side of the world to catalogue new stars, and came back to give his life and fortune to the pursuit of scientific knowledge. When seeking information about the movements of a planet, he found himself unable to solve the problem. The information could not be had, though all the members of the Royal Society tried their hands upon it.

Sir Christopher Wren Offers a Prize of Forty Shillings for the Answer to a Riddle

Sir Christopher Wren offered a forty-shilling book for the answer—forty shillings for the discovery of the greatest system of natural science ever conceived by the brain of man!

Fortunately, Edmund Halley had heard of Newton, and went down to Cambridge to see him. He asked his question, why such and such a planet behaved in a certain way, and he received the most astonishing answer ever given. Newton, by way of reply, unfolded to him the whole scheme of the mechanics of the heavens.

The sublime discovery was all in writing, put away unseen and unannounced.

How Halley got it printed and made it known to the world is a long and charming story. Newton was already a member of the Royal Society—for many years he was its president—but he was too poor to pay his fee of a shilling a week, and was excused. Halley got him to send up his paper on gravitation to the society, and Newton did send it, in writing. There has never been anything like that incident before or since, so there is nothing with which to compare it. Here was the greatest discovery ever made, more colossal than the works of Archimedes, and there existed only a written copy of it. Even now the society was too poverty-stricken to print it, as also was Newton. Halley wrote to Newton that the Royal Society was to publish it, but it was Halley himself, splendid fellow, who really undertook the work and cost.

The Story of the Wonderful Book that Newton Wrote

Newton made the discoveries, generous-hearted Edmund Halley revealed them to the world, had the works published, looked after the printing, paid for the cost, did everything as if the work were his own, but saw to it that his great friend had the glory.

All the time the world was beginning to know of his mighty work, Newton remained quietly at Cambridge, thinking it passing strange that as many as two hundred copies of his book should be printed. Two hundred copies of the greatest work of mathematical genius ever composed! Well, the society had had experience. They had printed a book about fishes at their own cost, and that had broken their bank. They had got their book of fishes, but nobody else would have it, so when they had to pay any money they would say, "£50 in money, or fifty books of fishes!" Charles II. was really the founder of Newton's society, and it might have been thought that he would help from the State funds, but he was too much engaged with dissolute company to do that.

It was under that worthless king that Newton made his mighty discoveries, and he toiled at Cambridge on into the reign of James II. James, however, brought the quiet, docile lion of science from his lair as a defender of the university's rights. The king ordered that, despite the law, a

Benedictine monk should be admitted as Master of Arts. Religious distinctions are monstrous, of course, but this was a clear case of a bad king's determination to override the Protestant religion. As the law stood, the monk could not be admitted to the degree without taking the Protestant oath, but the king was resolved that he should be honoured without taking any oath. The university authorities, divided between devotion to the Crown and to the law, were in great distress, but decided to resist, in spite of threats, and they were ordered to appear before a high commission sitting at Westminster. Forth, then, went the vice-chancellor, accompanied by eight scholars renowned and learned, and one of the eight was Newton. At the head of the court sat the savage Judge Jeffreys, the monster who, acting as the servile tool of a wretched king, conducted the Assize at which he ordered the hanging of 331 human beings, the transportation of 849, and the whipping or flogging of 89 others. This was the grim hireling before whom Newton and his fellows tried to defend the rights of the university against a tyrant's mandate. Newton did not take any active part in the proceedings, but his fine, manly spirit was manifested by his daring to risk not merely his livelihood but his life by appearing in opposition to a despotic king.



SIR ISAAC NEWTON SLEEPS BENEATH THIS TOMB IN WESTMINSTER ABBEY

He was, indeed, a splendid citizen as well as an incomparable scientist. There came a time, in the reign of Mary and William, when we were at war on the Continent and the country was at its wits' end for money. Clipped and debased coins had been called in, and there arose a great shortage of money. The safety of the country was imperilled. The Mint was in a condition of chaos, due to long mismanagement, in which men had been appointed as political favourites, and had done nothing but draw their salaries, leaving the work to others. At this time of crisis Newton was called to take over the management of the Mint, first as warden, and finally as master.

He was really the Minister for Munitions of the seventeenth century, for he had to supply silver bullets in the form of money to keep the country going. He created a revolution in his department, for he did a thing previously unheard of: he actually worked at his task! That was wonderful for those days. He threw science overboard, and worked hard at the Mint, growing angry with those who urged him to give his time to science while he was paid for giving it to the Mint.

Before Newton's time it had been a great feat to get fifteen thousand pounds' worth of silver coins a week from the Mint, but the country now needed at least twice that sum. Newton set nineteen money-mills going in the old Tower of London and trained money-makers. As soon as his new men had been taught how to turn silver into coins, he packed them off in bands to other parts of the country. He established Mints at Bristol, York, Exeter, Norwich, and Chester, to the great satisfaction of the nation. As his men and the machinery arrived at the various towns, they were welcomed by the ringing of bells and the firing of guns. Instead of the £15,000 of former days, Newton was soon turning out £60,000, £80,000, and, finally, £120,000 in silver coins

every week. And so the man who had been dwelling with his thoughts in the skies brought them to earth to save the fortunes of the greatest nation on it.

He had now a handsome salary, and for the rest of his days was a man of comparative wealth. When his duties became less pressing, he returned to science. He made many other great discoveries, some much too advanced for the day in which he lived. As in other days men in armour used to ride abroad inviting other warriors to meet them in the tournament ring to have their skulls cracked, so in Newton's day scholars used to issue challenges to all other scholars inviting them to have their brains racked. They would state a problem which they thought no one but themselves could solve. Newton could answer them all. In one instance he got his problem in the morning, solved it, and had the answer ready almost while he was getting his hat and coat ready to go to town.

We have seen now how great was his mind, great in grasping titanic natural laws, great in moral daring, great in administrative ability. It used to be said that the destruction of his papers by a fire—in which perished the result of two years' labour—turned his brain, but his letters during that period show that nothing of the sort happened, though he was terribly downcast. All sorts of stories are told of his absent-mindedness; of his sitting before a fire until he scorched his shins and called for somebody to remove the stove, never thinking of drawing his chair away. He is said, also, to have caused two holes to be cut at the bottom of a door, one for his cat to pass through, the other for her kitten! These stories may be true or they may not, but it is certainly true that when his mind was occupied with his mighty problems he would sit down on the side of the bed in his nightshirt, and remain there pondering for hours, forgetful of all else. To the end he remained modest, and in his ripe old age he uttered an unforgettable saying. "I do not know what I may appear to the world," he said, "but to myself I seem to have been only like a boy playing on the seashore, now or then finding a smoother pebble or a prettier shell than ordinary, while the great ocean of truth lay all undiscovered before me." What a lesson in humility to all mankind!



SIR ISAAC NEWTON IN A WINDOW AT PETERHOUSE, CAMBRIDGE

He lived during the closing years of his life with his niece and her husband, bright, happy, prosperous, contented with the opportunities his modest wealth afforded him of doing good. With his home-made instruments he wiled away the days of winter and summer, blowing his bubbles, working out new theories about colour, and dreaming of the boundless universe into whose mystic laws he had been privileged to find the way. He died in London on March 20, 1727, twenty-two years after he had been knighted by Queen Anne. The noblest comment on his work was Pope's—

Nature and Nature's laws lay
hid in night;
God said, "Let Newton be;"
and all was light.

That is not the epitaph on his tomb, but it is that which always rises to the mind at the mention of the name of Isaac Newton, the intellectual colossus of the human race who, escaping the turnips and carrots and the huckstering of the marketplace, escaped also the perils of the Plague, faced the wrath of a king, and wrought out unaided, in poverty and silence, the grandest and most far-reaching scheme of knowledge that ever sprang from the brain of a single man.

EUROPE'S LADY-IN-CHIEF

HOW FLORENCE NIGHTINGALE SAVED THE BRITISH ARMY

"The entire British Army is perishing." It is hard to imagine the shock with which these words would have fallen on the nation in the Great War, but they fell on the nation in the Crimean War, and they were true.

In those sad days, within the memory of living men, our brave men died in thousands when they might have lived; they were slain by the cruel neglect of the Government that sent them out to fight in a pitiful cause.

For two things we must always remember the Crimean War. We fought on the wrong side then, and there, perhaps, we sowed the seeds of the bitterness of Gallipoli. But from those battlefields, if Turkey, with our help, emerged victorious and strong again, there came also a new and mighty force in Europe, a living power as of an angel, a Lady with a Lamp that was to shine for ages yet to come.

When the whole British Army was perishing and the nation was aroused by the bitter cry from Scutari, it was a woman, a beautiful young woman in a London drawing-room, who heard the cry and saved the Army.

FLORENCE NIGHTINGALE went out like an angel to the Crimean War. She scourged corruption and uncleanness from the hospitals; she gave food to the starving, clothes to the naked, comfort to the sufferers. She made the hospital a place of healing, not a foul couch on which famished, fevered victims were thrown to death.

Doctors and officers fought against her as if she had been a witch; they hated her interference, and did all they could to hinder her, to override her authority, to break her heart by insult and conspiracy. But she conquered them as she conquered all the enemies of the hospitals and the wounded men. In those noisome dens where our British soldiers were huddled she wrought a miracle of healing. But she did more: she laid there the foundation-stone of the modern hospital system and of modern nursing.

Every nation owes its hospital and nursing system to Florence Nightingale; every army owes to her teaching the health of its troops. She became known as the Lady-in-Chief in the Crimea, and for fifty years she was Lady-in-Chief not only to the British Empire, but to every nation in Europe. It was a wonderful work that she did, this quiet, scholarly woman from a secluded English drawing-room. The mind goes back to Joan of Arc when we think of her; we can almost believe that as Joan of Arc heard spiritual voices calling her, so Florence Nightingale, too, heard voices speaking to her soul. For all that she did was done against probability, against the wishes of her friends, and against public opinion.

She was born at Florence on May 15, 1820, and was named after her birthplace. Her parents were rich. They had a house in London and country houses at Lea Hall, in Derbyshire, and at Embley Park, bordering on the New Forest. It was while her parents were making a prolonged stay abroad that Florence and her only sister were born. Her mother was kind, clever, and charming, but she did not in the least understand her daughter. Florence did not really understand herself. She was brilliantly educated; she became an accomplished linguist and musician, a witty and graceful letter-writer; and she thought deeply about politics and religion. She travelled in Europe; she went to Egypt, studying not only the treasures of art unveiled before her, but human life and suffering, too.

It was this study of suffering that moved in her the desire to take up nursing. Wherever she went she investigated hospital systems—such as they were—and whenever sickness occurred among her relations hers was the ministering hand which brought comfort and relief. But, as her mind formed, she felt within her a power greater than that necessary for the unskilled nursing of the domestic circle. She felt the enormous need for organised nursing. There was her

call. But her parents would not hear of it. The idea that a delicately nurtured young lady should go out as a nurse was preposterous and horrifying to them, and so it seemed to everybody she consulted about it. Why should it have been so?

