

THE LIFE OF A GREAT INVENTOR.

A work has recently been published in London, giving a minute account of the origin and progress of the mechanical inventions of James Watt—embracing his biography. To this great inventor has been accorded the same position as the eminent position among mechanical discoverers, that Shakespeare occupies among poets, and Newton among natural philosophers. Every mechanic and inventor throughout the world is an affectionate regard for his memory. The work referred to—edited by J. P. Muirhead, a relative of Watt's—contains a full account of Watt's life and presents in full, for the first time, the great number and value of his inventions and discoveries, and shows to us how much the world is indebted to the genius of this illustrious man. James Watt was a native of the town of Greenock, in North Britain, and was of an exceedingly delicate constitution. He soon acquired a taste for reductive powers and mechanical skill, and at an early age learned the trade of a mathematical instrument maker, and went to London to perfect himself in his art, by paying a handsome salary and his labor for a year's instruction. In 1756, being twenty years of age, he left London and came to Glasgow, full of professional knowledge, and equipped with the most perfect instruments maker in Scotland. The old-fashioned trade privileges prohibited him from setting up his business within the walls of the College, and he sought an asylum within the gates of the College where he was provided with a shop, and where he practised his trade for a number of years. He was highly respected by his patrons, and his quadrants and other instruments, till those light burdens upon his mind which ultimately led him to find out the secret of his success. He was a tireless worker, in one way, a noble benefactor to all mechanics. He never spent his time in nonessential amusements of any kind, but was fond of those which were innocent and useful. He studied music, and was fond of it; and he acquired a knowledge of chemistry, mechanical science, and natural philosophy surpassing all the students of the college, who looked up to him as an oracle.

It was while repairing a model of an old-fashioned steam engine, for the purpose of the college, that he made the grand discovery—that improvement which has made the steam engine "the iron ass of civilization." It was in 1764, when he was twenty-two years of age, that he was engaged to repair a steam engine in 1765 was but a single-acting machine, condensing the steam within the cylinder. The first great improvement was to condense the steam from the piston, by application of a separate vessel on the outside of the cylinder, when the piston had made a full upward stroke. The steam being condensed in the separate vessel, the piston, instead of opening a vacuum under the piston, which was opened to the air at the top, when down came with the atmospheric pressure of fifteen pounds on the square inch, was now condensed in this slow mode of condensing was discovered by accident. It was noticed by the attendant on one of the great steam engines, that on the consequence of a rick in the cylinder, by which some of the condensing water was forced into the interior and mixed with the steam. This led to the discovery of the steam jacket, by which the water into the inside of the cylinder. In this case the steam engine involved a vast expense for fuel, because the cylinder could not be cooled down from 212° to 200° in one stroke, before the vacuum was complete, and then heated up to 212° for the next stroke, before the steam began to act to drive the piston. The first double-acting steam engine was found by James Watt, and the improvements which he made on it during the year that he lived, left it nearly in the same condition in which it is now, and it is not possible to invent the separate condenser, the double stroke, working the steam expansively, the use of the condenser, the various parts of the double stroke, the use of the piston, and the dash pot to prevent slamming. In his specification he also described a locomotive, and his friend Watt was consulted by the Government, but he had no other guide but this, as far back as 1787. Watt's inventions are not circumscribed by the steam engine; he invented quite a number of other great machines, and he was the inventor of the steam engine that his fame rests, because it has become the universal lord of commerce and industry. He died worthy, full of years and honors, in 1819, and was buried in the same way as not—at least for many years—an easy one.

He suffered long from the want of money, nevertheless he was not discouraged, and he managed to construct his engines and get them introduced, and even after their complete success was demonstrated, ignorance and selfishness caused him to be so miserably treated, that he was much less and grief. His engines effected vast savings over the old ones. In one mine—Wheat "Virgin"—his first engine effected a saving of £100,000 in one year. He was so successful that he was granted by his firm one-third of this, although he asked no pay but the savings his engine effected.

