

JOHN FERNIE was born on the 24th February, 1824, at Cupar, Fife, where he served an apprenticeship to his father, Mr. James Fernie. In 1849, he obtained employment on the North Staffordshire Railway, and 3 years later, was appointed Manager of the Britannia Foundry, Derby, for Messrs. Handyside and Company. Relinquishing this post in 1855, Mr. Fernie became locomotive superintendent to the Midland Railway at Derby, remaining in charge of the department for nearly 8 years. Whilst there, he introduced methods of fine measurement of work and established a system of duplicating engines, whereby parts were made readily interchangeable. These methods were described in the Paper on the "Manufacture of Duplicate Machines and Engines,"¹ which he communicated to the Institution in 1862, and for which he was awarded a Watt medal and Manby premium.

In 1863, Mr. Fernie became part proprietor of the Clarence Ironworks, Leeds, and had charge of the engineering work of that establishment until he retired 6 years later. After his retirement, he travelled extensively in Europe and America. In 1883 he contributed to the "Proceedings" a Paper on the use of mild steel in the fire-boxes of American locomotives,² for which he received a Telford Premium. He invented, among other mechanical devices, a hoist for foundry purposes, a flanging-machine for boiler-plates, and, in 1863, a system of ventilation, which was installed in Wanamaker's stores in Philadelphia, and is still in use. Mr. Fernie served on the Mechanical Committee of the Exhibition of 1862, and was a member of the Institution of Mechanical Engineers. He died at Weybridge, Surrey, on the 12th December, 1904, in his eighty-first year.

He was elected an Associate of the Institution on the 2nd December, 1862, and was transferred to the class of Members on the 23rd February, 1869.

WILLIAM GEE, eldest son of the late Mr. William Gee, of Southwell, was born on the 1st April, 1852. After studying in the engineering school of the Hartley Institution, Southampton, he served a pupillage of 3 years to the late Mr. James Bolton, in St. Helen's Ironworks, Swansea.

In 1878 Mr. Gee joined the engineering staff of the Natal Government Railways as an assistant engineer, and 3 years later was appointed Chief Assistant on the surveys for extensions of the line through the difficult country of the Drakensberg

¹ Minutes of Proceedings Inst. C.E., vol. xxii. p. 604. ² *Ibid*, vol. lxxii. p. 8.

between Ladysmith and the Transvaal border. Returning to this country in 1885, he assisted in setting out and preparing contract plans and sections for the Essex extensions of the Great Eastern Railway to Southminster and to Maldon. In December of the same year, on the recommendation of the late Sir George Berkley, Past-President, he received an appointment to the staff of the Indian Midland Railway, being subsequently placed in executive charge of the construction of the Jhansi-Manikpur section of the line.

In 1889 he went out to South America as contractor's engineer on the Argentine Central Northern Railway, but returned to England in the following year on the outbreak of political disturbances in Argentina. After completing a short engagement in this country, Mr. Gee again proceeded to India, in 1892, under a 3 years' agreement with the Assam-Bengal Railway, and was given charge of the first division, comprising, among other works, the two largest bridges on the line, one of twenty-one and the other of fifteen spans of 40 feet on screw-pile piers. These bridges spanned tidal rivers, and their construction presented many difficulties, which were successfully overcome by the skill and forethought displayed by Mr. Gee.

In 1896 he was recommended by Sir William Shelford for the appointment of Chief Resident Engineer on the construction of the Lagos Government Railway, 123½ miles in length, and the Carter Denton Bridges connecting Lagos Island and the town with the mainland. After serving in this capacity for 2 years he resigned his appointment, owing to temporary ill-health whilst on leave in England; but on his recovery he returned to Lagos, in November, 1900, as Chief Engineer of an expedition dispatched to make a reconnaissance survey for an extension of the railway from Ibadan and Ilorin, and to select suitable crossings on the Niger River for the construction of a bridge to carry the line into Northern Nigeria.

The satisfaction of the Government with Mr. Gee's performance of his arduous duties was expressed in official dispatches recognizing the valuable services he had rendered. By his staff he was greatly esteemed for his unfailing tact and kindness. He died at Bournemouth on the 4th January, 1905, aged 52.

Mr. Gee was elected a Member of the Institution on the 1st December, 1891.

CHARLES HORSLEY died at his residence, 174 Highbury New Park, on the 4th January, 1905, aged 75. Born on the 30th May, 1829, at Pye Bridge, Derbyshire he was educated at Derby