That terrible old woman of whom we read in Dickens, Sarah Gamp, was no caricature, but was drawn from real life. She was the type of nurse of the period, she and those worse than herself. Hospital nurses were drunken, dissolute, and ignorant women, utterly unfit to be trusted with the care of the sick. Florence knew all about these women and their ways, but she believed that nurses could be as gentle as any other woman. She saw that they took to nursing when they were fit for nothing else, like the old man in the village, who was set up as schoolmaster when he was too old to mind the pigs. "I would rather have men about me when I am ill," said Lord Melbourne, "I think it requires very strong health to put up with women."



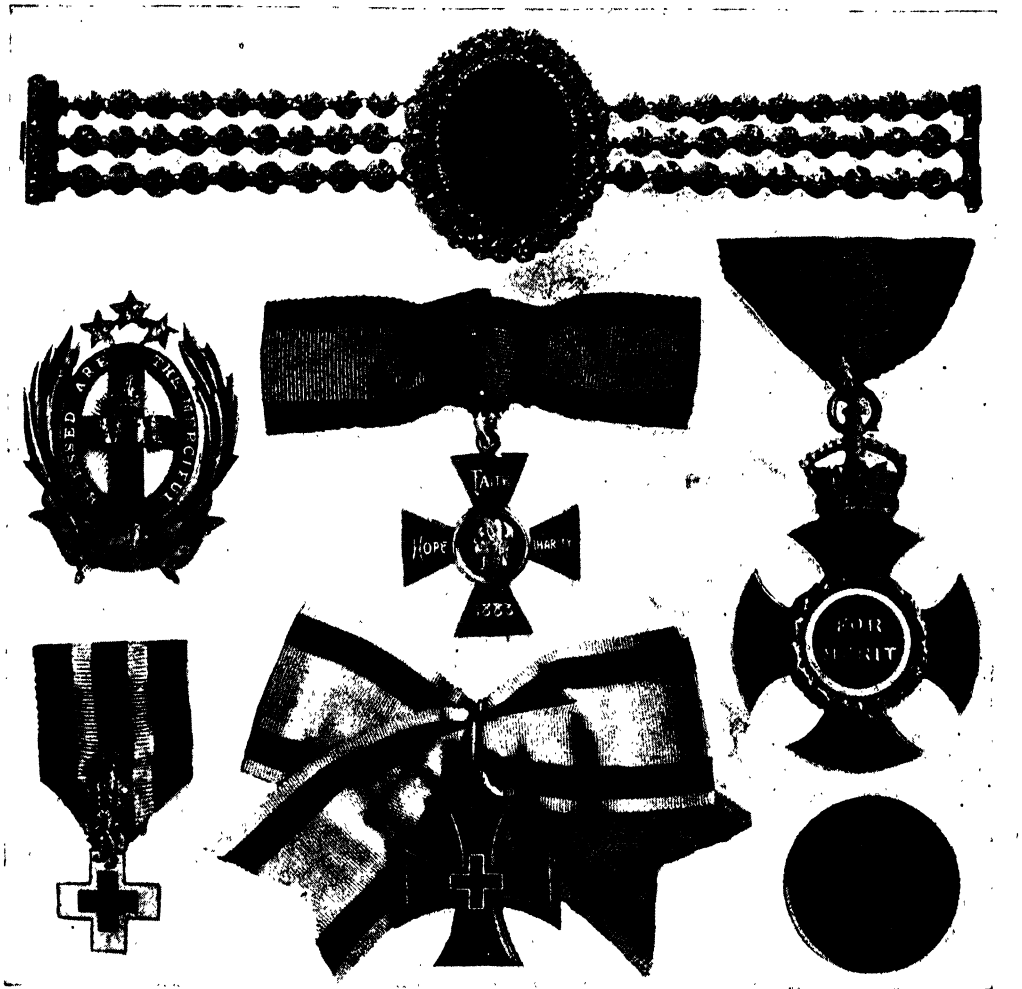
FLORENCE NIGHTINGALE IN HER DAYS OF PEACE
From the painting by Sir William Richmond, by courtesy of Sir Harry Verney

But, though everybody saw the evil of Mrs. Gamp and her drinking ways, few thought it possible to reform her. When Florence Nightingale had her great scheme in working order and was training her nurses, Lady Palmerston, wife of the Prime Minister, said she thought the whole thing a great humbug. "The nurses are very good now. Perhaps they do drink a little, but so do the ladies' nurses, and nothing can be better for them; poor people, it must be tiresome sitting up all night." Lady Palmerston represented her age, which had the sort of nurse it deserved.

The clear vision of Florence Nightingale saw that this hideous system might be altered. In spite of great opposition, she managed to study at various hospitals in England and Paris, Roman Catholic and Protestant, too. Religious creeds did not matter to her—as a good man said, when asked to what faith she belonged, "She belonged to a sect which, unfortunately, is very rare, the sect of the Good Samaritan." At last she approached her heart's desire by securing an appointment as principal of a sanitorium for governesses in Harley Street. She was there when the Crimean War broke out. Our troops were sent to the Crimea, a peninsula in the Black Sea, and such wretched apology for hospital as they had was established on the spot; but the Turks, for whom we were fighting in that unhappy war, made over to us certain buildings at Scutari, on the eastern shore of the Bosphorus, opposite Constantinople. To get the sick and wounded from the battlefield to Scutari took eight days, and by that time a quarter of the men who made the voyage were dying on the horrible ships. Florence Nightingale read what was happening. She read how aged pensioners had been sent out to do the nursing, and had failed abjectly, and that the wounded were having to attend the wounded. She read that, though the troops had been six months in the country, there was no preparation for the commonest operations. Not only were men kept for a week without a medical man coming near their wounds, not only were they left to expire in agony, "unheeded and shaken off, though catching desperately at the surgeon whenever he makes his round through the fetid ship," but when they reached the spacious building at Scutari, where they were led to believe that everything was ready, it was found that the commonest appliances of a workhouse sick-ward were wanting, and that the men must die because the medical staff of the British Army had forgotten that old rags were necessary for dressing wounds.

One day a strange thing happened. The British Army had never recognised the existence of women nurses, but one morning two letters on the subject crossed in the post. One was from Florence Nightingale,

suggesting that she should go out with two or three nurses, at no cost to the nation; the other was from the husband of the lady she was writing to, and was addressed to Miss Nightingale, suggesting that she should go at the expense of the Government! The man who wrote to Miss Nightingale was Mr. Sidney Herbert, a member of Parliament who held an appointment at the War Office. He and his wife were friends of Miss Nightingale, knowing her ambitions, and they felt that her hour had come. But for the chance that these three people knew each other, perhaps we might never have heard of Florence Nightingale. All she asked was that she should be introduced as one who is "not a lady, but a real hospital nurse who has had experience," for she guessed the sort of opposition she would have to meet. But she had a better introduction than that—she was officially announced as Superintendent of the Women's Nursing Establishments in the English Hospitals in Turkey. She started with 38 nurses, some well trained, some not—good, bad, and indifferent, the best that could be got in the time available. Her masterly organising powers asserted themselves at once. After travelling across France, she took ship at Marseilles, and there laid in a great store of all manner of needful things. She knew that medical stores in abundance had been sent



HOW EUROPE HONOURED ITS LADY-IN-CHIEF—FLORENCE NIGHTINGALE'S RIBBONS, BADGES, MEDALS, AND CROSSES

The diamond bracelet at the top was presented by the Sultan; the gold-enamelled brooch on the left was from Queen Victoria; the central decoration is the cross and ribbon of the Red Cross; the crown medal on the right is the insignia of the British Order of Merit; on the left is the badge of honour of the Norwegian Red Cross; the lower ribbon and cross in the centre are the German Order of the Cross of Merit; and at the bottom on the right is an international gold medal.

out, that lint by the ton had gone, but she knew also that these stores were in one place and the wounded men in another. She had heard, no doubt, that the men craved for coffee, and that coffee-beans had been sent with no machines to grind them. She bought what her instinct and training told her would be most useful. And in November, 1854, she reached the scene of her labours—a beautiful, cultured woman of 34, mistress of every refinement, with an income of £500 a year, every penny of which she was spending on her work. The task before her would have appalled most women, but it only served to inspire her with a firmer determination. There were several hospitals at Scutari, some bad, others worse, none good. There were five more hospitals to which she afterwards went, all horrible. Her own description of the hospitals at Scutari may suffice.



WHEN THE WARDS WERE DARK FLORENCE NIGHTINGALE WOULD TAKE HER LITTLE LAMP AND STEAL QUIETLY THROUGH THE SILENT ROOMS

There was everywhere frightful overcrowding, four sick or wounded men lying in the space of one. There was no proper bedding for them; men arriving wounded, frost-bitten, weak and starving, were put foodless into beds with sheets of such coarse canvas that the men begged to be left in their blankets. The hospitals were pest-houses, and beneath them were open cesspools, through which the wind blew sewer-gas into the wards and corridors. The beds and clothing teemed with incredible vermin, the places abounded with rats, and one of Florence Nightingale's first achievements was to make herself an expert rat-catcher, silently killing the rodents as they scuttled along the beams over the heads of her patients at night. The beds extended over three or four miles of wards and corridors; and as the cooking was all done in one place, a meal for all took three or four hours to serve, while the men were dying of exhaustion. Their clothes were terrible; only six shirts a month were being washed, and the floors were washed not at all. As for invalid food, there was none, nor was there any place where it could be properly cooked.

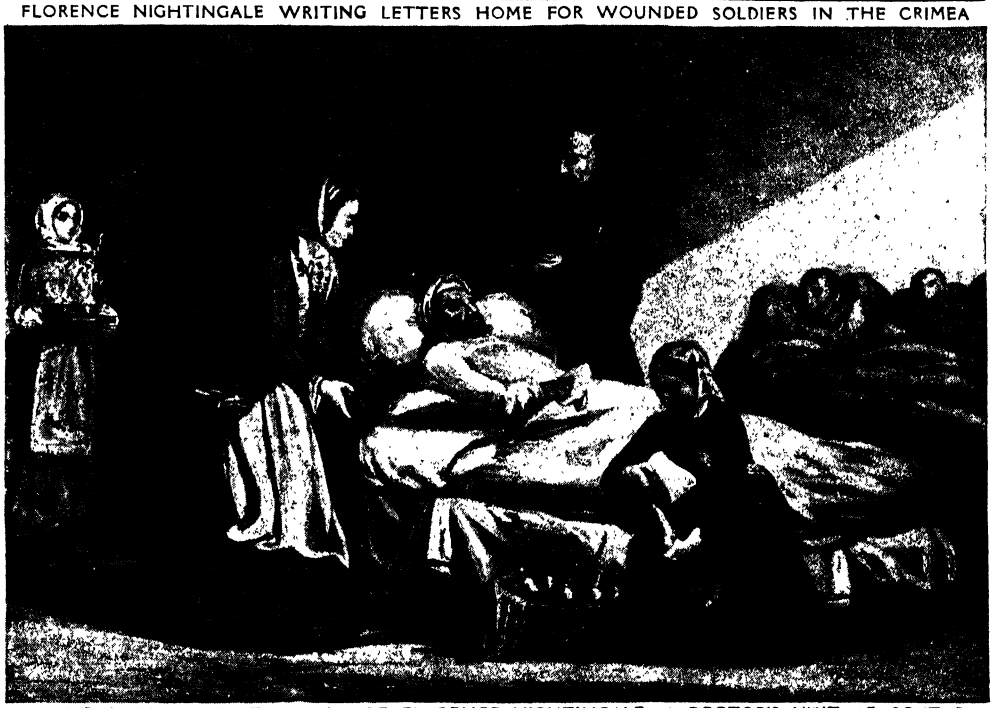
The first thing the Lady-in-Chief did was to go down on her hands and knees and scrub the floors, and then cry, "Now the strongest to the wash-tubs!" They were needed. Such washing of bed-linen as had been done had been done in cold water, and as it came back Florence Nightingale burned it, for this "clean" linen was foul and verminous. She bought stoves with which to cook good food, and so at once prevented men from dying who were perishing from improper feeding. She took a house, had boilers fixed, and set soldiers' wives to do the washing. Within ten days she had two extra diet kitchens fitted up in which to prepare delicacies at any moment. She was progressing, but there was bitter prejudice against her.

