

the Sea, and the construction of Sea and other Banks,"¹ and "Bridge Floors: their Design, Strength and Cost,"² for which latter he was awarded a Bessemer Premium of books.

Mr. Olander was elected an Associate of the Institution on the 2nd February, 1875, was subsequently placed in the class of Associate Members, and was transferred to the class of Members on the 15th December, 1896.

AUGUSTUS TICHBORNE PENTLAND, born on the 13th May, 1857, was the fourth son of the late Mr. George H. Pentland, a Justice of the Peace for the Counties of Meath and Louth, who filled the office of High Sheriff of Louth. He was educated at Bedford Grammar School, the Royal School at Portora, and Trinity College, Dublin, where he took the degree of Master of Arts. After a pupilage of a year with Mr. Marmaduke Backhouse, he was for two years a pupil with Mr. Bindon B. Stoney, LL.D., Engineer to the Port and Docks Board, Dublin, when the North Wall extension and other large works were in progress. He afterwards had charge of important works for a year under Mr. Alexander Tate, County Surveyor of Antrim.

In May, 1884, Mr. Pentland was appointed one of the four District Engineers under Mr. Robert Manning, Engineer in Chief of the Board of Public Works, Ireland, in connection with the fifty-nine piers and harbours carried out under the Sea Fisheries' Act of 1883. He had charge of the Eastern District. In 1888 he was transferred to the West Coast of Ireland to complete several harbour works there. On the completion of those works he was attached to the headquarters staff of the Engineer of the Board of Public Works, Ireland, and until 1900 was actively employed in connection with the harbours, arterial drainage and inland navigation systems of that country.

In May, 1900, Mr. Pentland was appointed an Inspector under the Local Government Board for Ireland, but had only performed his new duties for a few weeks when he died on the 5th June, 1900, from an attack of pneumonia following a chill.

Mr. Pentland was an enthusiastic member of the Royal Society of Antiquaries of Ireland and had a wide knowledge of the interesting relics of the past of which that country is a rich storehouse.

¹ Transactions, Society of Engineers, 1862, p. 25.

² *Ibid*, 1887, p. 27.

He was a cultured and capable engineer, an energetic and courteous official, and one of the kindest and most unselfish of men. His sudden death at a comparatively early age is deeply regretted by a wide circle of friends to whom he had endeared himself by his charm of manner, his gentle wit, and his goodness of heart.

He was elected an Associate Member of the Institution on the 4th December, 1888, and was transferred to the Class of Members on the 7th November, 1893.

JAMES WILLIAM SMITH, born on the 14th July, 1839, served a pupilage of five years to his father, Mr. William Edward Smith. He was subsequently engaged from 1857 to 1860 in making a survey and in carrying out new works on the estate of Sir Moses Montefiore at Jerusalem, including the blasting of a hillside, the formation of large rain-water reservoirs and the erection of a building 400 feet in length entirely of solid masonry, constructed to resist earthquake shocks. In 1858 he was also employed in connection with the restoration of the Church of St. Lawrence, Thanet; and in 1861 he had charge of the erection of a sea-wall on the west side of Ramsgate Harbour. In 1862-63 he was engaged, in conjunction with his father, on the restoration of the church of St. Mary at Minster, and in 1866 on similar work at the Church of St. Mary at Chislet near Canterbury. In 1865-66 he erected steam flour mills at Ramsgate for Messrs. Whitmore, of Ipswich, and in 1867 he had sole charge of the survey of the Dowager Lady Truro's estate, comprising the greater part of the eastern portion of the town of Ramsgate. In 1870-71 he was engaged under the late Mr. John Ramsay in taking up the old apron of the eastern sluices of Ramsgate Harbour, forming a new concrete foundation, and laying a new apron, and from 1872 to 1876 he was employed on public sewer works and road-making.

In 1878 Mr. Smith was appointed an Assistant Engineer for sewerage and waterworks, to the Municipality of Bombay, under the late Mr. Rienzi Walton. The main drainage works of that city were then in progress, and on their completion Mr. Smith was appointed Deputy Executive Engineer for Drainage, and in 1892 Special Drainage Engineer, the duties of which post included the design and supervision of the construction of all new extensions. The principal works designed and carried out by him were