

OBITUARY.

WILLIAM NEWTON BAKEWELL, born on the 26th October, 1845, died at Keswick on the 3rd November, 1913. Trained at the Don Engineering Works, Rotherham, he was afterwards engaged on railways in the London district and on various public works in Egypt. During the erection of the Forth Bridge, he acted as contractor's engineer for part of the time, and later he was engaged in a similar capacity on the Tower Bridge, the Assuan Dam, the English bridge at Cairo, and irrigation schemes in Asia Minor. Shortly before his recent retirement, he surveyed harbours at Trebizond and Samsun, on the Black Sea, for Sir John Jackson.

Mr. Bakewell was elected a Member of The Institution on the 15th May, 1888.

JOHN BARKER, born at Sandiacre, Derbyshire, in 1842, died at Sutton Coldfield on the 21st October, 1913. He gained experience under the late Sir George Berkley, Past-President, and subsequently served under his successors, Sir George B. Bruce, Past-President, and Mr. R. White, M. Inst. C.E., for 43 years, as head of the Consulting Engineer's department of the Great Indian Peninsular Railway, in which capacity he was responsible for inspection of material, specifications and general supervision of work. He was also associated with the work for the Cape and Natal railways.

Mr. Barker was elected an Associate of The Institution on the 4th March, 1873, and was transferred to the class of Members on the 27th November, 1877.

JAMES RICHARD BELL died at Ightham, Kent, on the 14th July, 1913. Born at Wick in 1841, he joined the Indian Public Works service in 1868. At first employed in the Madras

Presidency, he was later transferred to the State Railways department of India, in which service he remained until his retirement in 1896. He gained a high reputation in the construction of bridges, amongst the more notable structures erected by him being the Empress bridge over the Sutlej,¹ the Muttra bridge across the Jumna, Ferozepur bridge and the Sher Shah bridge over the Chenab. He also devised successful means for training rivers by means of bunds. He carried out a large number of difficult surveys and constructed many miles of railway on the North Western, East Coast, Indus Valley and other systems, but perhaps his most important service to India was the construction, in a remarkably short time, of the line from Ruk to Bolan, giving military access to Kabul. Mr. Bell was for several years Consulting Engineer to Government for State railways.

He was elected a Member of The Institution on the 2nd December, 1879.

OSBERT CHADWICK, C.M.G., son of Sir Edwin Chadwick, was born on the 5th April, 1844, and died in Scotland on the 27th September, 1913. Educated at the Royal Military Academy, Woolwich, he entered the Royal Engineers in 1864, but resigned his commission 10 years later to become a civil engineer. Like his father, he adopted the sanitary branch of the profession, and for many years, as Consulting Engineer to the Colonial Office, he carried out many important sanitary works, chiefly in the Crown Colonies. These included water-supply, sewerage and drainage systems for Grenada, Malta, Hong Kong, Mauritius, Trinidad, Kingston, Jamaica, and many other places. His services were rewarded with a C.M.G. in 1886.

Mr. Chadwick was elected an Associate of The Institution on the 9th January, 1872, was subsequently placed among the Associate Members, and was transferred to the class of Members on the 30th November, 1897.

JOHN COATES, born in 1846, died in London on the 10th February, 1914. Educated at Newcastle-on-Tyne, he received his engineering training at Lord Armstrong's Elswick Works, and was

¹ Minutes of Proceedings Inst. C.E., vol. lxx, p. 242.