The doctors and officers hated her. Books written at the time by the brave but brainless men who helped to officer the Crimean army show with what scorn they met her. The authority with which she was armed enabled her to get her way in many things, but in one she was beaten. The cooking was badly done at one end of a vast building, and there the half-boiled mess was slashed

THE ANGEL WHOSE NAME WAS NIGHTINGALE



FLORENCE NIGHTINGALE WRITING LETTERS HOME FOR WOUNDED SOLDIERS IN THE CRIMEA



A WAR HOSPITAL IN THE DAYS OF FLORENCE NIGHTINGALE—A DOCTOR'S VISIT AT SCUTARI

up and apportioned. To some would go a mess all lean, to some a mess all gristle, to others the bony remnant. She asked that the meat should be boned and sent out properly. But there British discipline triumphed. It could not be done, she was told, without a new Army Regulation! And so sick and dying men still got their bones and gristle—and remained sick till they died, to save the Army Regulations!

It was really a frightful problem that she had to attack. The wounded lay up to the very doors, with hundreds more arriving, men with not three limbs each on an average; yet in these fever-laden buildings there was no operating theatre. Men died under operations in sight of those awaiting their turn. Not even a screen was put round the bed until she provided one, and there was no house in which to place the dead. They were operated on in full view of the ward, and they died where they were. Then they were sewn up in their blankets and carried out.



FLORENCE NIGHTINGALE COMES LIKE AN ANGEL OF MERCY INTO THE LIVES OF THE

News of Miss Nightingale's work reached home, and money was sent out to her by private subscription, little by little, until in the end she had £7000 in this way. The British Ambassador at Constantinople was asked what was most needed for the troops, and replied that the funds which had been raised need only be devoted to the building

of a nice English church at Pera! The Chief Medical Officer at Scutari declared that he wanted nothing in the shape of stores or medical comforts! Yet the poor men had no proper food, nothing to destroy the vermin which were torturing them and basins, no towelling, no scissors for cutting the men's hair.

If things got into the store of the Purveyor, they could not be got out for weeks, "until a Board of Supply had sat." When wounded soldiers were lying shuddering



UNHAPPY WOUNDED SOLDIERS AT SCUTARI WHO WERE PERISHING FROM NEGLECT

spreading typhus among them. They had little or no furniture. Hundreds of them came in from the battlefield with their clothes in rags and their kits lost, with the result that when they were cured they had no clothes in which to go away. There were no forks or knives or spoons; dying men had to tear their food to pieces like animals. There were no mops or scrubbers for the floors, no slippers, no plates, no trays, no and freezing in their beds, this stupid officer had 27,000 warm shirts in his stores, which Florence Nightingale had caused to be sent from England, but he would not part with one "until the Board had sat." The same thing applied to rugs. For weeks men lay shivering and dying for want of shirts and rugs which this wretched creature kept under his lock and key. Our great nurse had the woman's quality of

patience, even in such a terrible environment; but once, when she could not get things the doctor had ordered her to supply, because this precious Purveyor would not release them, she went into his store, broke open the cases, and took by force the goods he was holding back from suffering men. But she did not ride rough-shod even over the head of such a man as this; she suffered him as well as she could, though she had a terrible time. Necessary things sent out from England were packed by fools and stolen by knaves. They were packed under loads of shot and shell, so that they could not be unloaded at Scutari, where they were terribly needed, but must go on to Sebastopol, where they were not needed.



FLORENCE NIGHTINGALE VISITS A MILITARY HOSPITAL AT WOOLWICH

Little by little she got her stores together, until she became the feeder and clother of the army at Scutari. She was expecting 500 more wounded in her already overcrowded hospital, but she had no room for them. There were ruinous old parts of her building, however, which, if rendered sanitary, would accommodate 800 men. She insisted on the work being done, and the Ambassador agreed, but in the middle of the work the workmen went on strike. The Ambassador dared do nothing, and Miss Nightingale engaged 200 men and had the work done at her own expense. She provided fifty thousand men with shirts and great numbers with other clothing; she provided all the things that were missing from the hospitals. "I have met only two men in the Crimea, and one of them was Miss Nightingale," said a traveller.

Let us now follow her in the merciful work of the wards themselves. She worked twenty hours a day. She received the wounded, she dressed their wounds until the surgeons could take them in hand. She washed and clothed and comforted them. She sat with them, encouraging them, before an operation. She gave them life and hope. She made them feel that mercy had come on angel wings into their bitter lives. Her nurses were here, there, and everywhere—wherever the doctors would allow her to send them. The rough, drunken, unskilled orderlies vanished from the nursing, and skilled and tender hands took their places. Florence Nightingale herself was the Lady of the Lamp. When the long day's work was done she would go to her little stuffy room to begin her correspondence; then, after a time, when the surgeons had retired, and the wards and corridors were dark, she would take her little lamp and steal quietly through the silent rooms, among the sick and dying men. She would kneel by bed after bed to speak a word of comfort; she would give medicine here, food or drink there.

The Lady with the Lamp was to these poor sufferers indeed an angel of mercy. A dying man lies shivering. He must have a hot bottle at his poor feet, she says. Can't be done, says the man in charge—can't be done without the orders of the doctor. Florence Nightingale goes off, and brings back a hot-water bottle. On a cruel night, with a bitter wind blowing, the men lie blue with cold in their beds. They must have more fires. "Can't be

SARAH GAMP RECEIVES NOTICE TO GO



THAT TERRIBLE WOMAN WE MEET IN DICKENS, SARAH GAMP, WAS A REAL FIGURE, THE NURSE OF OLDEN DAYS, BUT NOBODY THOUGHT SHE COULD BE IMPROVED TILL FLORENCE NIGHTINGALE CAME

done." Regulation allowance has been put on, and there's no more to be said. Florence Nightingale goes out and brings back fuel to stoke the fire.

No wonder the men worshipped her, though at first they were a little afraid and shy. "Never be ashamed of your wounds, my friend," she would say in her gentle, musical voice. Her gentleness made poets of some of these rough men. There was a giant Highlander who wrote home of her and her work, telling a beautiful story. "What a comfort it was to see her even pass! She would speak to one, and nod to another; but she could not do it to all, you know—we were lying there by hundreds—but we could kiss her shadow as it fell, and lay our heads on the pillow again, content." It was a beautiful idea, and this soldier's letter travelled round the world. Longfellow used it in his poem on "The Lady of the Lamp."



FLORENCE NIGHTINGALE AS SHE STEPPED OUT OF A LONDON DRAWING-ROOM TO SAVE A PERISHING ARMY

The soldiers regarded her as men regarded the saints of the Middle Ages. "If they were told that the roof had opened and she had gone visibly up to heaven," we are told, "they would not have been surprised." They believed in her power as much as in her tenderness, and they used to say, "If she was at our head we would be in Sebastopol in a week."

But we must hurry on. She stayed the winter at Scutari and made a revolution, and, whereas the deaths had averaged forty-two in every hundred, they were now down to about two in every hundred. So, in the spring of 1855, she went to the Crimea itself to attend to the hospitals there. The Crimea surgeons objected, and reminded her that she was superintendent of the nursing staff in Turkey, and the Crimea is in Russia. But she went, nevertheless. She had an escort. He was Thomas, a drummer-boy of twelve, who called himself "Miss Nightingale's man," a perfect gem of a boy, who proudly declared that he had "forsaken his instruments in order to devote his civil and military career" to Florence Nightingale. We lose sight of little Tommy, but when the Lady of the Lamp reached home she took with her, as spoils of war, a sailor-boy with a wooden leg, for whom she found work, a one-legged soldier, whom she set up for life, and a wonderful little Russian orphan boy, who came as a wounded prisoner to her hospital. She arranged for his education, and one day one of his teachers asked him, "Where shall you go when you die if you are a good boy?" "To Miss Nightingale!" he answered.

In the Crimea she saw men in trenches, and she saw them there five nights out of seven, thirty-six hours at a stretch, with nothing to eat but raw pork sprinkled with rum and sugar and powdered biscuit. They could not cook their food, because when the time came they were too tired to collect fuel for the fires. She set to work reforming, as she had done at Scutari, but she had done very little when she herself was struck down with fever. She was carried to a hut immediately behind those of the soldiers. In England the news of her illness created a sensation as profound as if we had lost a great battle. She was very near death, yet she managed to pull through; but she recovered, with her beautiful hair cut off, looking like the ghost of her former self. When she was well enough she was taken back to Scutari,

feeble, unable to feed herself or to speak above a whisper, but she would not go home. She worked on until the last British soldier had left the hospital and the war was over.

At home by this time she had become a national heroine. Hundreds of poems were written about her; pamphlets describing her life were sold in the streets. Her face was stamped on pottery, on tradesmen's paper bags, on showmen's booths, on notepaper in a thousand homes. Lifeboats, emigrant ships, children, streets, waltzes, race-horses, were named after her. She hated it all, but one thing pleased her—the founding of a Nightingale Fund which she was to spend as she liked.

Great preparations were made for her home-coming. The Government wanted to send a warship for her, but she travelled across Europe as "Miss Smith." Preparations were made for triumphal arches, for receptions by mayors and corporations, and for illuminated addresses; but she slipped into England as Miss Smith. She hid at the house of a friend for the night, and then, taking train in the afternoon, she reached home unnoticed. She had been away two years, and only a tinkle of thanksgiving from the bell of a little church on a hill marked the joyful completion of her mission.

The Power that Perhaps No Other Woman in the World has Ever Had

The Crimea was the "call" of Florence Nightingale, but it was only the beginning of her work. It gave her such a power as, perhaps, no other woman in the world has ever had. It set her in high favour at Court and with Governments. Her fund realised over £40,000, and with this money behind her she established a training school for nurses and began many great reforms.

She set herself to reform entirely the health arrangements of the Army, not only in time of war but in peace; for she was able to show that, horrible as were our civil hospital records, the death-rate among soldiers in peace-time was twice as high as among civilians. She achieved her purpose. She insisted that the Army should be educated, that the men should have reading and recreation rooms as well as canteens, and again she had her way. She turned her attention to the workhouse system of hospital nursing, and cleansed it of its horrors, and finally she assailed the entire hospital system of the country. She became the Lady of the Lamp indeed; she became the high priestess of light and air. She denounced the hospitals with boarded-up windows and no proper ventilation; she set herself in defiance of physicians who, seeing the beds of their patients exposed to the light, would have the beds moved into shadow. She insisted on proper drainage and hygiene. She founded modern nursing, and all the great nursing associations and all the Red Cross societies throughout the world have spread from her work.

