

MR. ANDREW CASSELS HOWDEN, son of the late Mr. Howden, W.S., was born in 1837. Owing to his father being in pecuniary difficulties, he had to leave school, and was thrown on his own resources, at the age of fourteen. He was then a regular attendant at the evening classes at King's College and at South Kensington, where he attained proficiency as a quick and neat draughtsman. His first engagement was in 1856, when Mr. William Dempsey, M. Inst. C.E., employed him to assist in the supervision of railway material in South Wales. On the completion of this work he was engaged by Messrs. Smith and Knight, contractors, on the construction of the Boston, Sleaford, and Midland railway, also in the construction of the North Level Sluice in Cambridgeshire. Subsequently he spent a few months in surveying a portion of the Buntingford and Ware railway.

In September 1859, Mr. Howden was appointed a 3rd Class Assistant Engineer on the Great Indian Peninsula railway, and in the same month proceeded to Bombay. For the first two years he was occupied in preliminary surveys and permanently staking out portions of the line. From 1861 until the end of 1874, when Mr. Howden left India, he had charge, from time to time, of lengths of line varying from 25 miles to 75 miles from the commencement to their completion, and carried out many important works both under the departmental and the contract systems. In fact, during an active service of fifteen years, he was engaged on all parts of the line and on works of every description. In 1866 he was promoted to the grade of 2nd Class, and in 1870 to that of 1st Class Resident Engineer.

Mr. Howden was elected an Associate of the Institution of Civil Engineers on the 1st of March, 1864, and in 1868 contributed a Paper on "Floods in the Nerbudda Valley, with Remarks upon Monsoon Floods in India generally;"¹ for which he was awarded the Manby premium. He died at Tenby on the 20th of March, 1875, after a few days' illness, from pleuro-pneumonia, to the great regret of his colleagues and friends, by whom he was much respected, both for his professional attainments and his personal character.

MR. ROBERT OGILVIE was born at Kerriemuir, Forfarshire, in 1815. His education was commenced at Paisley and was completed at the Edinburgh University. His connection with Engineering began in 1845, when he was employed by Mr. Thomas

¹ *vide* Minutes of Proceedings Inst. C.E., vol. xxvii., p. 218.

Brassey, Assoc. Inst. C.E., as superintendent of the permanent way and ballast engines on the London and South-Western railway. In 1849 he went to Ireland, and took charge, for Mr. Dargan, of the locomotives on the various lines of railway in which that gentleman was interested, as well as the steamers belonging to him then running between Ireland and Liverpool, and working on the lakes in connection with the Ulster Canal. He subsequently joined the Dublin and Belfast Junction Railway Company as Locomotive Superintendent, a position which he held until 1853, and on leaving which he was presented with a testimonial by the employés who had been under his direction. He then renewed his connection with Mr. Brassey, who, in conjunction with Mr. Alexander Ogilvie, Assoc. Inst. C.E., was constructing the railway from Crediton to Barnstaple and Bideford. On the completion of the works Mr. Robert Ogilvie became the sole manager of these lines, controlling and directing every department for a period of eight years, and with such success and satisfaction to all concerned that on the termination of his engagement he was presented with a silver tea and coffee service by the townspeople of Barnstaple, and at other periods with a silver vase and a gold watch and chain by the officials.

In 1863 Mr. Ogilvie took charge, for Mr. Edward Price, Assoc. Inst. C.E., of the construction of the South-Eastern railway of Portugal, including the erection of the locomotives. After a few years health necessitated his return to England, and in 1866 he was employed by Messrs. Brassey, Wythes, and Wheelwright as general manager of the Central Argentine railway from Rosario to Cordova, a distance of 250 miles. Many of his old employés accompanied him to South America, and several remain in that country who would never have left England but for the confidence they reposed in their old friend, of whose probity and kindness of heart they had received repeated and satisfactory proofs.

On his return home in 1869 Mr. Ogilvie endeavoured to recruit the energies of body and mind, which had been severely taxed by residence abroad. He retired to a farm near Barnstaple, where he sought recreation in agricultural pursuits. But the interval of leisure allowed him was brief, a short illness ending his useful career on the 8th of April, 1875. Mr. Ogilvie was elected an Associate of the Institution of Civil Engineers on the 1st of March, 1853.