It may be supposed by some, that the government of Great Britain fostered and encouraged such a genius and benefactor; but Britain does not, and she has succeeded in her policy of patentage, but to the enterprise of the people, and even a dark spot remains upon the

cutcheon of that great statesman, Edmund Burke, in speaking and voting against the extension of Watt's patent, when he was still poor and needy.

The Russian government has always encouraged Watt's inventions, and he was to have been the best skill in every country, and when James Watt could not find a patron in his own land, he was offered a lucrative situation in Russia, where he was to have been employed as chief engineer in Russia, and came very near accepting the offer.—Had he done so, it is possible—but we do not know—that he would have been a great benefit to his country, and he might have been in advance of England in manufacturing industry.

The great benefits which Watt's inventions have conferred upon the world, are generally acknowledged, but to estimate their value is beyond the power of figures. We have thus briefly alluded to the great man and his inventions, and the duty. Every mechanic may well be proud of him as the representative of their craft. He was so ingenious, simple, learned and generous, that we cannot but hold in awe a noble example to all young men possessed of a turn of mind for mechanical pursuits.

STEAMER OCEAN BIRD

The steamship designed by John W. Griffiths, editor of the *STANDARD MAGAZINE*, which was to have been named the *William Norris*, and to have crossed the Atlantic in six days, is now being built at Glasgow, Scotland, under the name of *Ocean Bird*. It has not been completed in detail as was originally contemplated, owing to it having been sold by the failure of Griffiths, and is now being built under the possession of others. It however made most extraordinary time on the trip—stated to be equal to that of the *Great Eastern*—and it is supposed that it will make an extraordinary fast voyage across the Atlantic. It is intended to be sent to Europe for sale in a few weeks.

Its dimensions, as completed, are 222 feet on the lead line, 225 feet on deck, 35 feet 10 inches beam, and 12 feet 7 inches depth. The hull is of iron, and is fitted with a screw propeller. The machinery is proportioned as follows:—
Diameter of cylinder, 65 inches.
Stroke of piston, 12 feet.
Diameter of wheels, 33 feet.
Length of bucket, 8 ft. 9 in.
Breadth of bucket, 22 inches.
Number of buckets, 12.
Dip of bucket, 4 ft. 8 in.

She is furnished with four single return flue boilers, each 12 feet long, and 4 feet diameter. The forward boilers are 20 feet long, and the after two 22 feet in length. Width of boilers 9 feet 6 inches, and 10 feet 2 inches in height. The engines are of the compound type, and are built by Messrs. Guion & Boardman build the engines.

KETCH.—This important town in Russia, in the Crimea, (recently taken by the Allies) is the ancient *Panticopeum*. It is situated on a tongue of land forming a peninsula of the same name on the Strait of Euxine, connecting the Sea of Azoff with the Black Sea, 130 miles E. N. E. of Simferopol, latitude 44 degrees 20 minutes N., longitude 33 degrees 45 minutes E. It is a town of 12,000 inhabitants, built chiefly of stone obtained from the fine quarries in the neighbourhood, and possesses great natural advantages for commerce. In 1827, it was declared a free port, and an extensive lazaretto was built, at which all the vessels coming by the Black Sea perform quarantine. The principal occupations are, the export of building stone and large quantities of salt, obtained from the lakes, and the preparation of salt. The site is that of the ancient *Panticopeum*, the residence and burial place of Mitridates. The modern town is of very recent existence, and is situated on a hill, and is, since its increase, has prejudicially affected some of the other ports. In 1834, the population was 2000; and in 1847, it had increased to 16,000.

ANCESTRY OF WASHINGTON IRVING.

