

OBITUARY.

SIR ROBERT RICHARD GALES was born at Littlehampton, Sussex, on the 31st October, 1864, and died in London on the 25th July, 1948. He was educated privately and at the Royal Indian Engineering College, Coopers Hill, and received practical training on the Forth Bridge. In 1886 he was appointed to the Indian Public Works Department, and in 1895 he became Assistant Manager of the North Western Railway, and subsequently Assistant Manager of the East Coast Railway, and Deputy Manager of the Eastern Bengal Railway. In 1903 he was appointed Engineer-in-Chief on the construction of the Curzon Bridge, Allahabad, and in 1906 Engineer-in-Chief of the Coonoor-Ootacamund Railway. In 1908, as Engineer-in-Chief, he superintended the building of the Hardinge bridge over the lower Ganges at Sara, and in 1915, in which year he was created a knight, he became Chief Engineer with the Railway Board of the Government of India. For 2 years prior to his retirement from the Indian Railway service, he acted as agent for the North Western Railway, and in 1919 he became a partner in the firm of Rendel, Palmer, and Tritton, Consulting Engineers, Westminster, with whom he remained until 1937. During his association with the firm he was concerned in the construction of the Uganda railway extension, the Falluja road bridge over the Euphrates, the Lower Zambesi bridge, and other important works.

Sir Robert was elected an Associate Member of The Institution on the 3rd March, 1891, and was transferred to the class of Member on the 13th December, 1904. He served on the Council from November 1917 until November 1919. In 1908 he presented a Paper on "The Curzon Bridge at Allahabad,"¹ for which he was awarded a Telford Premium, and in 1917 a Paper on "The Hardinge Bridge over the Lower Ganges at Sara,"² for which he received an Indian Premium and a Telford Gold Medal. For his Paper on "The Principles of River Training for Railway Bridges, and their Application to the Case of the Hardinge Bridge over the Lower Ganges at Sara"³ presented in 1938, he was awarded an Indian Premium. He was also a Life Member of the American Society of Civil Engineers.

He was unmarried.

SIR CLIFFORD COPLAND PATERSON, F.R.S., was born at Stamford Hill, London, on the 17th October, 1879, and died at Watford on the 26th July, 1948. He was educated at Mill Hill School, the Finsbury Technical College, and Faraday House. In 1901 he entered the National

¹ Min. Proc. Instn Civ. Engrs, vol. clxxiv (1907-08, part iv), p. 1.

² *Ibid.*, vol. ccv (1917-18, part I), p. 18.

³ J. Instn Civ. Engrs, vol. 10 (1938-39), p. 133 (Dec. 1938).