The Hard Work Florence Nightingale Did Out of Sight of the Public

Yet all this time Florence Nightingale was an invalid. She never recovered from the hardships and overwork of the Crimea. For over half a century she lived a chronic sufferer, and when she reached home she worked so hard, day after day, year after year, at her great schemes that she suffered permanently from heart and nerves. She lived out of sight of the public, and very often out of the sight of friends; but Cabinet Ministers would go to see her, architects building new hospitals or barracks or schools consulted her. From all lands appeals came for her help, and she denied her aid to none. Her home in London was a sort of Court, to which the most distinguished people in science and learning sought admittance. Most of her work—writing, dictating, advising—was done as she lay in bed or on her couch, but almost to the end she never flagged. We owe to her the sanitary and medical reforms of the whole British Army, as well as our modern nursing and hospital system; and all nations have copied from her.

All our great soldiers and sailors, our administrators and health reformers, went to her for counsel and instruction. To the end, in all that is best for the health of the individual and the nation, she remained a great, dominating mind. She died on August 13, 1910, at the age of ninety.

The Quiet Years Through Which the Lady of the Lamp Lived Unknown in Mighty London

Thousands of the general public did not know, until the announcement of her death, that she had been still alive in our midst. She was a tradition, a glorious legend, to most of us—a sainted memory, so close had been her seclusion. But those who were moving the world knew. Those who were curing the sick and keeping the healthy well—these knew that in a quiet drawing-room in London lay the great and noble woman who had gone out half a century before from such a room to become as an angel to thousands of men then living, and to live as an angel still in the hearts of millions then unborn.

MICHAEL ANGELO AND HIS WORKS



DAVID



THE THREE FATES



THE MOTHER OF JESUS



MOSES



MICHAEL ANGELO—BY HIMSELF



THE THINKER



JACOB AND JOSEPH IN THE SISTINE CHAPEL

WONDERFUL MICHAEL ANGELO

Out from a wooded valley rides a man, humbly mounted on a mule. He is a lean, unshapely man, with disfigured features, the bridge of his nose beaten flat to his face. Yet there is something majestic and noble in his look, for in spite of his nose, in spite of a meagre, wispy beard, there is a solemn grandeur in his eyes.

And as he emerges from the valley the great dark eyes light up; he gazes with rapture on a mountain of noble outline, and he is instantly fired with a great resolve. As he surveys its towering height and its rugged outline, a tremendous thought fires his mind. He would carve the summit of the mountain into a monument to last till mountains crumble into dust. That was his instant thought, a colossal design to impose the majesty of human art on the majesty of Nature's own creation.

The man was Michael Angelo, and this astounding thought that came to him gives us in a flash the key to his marvellous career—his towering ambition, his wonderful faith in his own great powers.

He knew himself for what he was, a genius with the capacity of a hundred men. He was content to leave to others the unfatiguing task with palette and easel, the minute excellencies of the goldsmith's refined art, the raising of dwellings for rich merchants and haughty princes. He would master a mountain and make its mighty outline take the shape which his chisel should direct. Nothing was too great for his imagination. When he first saw the Parthenon in Rome, he said, "I will make another such building, but I will hang it in the air!" And he did it, or something like it, for his Parthenon is the dome of St. Peter's, the cathedral in which fifty thousand men can stand. His "hanging Parthenon" was one of his achievements; his desire to carve the mountain was one of the things which he was compelled to leave undone. There is a great list of the things he planned and began, but had to leave unfinished. That arises from the fact that no other man ever attempted so much, and perhaps no other man of his time was so hampered by enemies, by calamities, and illnesses.

The things he left undone are many, but the things he did are more. He carved the mighty David and the awe-inspiring Moses, and the all-but breathing figures in the church of San Lorenzo at Florence, which he made world-famous; he painted the Sistine Chapel at the Vatican, the most tremendous achievement by one man in the whole history of art; he fortified Florence in her wars as she had never been fortified before; and, to crown all, he wrote poetry which ranks with Shakespeare's sonnets, and made him the foremost poet of his age—he, Michael Angelo, the man on the mule at the foot of the mountain.

We must know more of him before he makes that dramatic appearance in the valley. His name in full was Michael Angelo Buonarroti, and he was born on March 6, 1475, at Caprese, near Florence. His family were all Florentines, but when the child was born his father was acting as resident magistrate in the place where Michael Angelo was cradled. At the end of his term of office the family returned home, taking up their residence at the village of Settignano, overlooking Florence. Nearly all the villagers were engaged as masons or marble-cutters, and Michael used jestingly to suggest that he gained his love for sculpture with the milk which fed him as an infant. As soon as he was old enough he was sent to school, but, though in time he became an accomplished scholar, he would do nothing at first but draw. In after life he objected much to drawing, declaring that he was no painter but a sculptor, but in his early years drawing was his passion.

Now, his family thought it a disgrace that the boy should be a mere artist, and many were the scoldings and thrashings the boy received from his father for his disreputable tastes. What mother would not be proud today to have a sculptor or a painter for her son? But it was not so with the Buonarrotis, or, at any rate, with the father, for the mother died when Michael was but six.

The Days When Knowledge Spread from More to More in Europe

Their disinclination seems all the more incredible today from the fact that the Renaissance, the rebirth of learning, in which Florence led the world, was at full tide at this time.

Knowledge of a greater and glorious intellectual past had long been slowly filtering westward across Europe. Rich men beggared themselves in buying manuscripts from Constantinople; they glorified almost as a saint a man who went to Constantinople to learn Greek; they educated men solely to interpret classical authors; and one aged priest, recognising the wonders of the old philosopher's works, kept a lamp burning day and night in his Christian church in Florence in Plato's honour. With the love of letters came the love of sculpture and noble dwellings and fine pictures. Lorenzo the Magnificent, who ruled Florence at this time, and was one of the most generous patrons of art ever known, set up a garden and schools where classical statuary was available for all to study and imitate. He raised noble buildings, and rich citizens vied with him in erecting palaces which were also fortresses.

The Clever Boy Who Improved Upon His Master's Work

But the Buonarroti family had no desire to contribute personally to the splendour of the city rising about them, and so little Michael was beaten and lectured. Still his will was not to be cowed.

Art had entered his blood and brain, and he was always busy with a brush or pencil, or mallet and chisel. So, as the child would not give way, the father did, and behold Michael Angelo at thirteen apprenticed to the best Florentine painter of the day, Domenico Ghirlandajo, with a tremendous financial understanding at the back of the business that the lad, instead of having to pay a premium, should actually receive eight florins a year! The money was never paid, however. Little Michael showed astonishing facility with his brush, and, although he had to grind colours and play the drudge in the studio, he managed to paint a picture which startled his master, and, when copying that master's work for certain church paintings, to improve upon it. We generally read that the master becomes jealous of a clever boy pupil and gets rid of him, and the same story is told here. It may or may not be true, but it is true that when the boy was fourteen he was sent to a school of sculpture set up by Lorenzo in the grounds of St. Mark's.

The Old Workman of Donatello Who Taught Michael Angelo

Donatello had died, a very old man, some years before Michael's birth, but his old foreman survived. This was Bertoldo, the workman, who was really a fine sculptor, and finished the exquisite pulpits of San Lorenzo which his master had left for another hand to complete. And old Bertoldo, too aged for work, was in charge of the collection to which Michael now went. There, then, we have the boy, surrounded by some of the greatest glories of ancient art, now directed in his studies by this fine old man, who linked him with Donatello and the ancient masters.

Michael's first original work was a laughing faun in marble, which caught the quick eye of Lorenzo, who forthwith took him into his own house and treated him as a son. In the prince's home the boy associated daily with the greatest scholars of the age, and at fifteen carved in marble the battle of the Centaurs and Hercules. A wonderful

LITTLE MICHAEL DRAWS A PORTRAIT



A DRAWING LESSON BY THE WAY IN THE EARLY DAYS OF MICHAEL ANGELO

piece of work it was for a boy, full of imagination, strength, and intimate knowledge of the human form. It still exists in his old home in Florence, and is known all over the world by photographs.

Guided by his master as well as by developing talent, Michael studied painting afresh, and was sent with other students to make copies of frescoes in the churches.

The Man Whose Mark Michael Angelo Carried to the Grave

The work was easy to him, but not to all his friends, and his candour in pointing out their faults cost him his disfigured face. If we turn to Benvenuto Cellini's own life-story we get the tragedy in the words of the very man who was guilty of it. The offender was one Torrigiani, a youth somewhat older than Michael, and big and hot-tempered. In after years he met Benvenuto and found that strange genius studying the work of Michael Angelo, "my divine master," as he called him. Then Torrigiani told him this story.

"Buonarroti and I," he said, "when we were lads, used to go to the Church of the Carmine to study in the chapel of Massacio. Now, Buonarroti had a habit of teasing all the rest of us who were drawing there; and one day in particular he was annoying me, and I was more vexed than usual. So I stretched out my hand and dealt him such a blow on the nose that I felt it yield under my fist as if it had been made of crisp wafer. And so he'll go with my mark upon him to his dying day."

The Terrible Preacher Who Made Michael Angelo Tremble

Benvenuto was at the time considering an offer of Torrigiani to accompany him on his return to England, but he was so horrified at his words that he never again spoke to him. That is the history of the disfigured features of the man who loved beauty with his whole soul, next to religion and virtue.

Michael was only seventeen when Lorenzo died, and as his successor was an empty-headed noodle, as royalties so often are, the young artist left his household. Savonarola, the monk who preached against the corruption of Florence and predicted a terrible Judgment Day, was twenty years older than the young artist, and greatly terrified him. For study of the ancient masters had introduced a certain pagan atmosphere into the new art and into public life, and Michael Angelo had drunk in all the lessons of the past.

He left Florence and wandered to Bologna, where he had to flee from fear of the local sculptors, who declared that his work was taking the bread from their mouths. He returned from his travels, to find the son of his old patron a fugitive, and Florence governed by a party set up by the fiery Savonarola. The monk's enthusiasm had grown into fanaticism, and he was having bonfires in the public square of precious works of art.

The Sleeping Cupid That Michael Angelo Buried in the Earth

Michael Angelo was mortally afraid of him, yet he carved more "pagan" works, and still trembled. Leonardo da Vinci watched the monk with contemptuous, pitying eye, and secretly drew him as Satan presiding over the bonfires in which priceless art was perishing. Savonarola was cruelly put to death when our hero was twenty-three, but there can be little doubt that the terrific sermons to which the boy had listened affected him all his life afterwards, and found expression in the terrible paintings he bequeathed to the world.

