

those with whom he came in contact. He entered into the work he had in hand with a singular thoroughness of character, and exhibited a command of resources and indefatigable industry and interest in his duties. He came to England at the end of 1878 for change and rest; but on his return to Jamaica, early in 1879, he died suddenly. Mr. Dawson was elected an Associate of the Institution on the 7th of March, 1871.

MR. JOHN HANVEY, a native of Dublin, was an Irishman in the best sense of the word, possessed of shrewdness of character combined with urbanity of temperament and disposition. From his earliest years he showed an aptitude for scientific and mechanical pursuits, and became a proficient in mathematics at one of the best private schools in Dublin. When almost a boy he obtained employment on railways in Ireland under Mr. W. McCormick, and often encountered strange adventures in the pursuit of his calling as Manager of Works. He afterwards served on the Liverpool and Bury railway, and as Manager of Works to Messrs. Williams, Ackroyd and Co. He spent some time at Penrith in Cumberland, and for several years was engaged on the Birkenhead Dock Extension Works. From thence he went to Gloucester as the City Surveyor, where he formed a reservoir embankment outside the city boundary; and in 1861 he was elected, out of sixty candidates, Borough Surveyor of Dover. Here his labours were many and varied; the construction of an additional reservoir at the waterworks, the improvement of the borough prison, the original East Cliff revetment, the extension of the main drainage, and the laying out of the Maison Dieu estate came under his direction. He designed and carried out a scheme for separating the upper and lower services of supply from the waterworks, and inaugurated a system of water inspection that effected considerable economy. Later he designed and executed a comprehensive scheme for separating the surface water from the sewers, and shortly before his death completed the East Cliff sea-defences. Mr. Hanvey was one of the earliest advocates of the Rifle Volunteer movement, and for many years was connected with the Dover corps, from which he ultimately retired with the rank of captain. Mr. Hanvey was elected an Associate of the Institution of Civil Engineers on the 3rd of December, 1850, and during the discussion of a Paper on "The Brighton Intercepting and Outfall

Sewers," by Mr. Gamble in December 1875, gave some interesting particulars relating to the water supply and sewerage of Dover.¹ He died suddenly of apoplexy on the 5th of November, 1879, aged fifty-five years.

MR. RICHARD SECKER BROUGH, youngest son of Dr. Thompson Brough, M.D., was born at Kiltegan, in the county of Wicklow, on the 17th of October, 1846. His early education was pursued at a private school in Jersey, kept by a Mr. Thompson; and later at the Victoria College, in those days ably ruled by Dr. Henderson, whose prim yet kindly manner and impartial treatment rendered him a great favourite with the boys. In a society like that of Jersey, where many retired military officers had settled, and where the troops garrisoning the island were held in high esteem, most boys naturally inclined to the army as the profession of their choice; and as two elder brothers had already joined the service, young Brough was strongly inclined to follow their example. However, it was decided that he should study for the Indian Civil Service, and with this object in view he was sent to Avranches, in France, where more individual attention could be bestowed upon him than was possible in a large school. Here he quickly acquired a perfect knowledge of the French language, learned Italian and German, natural and physical sciences, and showed a permanently increasing interest in mathematics. It was then that his talent for physical research began to be perceived. He returned to London to continue his preparations; but, notwithstanding his natural ability, there was not time to accumulate that large amount of positive knowledge which is required to pass successfully through the ordeal of an Indian Civil Service Examination: he failed, and being over age, another profession had to be selected.

About this time Sir Stafford Northcote, Bart., M.P., had introduced the present system of examination for the Indian Telegraph Service. Mr. Brough got nominated for that service, and, after another year's study at University College, London, and under Mr. W. H. Preece, M. Inst. C.E., he passed first in the examination. He was appointed, by the Secretary of State in Council for India, a fourth grade Assistant Superintendent, with effect from the

¹ *Vide* Minutes of Proceedings Inst. C.E., vol. xliii., p. 221.