John of Irwyn had landed possessions in the parish of Holm, in Orkney, in 1438, when the country was still an appanage of the crown of Denmark, and the name of the Irvines of Seaver was very frequently mentioned in the times of Robert and Patrick Stewart, Earls of Orkney, and suffered very severely from the outrages of these rapacious nobles. They became extinct in the person of David, a younger son of Patrick, but one collateral branch had immediately before settled in the island of Shapinsay. They lost the estate of Garstary several generations back, and sank down into the condition of mere peasants, tenants of the crown, and lived in comparative poverty till the day. It was there lately with Mr. Balfour, the proprietor of Shapinsay, who pointed out the old and modest house at Quhome

where was born Irving, father of Washington Irving. It is not somewhat singularly that Robert Strange and the author of *Bracebridge Hall* can be almost demonstrated of the same blood? I guess, if Irving knew his pedigree could be traced step by step up to John Irwyn of 1438, he would readily claim to visit the site of *Old Sir Robert Strange*.

"ROW, BROTHERS, ROW."—Here is the scene of Moore's undervalued *Canadian Boat-song*, which he wrote on the fifth day of his descent of the St. Lawrence from Kingston. Thirty-three years after he wrote this song, I had the honor to see the original copy of the manuscript, which he had entirely forgotten. He had pencilled the lines, nearly as they stand in his works, in the blank page of a book which happened to be in his canoe, from whence he transcribed them that night. The scene of the original copy of these famous lines, recalling youthful days and happy associations, produced a great effect on the poet, who alluded in a touching manner to his passage down the rapids of life.—*Wald's Vacation Tour*.

POPULATION OF THE WORLD'S DEAD.—There are millions in the grave and hundreds in the coffin, and the extensive calculations it seems the average of human births per second since the birth of Christ this time, is about 545, which gives 32,000,000,000; and after deducting the present population of the world (300,000,000), there are left over a number of thirty-one thousand and forty millions that have gone down to the grave—giving death to the grave the victory over the living, to the number of thirty thousand and eight millions. Of this number, in the grave are five hundred and ninety-nine thousand millions; by famine and pestilence, seven thousand nine hundred and thirty millions; by intoxicating drinks, five hundred and eighty millions; naturally or otherwise, thirteen thousand millions.

REMARKABLE RESTORATION OF SIGHT.—Some of our Own Countrymen, of Bodeford, Anglesey, became perfectly blind. He was then a man of middle age, and under this terrible deprivation he continued year after year, until his blindness was regarded as confirmed. One day, last Easter, while sitting by the fireside, his sight returned to him. The touching scene and the feelings it produced can be more easily conceived than described. Owen Williams was in his 92nd year, when this remarkable restoration took place after total blindness of 40 years.—*Chester Courant*.

ENGLISH AND SCOTCH TIPPLING.

The English use three times more rum and brandy than the Scotch, 73 times more beer, 21 times more wine; but the Scotchman uses 43 times more whisky than the Englishman for his tipple (keeping in view each inhabitant) is 48a. 4d. and to a Scotchman, 57s. England consumes 100 times more rum and brandy than Scotland, although the population in proportion only 6.527 times greater. The two items of beer and whisky are most remarkable. An Englishman consumes 10d. of beer and 10s. of whisky; a Scotchman pays 4s. 3d. for his beer, and 19s. 10d. for his whisky?—

BROTHERS MEETING IN COMBAT.—The other day a curious thing happened during the severe engagement which took place for some time in front of the Bastion du Centre. In the Legion Etrangere, which was engaged on the French side, there is a Polish lieutenant of the name of Dubois, who is a native of Poland in the Russian service. After the engagement was over, he began to talk with a sergeant who was engaged with the British, and he put several unusual questions about his name and regiment, and he was told that he belonged to the regiment of his brother, so he asked further about Captain Labadie, who was the name of the British captain, but commandant, and he commanded in this very sortie." As he was neither among the dead nor the prisoners, he seems to have escaped, and he is now in the hands of the British, and he is now on the field which must have fallen from his pocket, and it will be given back to him on the first occasion.—*Times*.