A trick got him to Rome. He executed a figure of a sleeping Cupid so perfectly resembling a piece of Greek statuary that it was suggested that he should hide it in the earth for a time, and then have it dug up and put forth as a discovery of an ancient treasure. He fell into the plot, executed what was declared the finest piece of work of the time, and the statue was carried to Rome and sold to an art-loving cardinal as ancient Greek. When the story came out the



MICHAEL ANGELO AT WORK ON HIS MIGHTY STATUE OF MOSES
From the Painting by R. Torrini

cardinal was angry, but, realising the wonderful merit of the statue, he sent for the young sculptor to Rome. Here his first outstanding work was a marble group, " La Pietà," one of the loveliest things he ever did, representing Jesus, after the descent from the Cross, lying upon the knee of His mother. The tender sorrow upon the mother's face, and her whole attitude, complete a picture which seems to say, " Was ever grief like this in the world before ? " It stands today in a little side chapel in St. Peter's, the first we see as we go in. More than four centuries have passed since the sculptor carved it, and it is a little stained by time and dust, but once you have seen this group you are for ever a disciple of the unhappy man

who so lovingly and proudly carved it. For he was unhappy. His family had fallen on evil times. The revolutions and troubles of Florence brought them to poverty, and Michael had to support his father and his brothers.

He toiled in Rome with feverish energy, and went short of food and rest to do it, and he made himself ill in the attempt. So his father wrote to him from Florence, warning him against starvation and miserly living, and it is odd to read the advice he gave his son, ending with this remarkable injunction: "Above all things, never wash; have yourself rubbed down, but never wash!"

How He Built a Workshop Round a Rock and Carved Out David

When Michael returned to Florence he was famous, the foremost sculptor of the age, and commissions poured in upon him. Some of them vexed his heart to the end of his days, for he could never carry them out. But instead of applying himself to any of these works he commissioned himself. From the exquisitely subdued feeling of the "Pietà" he yearned to do something that should match the power and strength he knew to be within him. There had lain in Florence for forty or more years a colossal block of marble which a rough-handed sculptor had begun to carve and partly spoilt. Michael Angelo obtained this block as a gift. He built a workshop of wood around it, and there, with hammer and chisel, he wrought for two years and completed his gigantic statue of David, his greatest figure. Leonardo da Vinci helped to choose its site, and it was placed on a pedestal outside the Old Palace in Florence near where Savonarola was put to death.

The Two Great Men Who Did Not Love Each Other

There it stood for nearly four centuries, until it was found to be damaged by rain, when it was removed. A fine bronze duplicate of it that all the world knows stands on the hill overlooking Florence. There are many copies of it, and casts of the limbs are still given to art students as the perfection of modelling. It is a Titan of noble mien, anatomically perfect, with strength, defiance, yet with something of the melancholy of the sculptor. He had passed from the dainty, boyish fancies of his earlier work into a lasting mood of the gigantic and rather terrible—though he did at this time, it is true, his famous painting of the Holy Family, a masterly work, but utterly unlike the treatment of the subject as seen in the works of other painters.

It was about this time that he entered into competition with Leonardo. Leonardo was twenty years his senior, but there was keen rivalry between the two, and, on Michael Angelo's part, keen dislike as well. The two greatest men of the age, two of the greatest men of any age, were pitted one against the other to decorate the two sides of the great Council Chamber of the Old Palace of Florence. We need not retell the story, which is well known, except to say that each man prepared a cartoon of his drawing; that neither did the actual painting, but that the cartoons themselves remained on exhibition for all the people to see and wonder at.

The Wonderful Tomb Michael. Angelo Prepared for the Pope

Leonardo left his half done, a masterly fragment, but the other remained for some time before being destroyed by a rival. So long as it lasted, Cellini tells us, it was "the school of the world," and yet only copies of fragments remain. Michael Angelo would probably have carried out his scheme, but now he was summoned to Rome to the tragedy of his life—to his most splendid work, yet his greatest trial and tribulation.

Pope Julius II., impressed by the grandeur of the sculptor's work, called him to Rome, and bade him prepare for him a noble mausoleum. The Pope was a warlike man, feared in battle as in peace, and he could not have chosen a more passionate, high-spirited servant for the work. But all began well. Michael Angelo sketched what would have been the most superb tomb in the world. It was to embrace forty gigantic

FIGURES ON MICHAEL ANGELO'S GREAT ROOF



JOEL



THE DELPHINE SIBYL



EZEKIEL



ZACHARIAH



ISAIAH



THE CUMEAN SIBYL



THE ERYTHRAEAN SIBYL



JEREMIAH



A DECORATIVE FIGURE

A FEW OF THE IMMORTAL PORTRAITS THAT CROWD THE SISTINE CEILING

statues, besides reliefs in bronze and exquisite tracery, and was to cover an area of nearly 800 square feet. St. Peter's was too small for such a tomb, so the Pope decided to rebuild the church, and set Bramante to work on the plans. The sculptor went to Carrara to superintend the hewing of the marble, and lived there while the work was in progress. He returned to Rome, and the great piazza of St. Peter's, which was once Nero's circus, soon became stacked with marble.

How the Great Artist Went Home Again in a Great Temper

Then came the first rift. A quantity of marble arrived, and Michael Angelo, desiring to see the Pope to obtain the money, was refused admission. The angry sculptor immediately went home to Florence. His return was fiercely demanded by the Pope, and Michael Angelo made up his mind to flee to Constantinople and take service with the newly settled Turks. But he remained, and the Pope, having concluded a successful war against Bologna, threatened to turn his arms against Florence unless the artist rejoined him. Michael Angelo went to the Pope, was forgiven, and ordered to set up a figure of the Pope in bronze at Bologna. Owing to the stupidity of the bronze-casters, the work occupied over a year, and three years later the citizens seized the work and converted it into cannon.

The Painting of the Wonderful Ceiling of the Sistine Chapel

During the sculptor's absence from Rome, his enemies and rivals persuaded the Pope that it would be unlucky to have his tomb built during his lifetime, and that it would be better to employ Michael Angelo to paint the ceiling of the Sistine Chapel. This, they hoped, would ruin him, for he had had no experience of such work. The Pope fell into the trap, and bade the sculptor turn painter, in spite of his agonised protests. Michael blamed Bramante and Raphael as chief conspirators in this plot, but, be that as it may, he began the work. He began with half a dozen assistants from Florence, but, these not satisfying him, he bundled them out, locked himself in the chapel, obliterated their work, and set out to do the whole of this enormous task himself. The ceiling is a vault of 150 feet by 50 feet, and he covered it with nearly 400 figures, most of them 10 feet high, telling the story of Creation, the Flood, and the hope of final redemption. He had to lie on his back at the top of a scaffold, working in torturing positions, so that he could neither eat nor sleep properly; he was tormented by his relatives; he was continually harassed and once actually beaten by the Pope, whom he enraged by locking him out of the chapel until the work was finished.

At last the work was revealed, and the world realised that the genius and superhuman strength of the painter matched his qualities as a sculptor. Then the Pope died, and Michael Angelo was ordered to remodel the tomb. He had barely begun when the new Pope sent him to Florence to decorate the façade of San Lorenzo's church with marble and sculpture.

The Beautiful Chapel and the Mighty Walls He Built for Florence

Again he had to go out quarrying marble, and then, two deaths having occurred in the Pope's family, the tormented genius was taken off his new work to build a chapel as a monument to their memory. The new Pope quickly passed away, and then came a Dutch Pope, who looked with horror on paintings and sculptures in churches. He passed, and then came Clement VII., who, while the artist was building the chapel and carving the incomparable Medici tombs in it, pestered his life out for a new library at the Vatican.

The land now became convulsed with war. Rome was pillaged, and the Pope was besieged, and Florence became involved in a war for the right to govern herself, and called upon Michael Angelo to help. He built her wonderful fortifications, so that she held out for a year, and then fell only through treachery. The war died down, but not Michael Angelo's troubles. He was toiling at the Medici

tombs, he was badgered to finish the tomb of Pope Julius II., and all the time his family worries continued. Eventually he did finish his work at San Lorenzo's in Florence, and the chapel of the Medici and its tombs are among the world's masterpieces. He returned to Rome, to find Clement VII. dead, and resumed the labours he had begun thirty years before upon the Julian tomb, when suddenly a new Pope, Paul III., appointed him chief architect, sculptor, and painter to the Vatican, and ordered him to paint the altar-wall of the Sistine Chapel.

Here the painter depicted the Last Judgment, most terrible, most wonderful, most thrilling, with gloomy, hopeless, gigantic figures, a wrathful Saviour, mighty in frame as a gladiator, with doomed souls about Him cast to appalling fate, and even the redeemed seeming in agonies of terror. Eight years' work went to the making of this vast picture of gloom and horror.



THE BRONZE STATUE OF MICHAEL ANGELO'S DAVID, STANDING ON THE HILL ABOVE FLORENCE

He finished the Julian tomb at last, with but three statues instead of forty; but one of these is the colossal Moses, a grimly powerful, contemplative giant, seated and gazing afar as if in dire wrath at the breaking of the Tables of the Law which he holds in one of his mighty hands.

By this time Michael Angelo was nearing eighty, but the building of St. Peter's remained, and the veteran did not forget his young ambition. He did "hang a new Parthenon in the air." But first he dismissed the incompetent and knavish hordes who had gathered about the building; he abolished much rubbishy work done since the death of his old enemy, Bramante. Many new enemies were ranged against him, but still another Pope reigned, Julius III., and trusted him.

At first he carried the scheme of the dome in his heart, and would let none know its details, but at last he consented to make a wooden model, which we can still see at the Vatican. While all those dear to him were dying, and he was nearing his end, he used to sit at a window of his house and see his great dome slowly rising, little by little, into reality. His last days were crowded with an enormous variety of work—work on the Capitol, designs for new churches, monuments for existing churches, and his poems. He was always ill and unable to rest, but he wandered out in all weathers,

on horseback or on foot, the fire of his energies burning fiercely, though his frame was breaking. He was last seen in the streets in a raging storm, and then for four days and nights he sat in his chair, and there died, on February 18, 1564, all but eighty-nine years old. Even at his death strife centred still about him. Rome, for which he had done so much and suffered so greatly, had made him a citizen, and she now claimed his body, though he had passionately desired to lie at Florence. To carry out his wish, his friends secreted the body in a bundle of merchandise and smuggled it out at dead of night, to be buried at last in the church of San Croce in Florence.

He never married ; he had but one love affair, late in life. That is a story sad and beautiful for another day, a story beginning when he was fifty-nine and ending when he was seventy-two, but productive of his most exquisite poetry. His life was too crowded and varied and extraordinary to come easily within a short article, and not the half of his glories nor a tithe of his sufferings can be told here. But in any six of the world's greatest men since the dawn of civilised life, Michael Angelo must always be included.



THE GREAT HEART OF A GREAT MAN—MICHAEL ANGELO SETS ASIDE HIS IMMORTAL WORK TO ATTEND AT THE BEDSIDE OF HIS SICK SERVANT

JULIUS CAESAR

THE FOREMOST MAN OF ALL THIS WORLD

NEARLY two thousand years ago a man engaged in a mighty war, with only a small army pitted against nations, looked out across the sea, and at the farther side of a narrow channel he beheld white cliffs that were new and strange to him.

What walls they were, he did not know. He knew that the enemies with whom he was desperately grappling were wont to visit that strange land, to flee for hiding and stir up new troubles against him. He knew that the centre of their religion was there, the mysterious Druid faith with strange lore. He knew that there were mines and metals there, and fierce dogs for fighting, and good corn for bread; and there was a romantic story of pearls in the waters that washed against the foundations of those white cliffs. So he determined that, when he had nothing better to do, he would cross the narrow channel and see the white-walled land behind.

