

THE LATE MR. BRUNNEL, C.E.

ISAMBARD KINGDOM BRUNEL, son of the constructor of the Thames Tunnel, was born at Portsmouth in 1806, when his father was engaged in erecting the block machinery for the Dockyard. He was taken while quite young to France, and finished his education at the College Henri IV. at Caen. He commenced practical engineering in 1826, under his father, at the Thames Tunnel, of which work he was resident engineer. Being the last to quit his post, he was more than once in danger from the frequent breaking in of water during the progress of the excavations, and only saved himself by swimming. The final irruption of 1828, when one man was drowned, surprised him 600 feet from the end of the tunnel; he was borne along by the stream, and rose to the surface near the top of the shaft.

Mechanical and railway engineering, and the construction of machinery or locomotives and steam navigation, have been the special objects of

Mr. Brunel's study. For ten years he laboured in the experiments instituted by his father to employ carbonic acid gas as a motive power. He was designer and civil engineer of the *Great Western*, the first steamship built to cross the Atlantic; of the *Great Britain*; of other large vessels and of the *Great Eastern*. He has been engaged on the docks at some of our outports; among which the most important are the improvement of Bristol Docks, Cardiff, and the construction of the Old North Sunderland Dock.

Mr. Brunel was appointed engineer to the Great Western Railway in 1833; and under his direction have all the tunnels, bridges, and other works been constructed on that line and its branches and connections, including the Bristol and Exeter, South Devon, West Cornwall, Birmingham and Oxford, and others.

The Hungerford Suspension Foot-bridge across the Thames at London was also erected by Mr. Brunel. It has the longest span in England. He took part in the floating and raising of the Conway and Britannia



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ular bridges—operations not less remarkable for their novelty and magnitude than for the friendly co-operation of engineers by whom they were successfully accomplished. He set out and conducted the works of the Tuscan portion of the Sardinian Railway; and had the entire charge of establishing and fitting the Renkioi hospitals on the Dardanelles, necessitated by the late war with Russia. These hospitals will accommodate 3000 patients; and as regards comfort, artificial ventilation, warming, baths, &c., and special adaptation to their purpose, they are not excelled by the best London hospitals. An abundant supply of water is aid on from the hills, and railways afford easy carriage from the landing-places on the shore into the several wards.

Mr. Brunel was elected a Fellow of the Royal Society in 1830, and was

chosen on the council in 1844. He was a vice-president of the Institution of Civil Engineers and of the Society of Arts; a Fellow of the Astronomical, Geological, and Geographical Societies; and Chevalier of the Legion of Honour.

The lamented gentleman, whose last important work, the *Great Eastern* steam-ship, has lately occupied so prominent a place in public attention, was carried to his residence in Duke-street, Westminster, from the *Great Eastern* ship, at midday on the 5th of September, 1859, in a very alarming condition, having been seized with paralysis, induced, it was believed, by over mental anxiety. In spite of the most skillful medical attention, he continued to sink, and at half-past ten on Thursday night, the 15th of September, 1859, he died at the comparatively early age of fifty-four years.