

In 1869 Mr. Sparkes went to Ceylon to undertake the management of the mills of Messrs. George Wall and Company, of Colombo, for which firm he designed and supervised the erection of a large office. From 1870 to 1872 he acted as engineer to the Ceylon Company, Limited, in which capacity he constructed 7 miles of difficult mountain cart-road, designed and erected a timber arch-bridge of two spans and carried out other works of some importance. He then practised for a time on his own account and in 1873-74 was engaged on the Colombo Harbour works. After another brief period of private practice he was appointed in 1875 District Engineer in charge of the Moratuwa branch and Kalutara extension survey on the Ceylon Government Railways.

On the completion of this work Mr. Sparkes returned to England and in 1879 started in practice at Guildford as a civil engineer and architect. There he continued to practise for the remainder of his life, his principal work being the design and construction of an iron bridge over the river Wey presented to the town by the Earl of Onslow and providing an additional approach to the railway station. As engineer to Lord Onslow, Mr. Sparkes laid out several building estates and carried out the road-making and drainage work in connection with them. Of late years his practice became more architectural.

Mr. Sparkes died at Guildford on the 6th of October, 1893, from liver complaint. He was elected an Associate of the Institution on the 5th of December, 1876, and was transferred to the class of Associate Member in 1879.

JAMES STEWART, junior, son of Mr. James Stewart of Auckland, New Zealand, was born in that town on the 11th of August, 1863. After being educated at Auckland College and Grammar School, he was articled in 1881 for four years to his father, a member of the firm of Messrs. Stewart and Hunter, with whom he remained as an assistant for three years after the expiration of his pupillage. During that time he was principally engaged on the survey and construction of the Rotorua Railway, on which he acted as Resident Engineer.

At the beginning of 1889 Mr. Stewart went to South America, where he had obtained employment on survey work for the Central Uruguay Railway extensions. From the following May until the

end of July, 1891, he acted as District Engineer for Messrs. Perry, Cutbill, De Lungo & Co., on the construction of the Paraguay Central Railway. In 1892 he was placed in charge of the construction of the Ferrocarril del Norte, a new line between Bogotá and Cipaquirá in the United States of Colombia. He resigned that post, however, in September of the same year to undertake the survey of the Ocaña Railway for the Railway and Works Company, Limited. His career was unfortunately cut short, for before the conclusion of that survey he was bitten by a snake, from the effects of which he died on the 26th of January, 1893, near Quebrada de la Lejía in the United States of Colombia.

He was distinguished for ability, zeal and perseverance, and gave every promise of a useful and successful career.

Mr. Stewart was elected an Associate Member of the Institution on the 24th of May, 1892.

WILHELM ADOLPH WORSOE, son of Mr. Claus Worsoe of Bergen, was born at Trondhjem, Norway, on the 27th of March, 1857. He was educated at the Trondhjem Realskole, and subsequently at the Technological Institution in that city at which he graduated with honours in the summer of 1877. For the three following years he was engaged under government on the construction first, of high roads in the north of Norway, and subsequently of the Bergen-Vos Railway. In order to improve his knowledge of bridge-construction, he then studied for some months at the Polytechnic at Zürich, after which he was engaged for a time on railway surveys in the department of the Loire Inférieure for the Administration des Ponts et Chaussées. During the greater part of 1882 and 1883 he was in the service of the engineering firm of C. Zschokke, of Paris, having at first charge of the drawing-office and subsequently acting as an assistant on the construction of harbour works at Fécamp.

Ill health then compelled Mr. Worsoe to give up work for a time and return home, where he remained until the autumn of 1884, when he obtained an appointment on the Buenos Ayres and Rosario Railway under the late Mr. Thomas Charles Clarke.¹ On arriving in Argentina he was engaged on the survey and subsequently on the construction of the extension from Rosario to

¹ Minutes of Proceedings Inst. C.E., vol. cxiii. p. 333.