

Herbert Taylor. The firm of Clarke, Forde and Taylor may be said to be largely responsible for the carrying out of a great proportion of the cable extensions throughout the world since 1869, at which date submarine telegraphy became possible as a commercial investment. After the present Eastern Telegraph Company was formed, triplicate cables were laid from Suez to Aden and Bombay, and duplicate cables between Madras and Penang, Singapore and Batavia, several of them under the personal superintendence of Mr. Forde. As engineers to the respective submarine telegraph companies, Messrs. Clark, Forde and Taylor laid down cables between Singapore and Nagasaki; England, Gibraltar, Malta and the Levant; Durban and Delagoa Bay (nearly 4000 miles) during the Zulu War; five Atlantic cables, including that from Brest to Newfoundland in 1869 (2,584 nautical miles); and the first South Atlantic cable, from Pernambuco to St. Louis in Senegal. In 1894 Mr. Forde superintended the laying of the cable from Singapore to Labuan (Borneo) and Hong Kong, a distance of 1,972 nautical miles.

Mr. Forde died at West Hill, Epsom, the residence of his cousin, Major Forde, on the 21st February, 1897. Of his ability as an engineer some impression may be conveyed by this notice. As a man he was straightforward and genial, qualities which gained for him many friends. He married in 1855 Catherine Eleanor, eldest daughter of the late Rev. R. Ferrier Jex-Blake, Rector of Great Dunham, Norfolk. Mr. Forde was elected an Associate on the 3rd February, 1857, and was transferred to the class of Members on the 11th February, 1862.

EDWARD GOTTO, born in 1822, commenced his professional career as a pupil of the late Mr. Edward Jones, of Bloomsbury, engineer and architect. He was afterwards employed on the drainage of Sandgate, and from 1842 to 1848 was in business on his own account, engaged on Parliamentary surveys for railways and other works, and at the same time holding the post of Surveyor to the Corporation of Dover. In 1848 Mr. Gotto was appointed an Assistant Engineer to the Metropolitan Commissioners of Sewers, and for three years had charge of the sewers on the north side of the Thames from Pimlico to Stoke Newington, with the exception of those within the City of London.

In 1852 Mr. Gotto took an office in Great George Street and began to practise on his own account. Work soon came to

him, and among the undertakings on which he was engaged during the next ten years may be mentioned the drainage of Chatham, Romford and Cowes, the water-supply of the last-named town, and the estimates for the main-drainage works of the Metropolis. In 1860 he entered into partnership with Mr. Frederick Beesley, an association which lasted for thirty years. The principal works carried out by the firm of Gotto and Beesley during that period were the drainage of Rio de Janeiro, Seaford, Trowbridge, Evesham, Huyton and Roby, Redditch, Brentford and Cheshunt; and the drainage and water-supply of Campos (Brazil), Oswestry, Leominster and Cinderford.

On the expiration of the partnership in 1890, Mr. Gotto assumed the position of General Manager of the Rio de Janeiro City Improvements Company, Limited, which post he held until his death at Albany Road, St. Leonards-on-Sea, on the 27th February, 1897, at the age of seventy-five. Mr. Gotto resided at the Logs, Hampstead, and was a Justice of the Peace for Middlesex. He was elected an Associate on the 13th January, 1863, and was transferred to the class of Members on the 13th December, 1870.

WILLIAM WILSON HULSE, born at Amber, Derbyshire, on the 19th June, 1821, was the second son of the late Mr. Joseph Hulse, cotton-spinner, and it was at the mechanics' shop in connection with his father's mill that he and his cousin, Joseph (afterwards Sir Joseph) Whitworth,¹ first obtained a knowledge of engineering work. After being educated at King's College, London, he was apprenticed at an early age to his cousin, who had established the Whitworth works in Chorlton Street, Manchester. He remained connected with the firm for twenty-two years, ultimately becoming managing partner with Sir Joseph Whitworth. During that period he devoted special attention to the design of machine tools and to the improvements in ordnance and small arms with which the name of Whitworth became identified, and it was he who initiated the hollow frame now universally adopted in the manufacture of machine tools.

When in 1864 the firm of Joseph Whitworth and Co. was converted into a limited company, Mr. Hulse commenced to practise on his own account as a consulting engineer in Manchester, and gained considerable reputation in that capacity. On the retire-

¹ Minutes of Proceedings Inst. C.E., vol. xci. p. 429.