NEW FASCINE.—Mr. J. Niven, gardener, Ker House, has succeeded in making a paper and rope from the common garden hollyhock, and has patented his invention under the title of Niven's Patent Hollyhock

Paper and Rope." The paper is of the appearance and texture of that used for small bags and parcels by grocers, &c., and is very clean and firm. The rope is about half an inch thick, light and shining in colour, and of apparently of considerable strength.—*Peter's Courier*.

ASTRONOMY.—Astronomers are to be on duty during the present year, to decide an important question that has lately arisen with respect to Saturn, namely, the collapsing of its rings. Compared with drawings made 200 years ago, a considerable difference is now perceived, as a number of the rings are actually falling in upon the body of the planet.

COST OF WAR.—England spent sixty-five years in war and sixty-two in peace in the 127 years previous to the close of the year in 1815. In the war of 1688, we spent £36,000,000 sterling; in the war of Spanish succession, £29,000,000; in the Spanish war (1759) £54,000,000; in the Seven Years war (1756) £112,000,000; in the American War, £136,000,000; in the war of the French Revolution, £464,000,000; and in the war against Bonaparte, £1,159,000,000. The total amount of money expended in war, in 127 years, of £2,023,000,000 sterling, (or ten thousand one hundred and fifteen millions of dollars!)—*English paper*.

SCOTTISH EMIGRATION.—A large emigration is now going on from the North of Scotland to Canada; in two months no fewer than 5000 emigrants have left Aberdeen for their northern port. The great majority are farm-servants, of both sexes.

VALUABLE BEQUEST.—A Scotchman, named William McClure, says the *Toronto (Canada) Patriot*, recently deceased, left the bulk of his property, valued at £100,000, to be appropriated for the purpose of the diffusion of useful knowledge and instruction among the institutions, libraries, clubs, or meetings of useful instruction of the working classes or manual laborers in the United States of America.

ENTRANCEMAN.—Lord John Russell and suite, while at Vienna, numbered so many persons as to fill the hall of herick chamber, she listens to and what with the continual visits of couriers and of his lordship's travelling countrymen, the hotel seemed transformed into an English inn, with a hundred and fifty guests and six children, his doctor, the tutor, and the governess of his children, besides three young ladies, and a number of other attendants. It would be worth while to get the bill of expenses for all this party, and also to inquire what such a suite had to do with a grave dipper.

PERCING PUPS.—The *Colombo Mercury* says that a lady, connected with one of the principal churches in the New Town of Edinburgh, having become enfeebled in body, and unable to attend to her usual duties, she had recourse to public exercises of devotion, one of her greatest deprivations. An ingenious friend suggested that she should take a house adjoining the church, and have one of those guffa percha conductors actually led to her bed. The suggestion was carried into effect; and now, in the place of her sick chamber, she listens to the public ministrations of her spiritual adviser!

JAMES KEONEN, in an interesting letter about Japan, says that "sac," the principal drink of the country, is supposed to consist of sour whisky, tobacco juice, and aquaducts. Pleasant beverage.

NECESSITY OF A DUE ALLOWANCE OF SLEEP.

Habit influences, in some degree, the amount of sleep that is required. It should be said, however, that it is never very difficult any of the revenue that is usually derived from the same, and it may accustom himself to take so little sleep, as to be greatly the loser thereby in his waking moments. It may be commonly observed, that those persons who spend less time in sleep than is usually found necessary for the same age, and length, and occupation, consume a much larger portion of their days than others do, in a kind of dreamy vacancy, and virtual inactivity of mind and body. The hours expended in sleep are not the only hours of the day that are lost, as the sum total of the life, as having been lost to it; numbers of moments are daily spent in an absolute inaction of mind and body, and sleep cannot be robbed of its dues without adding largely, and in greater proportion than it is, to the amount of the waking sleep, to that which it wasted in such waking reveries. In order that the mind may have the power of undergoing, trying and