We all know this man who turned from the battlefields of Gaul to look out on the white walls of Britain. His name was Julius Caesar.

We have listened entranced to the romantic story of the voyage of a handful of Romans in their little ships crossing the sea to the coast somewhere between Deal and Walmer, the story of the fear of the small force to land in face of the powerful opposition on the shore. We have heard of the gallant Roman standard-bearer who seized his flag, plunged into the sea, and cried, "If you would save your eagle from capture, follow me!" There was the short scurry into the interior of the country, the storm at sea which wrecked half his ships upon the shore, the rapid repair of the vessels by his splendid soldier-mechanics and shipwrights. There was the return to France and the second coming with larger forces, and the anxious series of engagements which carried Caesar from the coast right up to St. Albans, where he forced a treaty with the British ruler; then back to the coast and back to France, to return no more.

It all occupied but two short periods in the years 55 and 54 B.C., and it was to Caesar one of the most unimportant things of his life. But it is all sheer wonder and romance to us, for it was to our land he came, with our rude forefathers that he fought. To them he gave civilisation's first stern, beneficial lesson; from them he learned one simple thing, which was destined one day to save him and all his army, and, by giving him a little longer life, to enable him to alter the course of humanity.

He got a good idea of the size and shape of our land; he mastered with his swift and comprehensive brain the characteristics and occupations of our people. But he noted something else which would have escaped the attention of nearly everybody but himself. He saw our ancient British ancestors skim the waters in their little coracles, the neat, small boats made of boughs of trees and covered with the skins of animals; and that simple idea was the peg on which hung the highest glories of Roman civilisation, and through hers the civilisation of the world. His visits, brief and barren as they seemed, left behind the first precious seeds of true civilisation in these islands, and in exchange he took away the scheme of a painted savage's canoe; and the exchange proved richly profitable.

The expedition to Britain, meaning so much to us, meant little to Caesar, for he was seeking to conquer not only an island, but the world. Rome was mistress of the world in name; he sought to make her really so. But he had a mission which was

greater than that of a military conqueror; he was seeking not merely to complete and consolidate the victories won by the sword of Rome, but to conquer victorious Rome herself, to win her from corruption, vice, and crime of every sort; to establish a reign of law and order, of justice and mercy, peace and prosperity, in his own land as well as in every land over which the Roman eagles flew.

How Caesar Came at a Great Parting of the Ways

Caesar was one of the greatest generals who ever lived, but he was also one of the greatest crusaders, one of the mightiest thinkers, one of the towering reformers of all time. When he was battling with fierce, brave barbarians in our native Britain, he was thinking of the land and its people as merely a tiny unit in the mighty structure of law and righteousness which he aspired to set up.

Julius Caesar came into the world when Rome was at the parting of the ways. The world-wide empire of Alexander broke up at his death, and was divided among his generals. Greece and Macedonia passed, with the course of time, under Roman dominion, and Carthage, home of Hannibal, was conquered. Rome had become the ruler, wholly or in part, of all the lands bordering on the Mediterranean. She ruled the bulk of Spain, and that part of France which lies between the Alps and the Cevennes. Sardinia and Sicily were among her chief granaries; the Greek islands were all hers. Egypt, Syria, Algeria, Asia Minor as far as the Euphrates, were either under her rule or under the rule of sovereigns subject to her.

The Wealth of All Kinds That Poured into Rome

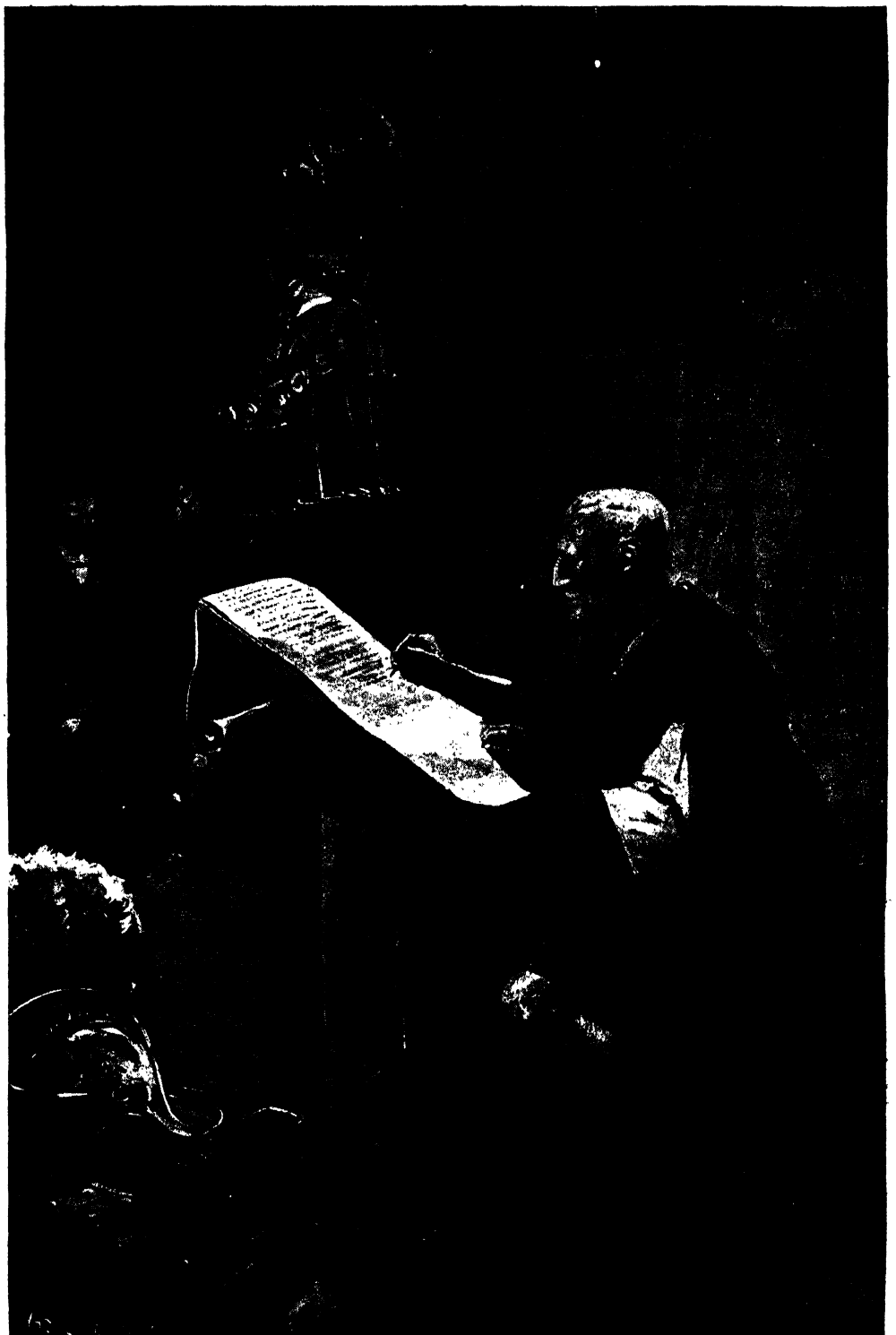
She was mistress, at Caesar's birth, of the richest countries in the world, and wealth of every description poured in upon her. But wealth did not make for good in Rome. The old simplicity of life, which had enabled a single city to conquer the fairest places of the earth, had utterly departed. Her vast possessions were now simply spoil for about five hundred of her patrician families. The Senate, the permanent Council of State governing the treasury and national policy, had degenerated into incredible corruption. Office and justice were bought and sold. A man was rewarded for misdeeds by permission to rule over one of the provinces; and his rule meant that he went forth and preyed upon the people, enriching himself by frightful exactions and intolerable oppressions. He stole money and goods; he levied appalling taxation; he carried off the people and sold them into slavery, either to toil or to perish as gladiators, fighting in the arena against wild beasts or against their fellow-men.

The One Blot Upon the Fame of a Great Man

Caesar sold treacherous enemies into slavery. It is the one blot upon his life, but up to that time no one had ever questioned the right of a conqueror to enslave his victims. In Rome, as everywhere, slavery had become a curse. Where slavery was introduced it made toil dishonourable. It displaced free labour and drove free men from the land into the towns, to starve or live on charity or crime; it left the land in the possession of the few great slave-owners; it robbed Italy of her splendid yeomen who had formed her armies and helped to make her a Power.

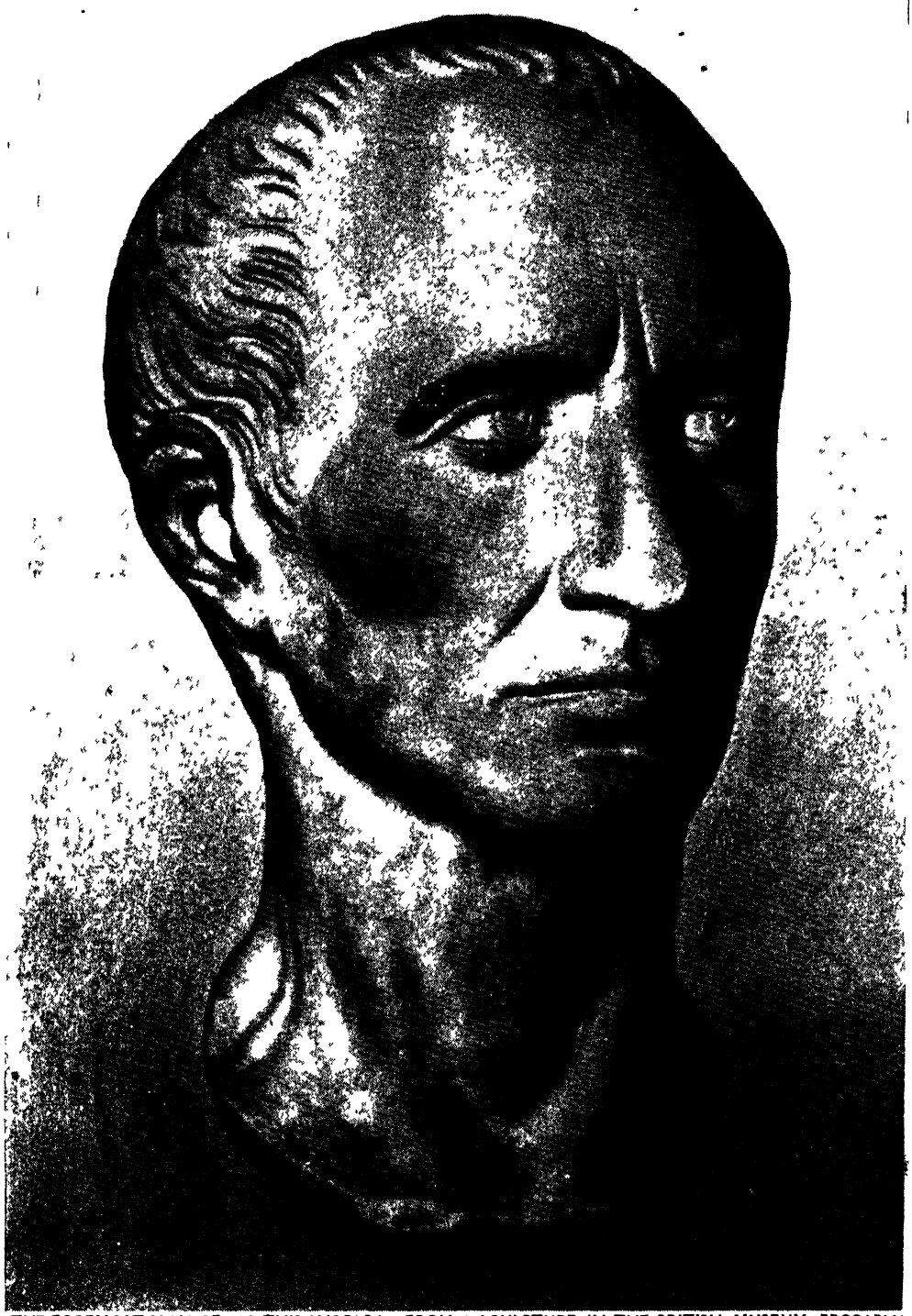
Slaves were everywhere—on the farms, in the vineyards, in the shops and offices and manufactories, in the houses. One result was that in the year that Caesar was born—about 100 B.C.—Rome, denuded of good soldiers, was threatened with extinction. Enormous waves of barbarous tribes rolled south from over the Danube and the Baltic countries, not as armies, but as nations in motion, bringing their carts and horses and belongings, determined to seize the fair lands before them. By a miracle Rome was saved. The barbarians turned aside from Italy, and swept first into Spain, and in two years Caius Marius, the uncle of Caesar, built up a new Roman army, drilled it in new ways, armed it with new

