

places by these tubes. Subsequently to the completion of the Merthyr Outfall Sewer, and when the lands of the Merthyr Local Board were being prepared for the reception of the sewage, the Merthyr Board arranged with the neighbouring Local Boards of Aberdare and Mountain Ash to treat the sewage of those districts on their land, and Mr. Harpur was engaged by those Boards as Consulting Engineer to carry out the work. The lands for irrigating the sewage of these three districts (some 400 acres in extent) were ultimately laid out by Mr. Harpur, and are now accomplishing all the objects which were sought to be attained, and are yielding a profit on working expenses. Upon the delivery of sewage from Aberdare and Mountain Ash on to the farm, the three Local Boards became joint-owners, and the farms were invested in a Committee representative of the three Boards, entitled the "Merthyr and Aberdare Joint Sewage-Farms Committee." To this body Mr. Harpur continued to act as Engineer up to the time of his death.

In 1885, failing health compelled Mr. Harpur to resign his appointment under the Merthyr Local Board, but latterly his health had to outward appearance very much improved, and his death came at last very suddenly, on the 10th of November, 1888, after an illness of only five days' duration.

He was elected an Associate of the Institution on the 6th of May, 1873, and was transferred to the class of Associate Members on the formation of the latter grade.

Mr. Harpur was a man of great reserve; he was earnest, conscientious, and upright in his dealings with all men, and scrupulously straightforward and impartial in the conduct of his business; he was, moreover, very unpretentious in his manner, would never push himself forward in any way, and a marked trait in his character was a want of ambition. From his long experience in sanitary engineering, his advice and assistance was frequently sought, and he was often engaged as a witness in Parliament and elsewhere upon sanitary matters, though seldom seeking such engagements.

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ERNEST FREDERIC MORANT, son of Mr. John Edward Morant-Gale, was born on the 29th of July, 1849, at Upham, in Hampshire. He was educated for the Indian Civil Service, but on reaching full age he resolved to try the more adventurous life of a sheep-farmer in Uruguay. Like many others, he was unfortunate,

and in 1873 found himself without capital or employment. Under these circumstances he joined the North Western of Uruguay Railway as an assistant under Mr. W. G. Ferrar, by whom he was afforded every opportunity of acquiring engineering knowledge. Possessed of a keen intellect, he was, within two years, fully competent to undertake the ordinary duties of an assistant engineer, the practical knowledge gained in his uphill experience making his services of far more than ordinary value. From the North Western of Uruguay Company, Mr. Morant passed to the Buenos Ayres and Campana Railway in the Argentine Republic. Owing to the completion of this line, he was for some time without regular employment, but proceeding to Brazil he was engaged by Mr. John Dixon, on the Rio de Janeiro Waterworks, and subsequently became one of Messrs. Waring's agents on the Minas and Rio Railway. While in Brazil he married a daughter of Mr. John Morritt, a prominent merchant of Rio, and joined him in several business undertakings, reorganizing a cotton-mill, and also aiding in the working of steam-navigation on the great Brazilian rivers. Having made a moderate fortune he returned to London, and entered into business as a contractor. In conjunction with another gentleman, Mr. Morant, in 1886, tendered for the construction of the great sewage-collecting tank at Barking. He was also much interested in the adoption of shale and other mineral oils for fuel purposes, under the form of gas. Mr. Morant was a director of the Amazon Steam Navigation Company, where his intimate knowledge of the river was of considerable service to his colleagues. Mr. Morant was an excellent business man, seeing at once the points of anything presented to him, and was able to go to the root of a matter.

Mr. Morant was elected an Associate Member of the Institution on the 2nd of February, 1886. His death, on the 26th of August, 1888, was the result of being thrown from a dog-cart.

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ROBERT PINCHIN was born in the year 1821. In 1842 he was articled to Mr. W. J. Lord, formerly of the Royal Engineers, and on the expiration of his pupilage he was employed by Mr. (now Sir Joseph) Bazalgette, who was surveying a proposed railway from Birmingham to Stratford-on-Avon. On the completion of this work Mr. Pinchin, in 1846, had entire charge of the survey of the Parish of Moncton Combes, in Somersetshire. In the same year he sailed for India. In taking his passage, however, provision