Famous Inventors

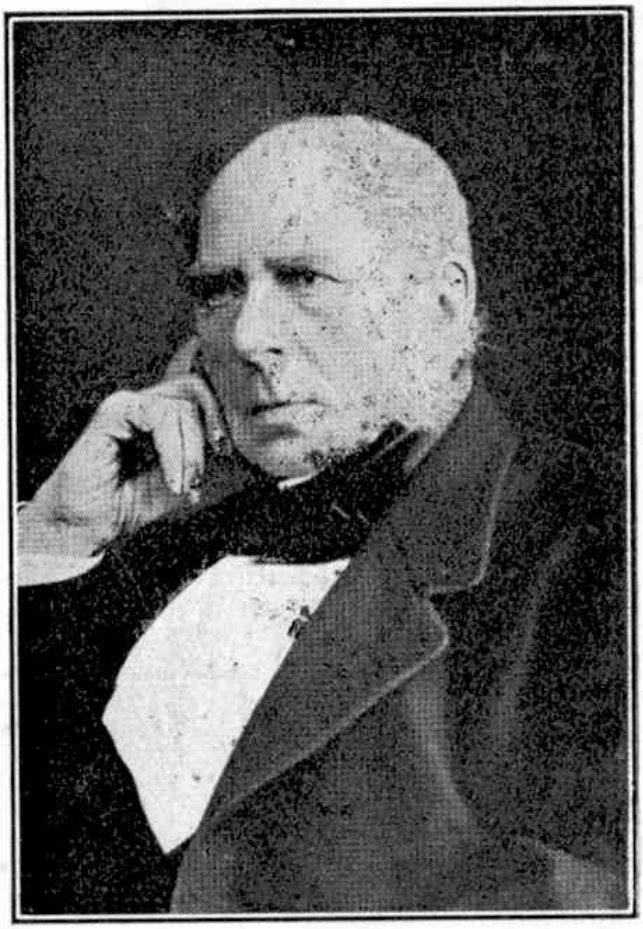
Sir Henry Bessemer

HENRY BESSEMER was born on 19th January 1813 at Charlton, near Hitchin, Herts. His father, who was of Huguenot descent, had established there a type-founding business, and the boy, while attending the village school, spent all his spare time in the workshops asking endless questions about everything he saw. It was evident that he had unusual mechanical ability and his father encouraged him to develop it in every way.

At the age of 17 Bessemer went to London and struck out for himself. He was greatly interested in the production of white metal castings of works of art, ranging from statues to small ornaments, and he soon established a flourishing business. At this time the Government were greatly worried at the heavy loss resulting from the fraudulent re-use of revenue stamps on deeds. Bessemer saved the situation by means of his first invention, a perforated die that impressed a date on each stamp. It was admitted that this invention saved the authorities something like £100,000 a year and Bessemer was promised a good official appointment in return, but the promise was never kept.

Other inventions followed rapidly. Turning his attention once more to type-founding, he produced a type-composing machine from which the modern linotype may be said to have developed. He devised a method of making pencils by pressing graphite paste through a die, and a process of embossing on velvet. His first big financial success was concerned with the making of bronze powder and so-called "gold paint." This powder was then made in Germany by hand labour and cost about £5 10s. 0d. per pound. Bessemer, after a series of failures, invented a machine to do the work, and put his products on the market at £4 per pound; later he was able to reduce the price to half-a-crown per pound! This venture brought him in a large sum of money that was to set him on the way to his success in steel manufacture.

The Crimean War had shown the inefficiency of the British artillery, and Bessemer set himself to improve the construction of the cannon by producing a metal better able to withstand the firing strain. He first tried a fused mixture of cast iron with steel, but this was no improvement. Continuing his experiments, he noticed one day, while melting pig-iron in a furnace, that certain pieces of the iron, which had been exposed to the air blast, were still unmelted. On examination he found that these pieces were just hollow shells of decarbonised iron, the carbon having been burned out of them by the air blast.



Sir Henry Bessemer. Photograph by courtesy of The Iron and Steel Institute.

This gave him the idea that it might be possible to free pig-iron from carbon, which was the cause of its weakness. He devised a special furnace into which molten pig-iron from the blast-furnace was run and then subjected to a stream of air or steam under pressure. He patented his method, but soon found that there were many difficulties to overcome. The greatest trouble was that it was impossible to tell

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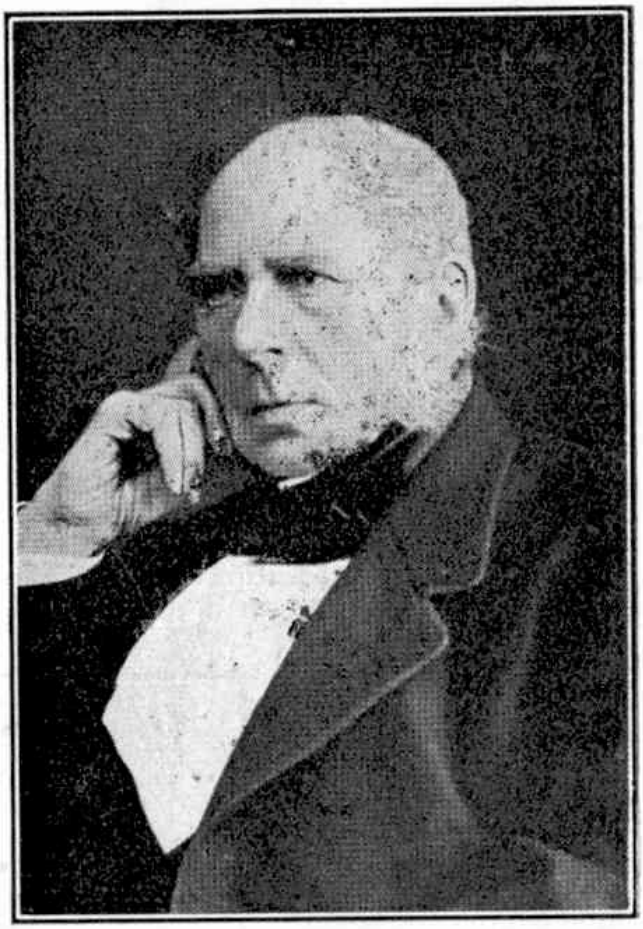

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