JULIUS CAESAR'S TRIBUTE TO THE BELGIANS



TILL THE END OF THE WORLD THE GALLANT MEN OF BELGIUM, WHO HELD BACK THE DESTROYERS OF THEIR COUNTRY, WILL BE REMEMBERED. JULIUS CAESAR WROTE OF THEIR ANCESTORS THAT "OF ALL THE PEOPLE IN GAUL, THE BELGAE ARE THE MOST BRAVE"

JULIUS CAESAR AS HE REALLY WAS



'THE FOREMOST MAN OF ALL THIS WORLD'—FROM A SCULPTURE IN THE BRITISH MUSEUM, PROBABLY CARVED BY A MAN WHO SAW CAESAR

weapons, and made out of it the finest army ever seen. In our days another Teuton horde has broken out, and again two years have been occupied in building a victorious army to oppose them. At the end of two years Marius turned upon the enemy, which had by this time utterly destroyed five Roman armies across the borders, and he cut them to pieces.

Rome, Saved from Her Perils, Returned to Her Vices

Caesar grew up under the influence of Marius, and learned from him something of his military genius. But Rome, saved from her perils, returned to her infamies. The patricians lived for spoil and plunder, and eventually hunted Marius through the land like a mad dog because he favoured reform. They became again all-powerful, and powerful for evil.

Caesar's whole life and purpose were coloured by the world-shaking events through which Rome passed in his youth. He came of an old patrician house. His grandmother was descended from one of the old kings of Rome, but his mother, a noble woman to whom he was passionately devoted, came of a house belonging to the people's side in the State. So there was the influence of his mother, and there was the influence of tough old fighting Marius, the self-made farmer who left the plough for the sword and saved his country, a people's man to the core. So Julius Caesar, descendant of a long line of patricians, grew up opposed to the patricians and devoted to the common people, the people who had no votes, no rights, no power to help either him or themselves.

Why Julius Caesar Fled into Hiding from an Old Tyrant

He was well educated, and wrote admirable Greek, but he inured himself to every kind of athletic accomplishment with a view to acquiring bodily fitness, and grew up tall, slightly built, but powerful and wiry, with muscles like thin steel, but with a neck like a gladiator's, supporting a noble head which his friends thought like a god's. When Julius was seventeen his father planned to marry him into a patrician family. Julius did marry when about that age, but to a lady of his choice and not of his father's; he married a daughter of Cinna, a people's man.

The man who hunted old Marius through the wilds was a terrific figure, Sulla, a soldier of genius, but a flinty-hearted aristocrat who punished with horrible barbarity the attempt of the people to elect their rulers. The terrible Sulla marked out young Caesar, and, sending for him, bade him divorce his wife and marry one whom Sulla himself would select. Pompey the Great, who was slightly Caesar's senior, complied with such an order from the tyrant, but this beardless boy Julius defied the man who had laid half Italy desolate. He fled into hiding, and Sulla set assassins on his track, but Julius eluded them, and eventually powerful influence prevailed, and Julius was pardoned.

The Splendid Orator with a Weak Mind and a Base Heart

Sulla died when Caesar was 22, and Caesar took up law, and practised in the courts side by side with the immortal Cicero. The lives of Cicero and Caesar were closely mingled to the end, and Caesar had no falser friend than the weak-minded, cowardly, ignoble genius who is for ever famous as orator and philosopher. But we can only take note of him, and at the same time bring in Pompey, who is an essential figure. Pompey was a good soldier, but—a rarer spectacle in that vile age—he was honest. He made war to conquer his country's enemies; not, as was generally the case, to enrich himself and his creatures.

At this time the seas swarmed with pirates, who braved the power of Rome, sacked her coasts, took her citizens and, if they could not pay ransom, either made them walk the plank or sold them into slavery. They bribed the Roman Senate to leave them alone, and expedition after expedition against them was deliberately allowed to fail. Then Pompey was given the work to do, and in a single summer he smashed the whole pirate fleet of over 1300 ships,

destroyed their docks and arsenals and forts, and took over 20,000 prisoners.

These pirates are especially interesting to us because they might have cost us Caesar. Journeying to Rhodes to study rhetoric, he was captured by them and held to ransom in the sum of £10,000. While they were awaiting the delivery of the money, they allowed him to enter into their games and make himself at ease, and he responded readily, but all the time he solemnly warned them that they would be executed for what they had done.

Caesar Becomes One of the Two Chief Men of Rome

No sooner was his ransom paid and himself released than Caesar gave the first example of that marvellous swiftness of action which always distinguished him. He gathered together a few ships, returned to the pirates' stronghold, seized them while they were dividing the booty, recovered the money, and gave the ruffians up to justice.

Upon his return from Rhodes, Caesar was given a military post in Spain of a minor character. He discharged it satisfactorily, and then, re-entering public life in Rome, allied himself with Pompey. His wife dying, he married a cousin of Pompey, the lady Pompeia, whom he afterwards divorced, because, as he said, "Caesar's wife must be above suspicion." Pompey in turn married Caesar's daughter, Julia.

We must not follow Caesar through all the details of these stormy and dangerous political days, but must jump to the time when he became one of the two consuls, the two chief magistrates for the year. With him, as second consul, was a man named Bibulus, a typical representative of the corrupt patrician party. He was elected solely to check the reforming tendencies of Caesar, who was already feared and hated as a reformer by those who had stolen from the State lands and moneys of the people.

The Great Year's Work That Caesar Did for Rome

It was the right of either consul, if he or his friends did not approve of a measure, to declare that the auguries were unfavourable; that the nature of the clouds, the look of the sky, the direction of the wind, or the action of the birds, showed that the gods disapproved of the proposed reform. If that failed, then the consul could declare the day a religious festival, when nothing could be done; he could declare every day of the other consul's year of office a religious festival. And when Caesar brought in a law to buy out the public thieves, and to place 20,000 veteran soldiers on the land, Bibulus actually did declare that the clouds and the sky were unfavourable, did actually declare every day of the year a religious festival, so that everything which Caesar did should be illegal. But Caesar appealed to the people through their national assembly, and carried a marvellous body of laws—laws against corrupt judges, against robbery by governors of provinces and public offices, against illegal arrest, and a dozen other rampant ills which were destroying the very life of the nation. Bibulus, with his cloudy skies and religious festivals, swore that it was all illegal, and not until Caesar was head of the State, years later, were the laws finally and safely established.

It was a wonderful achievement for a single year, but it made Caesar a marked man; the idol of the people became the certain victim of the patricians when the time should come for them to strike an assassin's blow. They tried to pack him into an obscure office, but such was his power that he won the command of Gaul.

Julius Caesar's Ten Years of Great Triumphs

Other men had always turned to the sunny East, with its crowded, luxury-softened peoples, its old, decadent culture, and its vast treasure, for easy conquest and spoil. Caesar grappled with the greatest external danger of the State, Gaul, which included the then unknown lands of France, Switzerland, and the German provinces of the Rhine.

These, lying beyond the Alps, had in times past brought terrible danger to Rome when she was still in her swaddling clothes as a State; for hordes of barbarians had surged over the Alps and menaced her existence, as other tribes had done in Caesar's childhood. They were a teeming, brave, warlike people, living mainly in villages, but with a number of walled towns, with houses built of brick and wood in a manner which survives in the timbered houses of our own day. Caesar went forth to face unknown perils, crossed the Alps, conquered the Swiss, who were making a complete national descent upon France, beat back the Teutons after another of their inrushes, and fought great battles on fields whose history is still being written in blood today. It is too long a story to tell here, for the war lasted ten years, but it yielded a marvellous series of triumphs for Caesar, who went forth to battle almost a novice as a soldier, and by his skill, his

personal daring, his rapidity of action, his unfailing resource as a general, his undeviating goodness to his troops, made himself the greatest of all Roman generals, the leader of an army whose fidelity and feats have never been excelled in history.

His successes horrified the Senate, who actually plotted with one of their own enemies to assassinate him. Again and again conquered tribes, encouraged by Roman treachery, rose against him. He punished treachery. He rewarded the culture of France dates from that famous war of Caesar in Gaul.

The Senate, terrified at his successes, which meant still more power to him at home, ordered triumph after triumph to celebrate his victories, but secretly they were plotting to destroy him. It had been agreed that at the end of ten years he was to return as consul once more. They went back on their solemnly plighted word, and sought to extinguish him, to drive him from the enormous province he had given Italy,



"FRIENDS, ROMANS, COUNTRYMEN, LEND ME YOUR EARS"—MARK ANTONY'S ORATION OVER THE DEAD BODY OF CAESAR

honourable valour of his enemies. Ther never was a more merciful conqueror. He was fighting first for the safety of Rome, upon which the barbarians might at any time advance, but he was giving to the conquered laws and rulers, teaching them the blessings of peace and order and industry. He conquered not only their arms, but their hearts. He won glorious devotion from those whom he defeated, and he left them with smiling fields. It was while he was in the midst of this tremendous war that he crossed twice to Britain. The and to take from him the army which worshipped him.

Eventually they succeeded in working on the feelings of honest Pompey. They made him jealous. He, the man who had fought wonderful battles in Asia and swept the sea of pirates, the first man in the empire, was to be eclipsed by this conqueror of savages. Pompey's wife, Caesar's daughter, was dead, she and her baby, and the last link was snapped. Foes weaned him from friendship to his old friend, and gave him an army while trying to take

Caesar's away. The upshot was that Caesar, knowing exactly how things were turning, kept the remnants of his army, and at last, crossing the little river Rubicon, which formed the southern boundary of his province of Gaul, entered Italy at the head of his troops. That meant war—civil war—a war for the rights of the people he represented against the exalted ruffians who sought, by overthrowing him, to keep the people in bondage. The towns between him and Rome opened their gates to him in joy and thankfulness, and the soldiers joined his legions. Pompey fled with his army to Brindisi, and from there took ship to Durazzo. Caesar had no fleet with which to follow, and Pompey, committed at last to infamy, intended to rest while he collected an army from Asia, then to return to Italy, blockade her coasts, cut off her food supplies, march in as conqueror, and, repeating the horrors perpetrated by Sulla, slaughter all who had adhered to Caesar.

The position was one of immense peril, but the Gauls, whom Caesar had overthrown, sent splendid legions to assist their conqueror-friend. Before Caesar could deal with Pompey, he had to secure his food supply and suppress rebellion in Spain. He quickly mastered Sardinia and Sicily, and then went to Spain, where 30,000 men in arms were making war on Pompey's side.

The Greatest Peril in Which Caesar Ever Stood

Here Caesar was in the greatest peril of his life. His army, marching through the mountains, was suddenly beset between two rivers which became flooded through the unexpected thawing of the mountain snows. Bridges were swept away, all means of communication were cut off, a powerful enemy was near, and the news spread that Caesar and his army were destroyed. But Caesar, in this most critical hour, remembered having seen the Britons make their little boats of boughs and cover them with skins. He ordered his men to cut the boughs of willows; he made them into coracles, and covered them with the hides of animals, and in these carried his army to safety and to the rout of his enemies.

Then Caesar hastened back to Rome, and was named Dictator. He gave little more than a week of hasty law-making to the harried city, then flew to meet Pompey, and defeated him at Pharsalia, in Thessaly, a town now called Fersala. Pompey fled to Egypt, and was there murdered by Cleopatra's enemies. Caesar had two more great battles to fight—one in Africa and one in Spain, where all the malcontents in arms were gathered. He was triumphant, and the few remaining years of his life were given to reform. He had made Rome truly mistress of the best parts of the world; now he gave her laws of which conquerors and conquered might be proud. He pardoned his enemies and gave them high office; he raised paupers from beggary and restored the rich who had been brought to poverty. He reduced taxation, he enormously increased public expenditure for the public good, yet he left Rome ten times as rich as she had ever been, and he did it without robbing other nations. No one now dared to challenge his laws, which Bibulus had declared to be illegal. They became part of the Constitution, and life, property, and justice were safe in Rome at last.

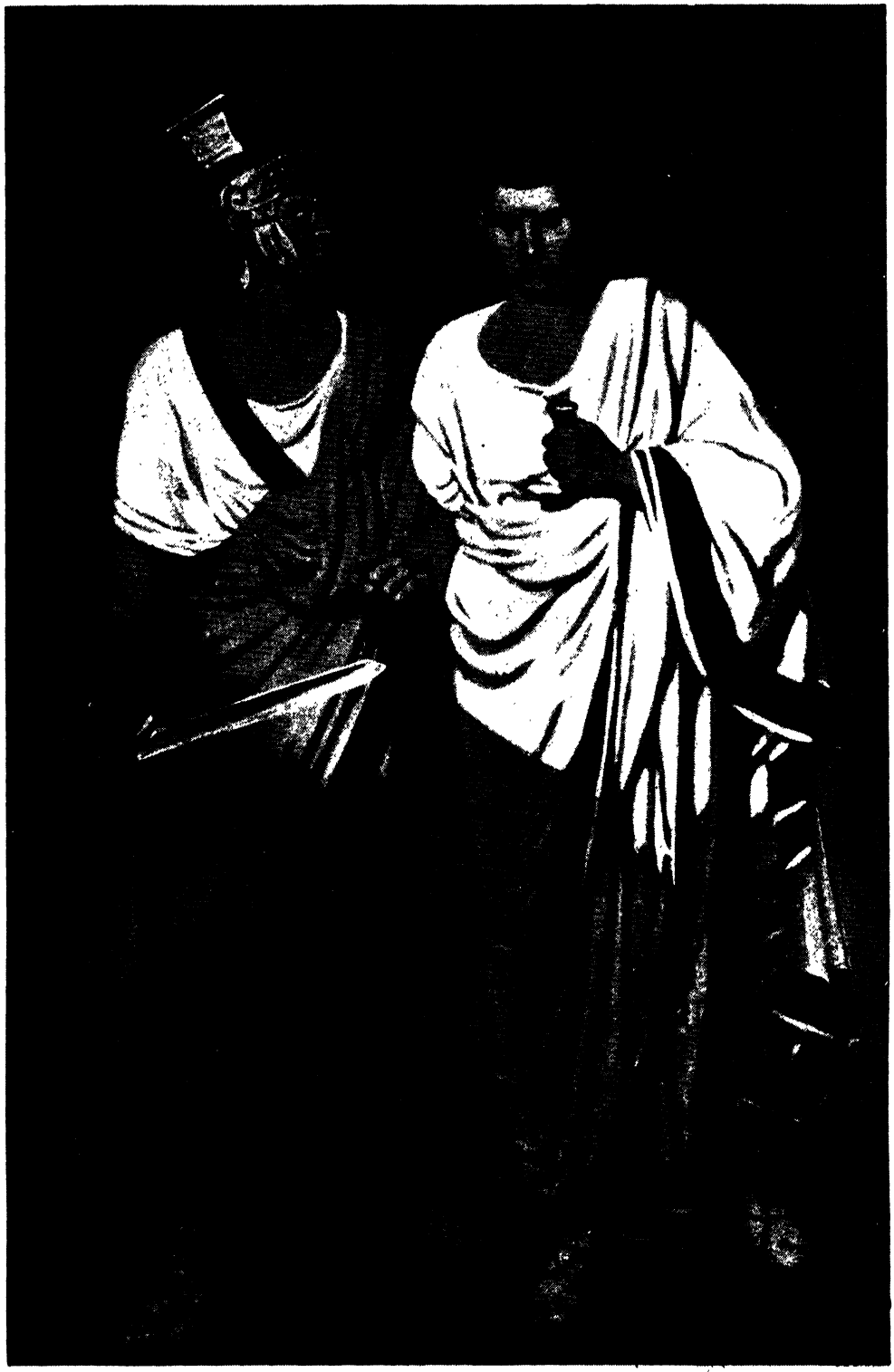
The Wise and Beneficent Things That Caesar Did

He had only three years to live, but in that time he gave the people votes, he gave them places in the Government, rich or poor; he included even the enlightened chiefs of Gaul in the Parliament of Rome. He gave the provinces a new code of noble laws; he took the census of the Roman Empire; he established splendid public libraries; he created police to suppress civil disorders; he fixed building regulations; he gave the world a magnificent system of sanitation. Bribery, corruption, and legal jobbery he suppressed as plagues. A thousand wise and beneficent things he did. He even reformed the calendar, giving the world the Julian calendar, which endured with us for seventeen centuries, and holds good in Russia and other countries to this day.

It was an unparalleled period of fruitful legislation. Were the people satisfied? Yes, but not their oppressors. The men he had forgiven would not forgive him except with their lips. They voted him the most extravagant honours.

The Enemies of Caesar and His Faithless Friends

They erected a temple to commemorate his mercy towards them; they erected statues to him; they desired to inscribe his image with the title of the Invincible God. They sought to heap gold and treasure upon him. They declared his birthday a perpetual holiday; they named one of the months July in his honour. Yet all the time they were plotting his destruction. He knew what underlay their flattery; he knew, and did not care. He felt that he did not mind dying now, for he had done his work, and so, although he was warned



CASSIUS AND BRUTUS, THE MURDERERS OF CAESAR, LEAVING THE SENATE HOUSE

JULIUS CAESAR COMES WITH HIS ARMY TO SEE WHAT THE LITTLE ISLAND OF BRITAIN IS LIKE



THE LANDING OF THE ROMANS ON THE COAST OF KENT FIFTY YEARS BEFORE CHRIST WAS BORN IN BETHLEHEM

THE DEATH OF JULIUS CAESAR IN THE SENATE HOUSE OF ROME 2000 YEARS AGO



O MIGHTY CAESAR! DOST THOU LIE SO LOW?
ARE ALL THY CONQUESTS, GLORIES, TRIUMPHS, SPOILS, SHRUNK TO THIS LITTLE MEASURE?

that a conspiracy was afoot, he took no heed. He put aside the monstrous suggestion that he should be worshipped as a god; he declined to be crowned. "The Romans have no king but God," he said.

The plot matured, in spite of the flattery. Cicero, if not a party to it, claimed credit for a share of the crime. Decimus Brutus, whom Caesar had befriended and named as executor in his will, became the chief instrument of the great conspiracy. The plan was to fall upon Caesar as he entered the Senate, unarmed, and slay him.

Many things conspired to warn Caesar, but he would not heed. He did not believe in auguries. He had never feared death, and he was not to be frightened by superstition. But so many representations were made to him, doubtless by those who knew more than they dared to say, that on the fatal day he at last decided not to go to the Senate. The conspirators were in their places waiting, but he did not come. They sent Brutus, whom he trusted, to beseech him, on the plea of urgent business. Then Caesar shook off his uneasiness and rose to go. As he crossed the hall his statue fell, shivered to atoms, at his feet, doubtless overturned by a faithful follower who still strove to warn him. He quitted his palace, and someone thrust a paper into his hand. On it were written the details of the plot and the names of the plotters, but Caesar, thinking it a petition, put it aside and marched on to his doom.

He entered the Senate and took his seat, while his only friend, Mark Antony, was deliberately detained outside by one of the conspirators. The high-born murderers pressed about him in seeming friendliness. Then one, Cassius, standing behind him, drew a dagger and stabbed him in the throat. Caesar started to his feet, but instantly another weapon struck his breast, and, looking round and seeing none but the men who hated him, each with drawn dagger in his hand, Caesar drew his robe about his head and sank down without a murmur. And Brutus, whom Caesar had loved, waving his dripping poniard at Cicero, cried upon him to rejoice. Cicero did rejoice, and demanded his share of credit for the crime against this greatest of all mortal men.

So, on March 15, 44 B.C., in his fifty-fifth year, and at the height of his glory, in the full tide of all his noble genius and the full glow of his passionate ardour for mankind, perished he whom Shakespeare called the foremost man of all this world.

The human race has never, before nor since, produced his like. One of the most accomplished of orators; a writer who, in the midst of incredible war, found time to write works of imperishable literature; a scholar gifted in every phase of splendid learning; a general whom none has excelled either as strategist, tactician, or hero of undaunted daring—all this and more was Caesar, gracious, generous, and kindly as he was mighty and inspired, gentle and forgiving as he was powerful and irresistible. He left the bulk of his private fortune to the citizens of Rome, and bequeathed to them his park and gardens. His legacy to mankind was greater and more enduring. His laws form the foundation of all the laws of all well-governed countries in our day, and it is safe to say that the nation which followed them faithfully would be almost a perfect State. From our hearts we can re-echo the noble speech which Shakespeare puts into the mouth of Antony as he roused the populace to wrath and vengeance, and we feel, as we turn from the study of the career of Caesar, that there is not in human annals another man whom all the world so loves and venerates as Caesar.



THE MAGNIFICENCE OF THE APPIAN WAY THAT LED TO ROME

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