the late Mr. William Fiddes, the gasworks at Stapleton Road, for the Bristol Gas Company. He also acquired a reputation in his day as a builder of gas-holder tanks, of which, both for the Bristol Gas Company and other gas companies, he constructed a large number. These tanks are usually built watertight; hence great care is necessary in their construction, and the use of clay puddle is commonly resorted to. Mr. Fiddes never used puddle, yet his tanks, generally built of stone and hydraulic mortar with an inner lining of brickwork jointed with cement, the core in the centre being as usual left in place, are all perfectly watertight.

Mr. Fiddes devoted considerable attention to the study of chemistry and photometry, and was the originator of an ingenious method of testing the illuminating power of gas, by the utilization of a portion of the gas flame itself. He was a Member of the Institution of Mechanical Engineers, and had previously been a Member of the British Association of Gas Managers and of the Gas Institute.

Mr. Fiddes was elected a Member of The Institution on the 1st March, 1881.

DAVID MICHAEL LITSTER, born on the 8th June, 1861, was educated at the Thomason College of Civil Engineering, Roorkee, India. In 1882 he entered the Indian Public Works Department as an assistant engineer, and was posted to Mhow, in Central India. He was employed there for about a year in constructing military works, and was then transferred to Indore, where he was engaged for 2 years in constructing new public buildings, streets, drains and avenues, and in superintending the repairs to all existing buildings, streets and waterworks. During this period he constructed the Daly College, one of the largest public buildings in India, the foundations of which he described in a communication to The Institution in 1888.[1]

In 1885 he was transferred to the Public Works Secretariat, and under the Chief Engineer held charge of the head office of the province, besides acting as Superintendent of the Government Workshops. In 1886 he designed and constructed the Mhow Water Works, which supply a garrison and town of about 40,000 inhabitants. In the following year he was one of two officers specially

[1] Minutes of Proceedings Inst. C.E., vol. xcvii, p. 352.

selected by the Viceroy of India for a term of practical experience in England. He remained in England until the end of 1889, and during this time he visited and studied a number of important works, including the Forth Bridge, Vyrnwy Waterworks, and the chief sewage and drainage works in the large towns of England and on the Continent.

On his return to the East in 1889 he was transferred to Burma, and was first employed on military works in Myingyan, consisting of barracks and hospitals for the troops employed in the Chin Hills Expedition. He was then placed in charge of the Kyaukse division, and remained there until 1892. During this period he constructed most of the public buildings in the district and in the Southern Shan States. He also surveyed and constructed over 200 miles of roads and streets, and a great portion of the drainage and irrigation of the Kyaukse district. He designed and built the Government buildings at Fort Stedman, Bampon and Loikaw and the civil station at Taunggyi, together with the water supply and drainage of each station.

In 1892 he was placed in charge of all irrigation works in the province of Upper Burma; and also had charge of the famine relief operations in the Meiktila district. During this time he had the control of 15,000 men, and designed and executed a large number of works, including roads, embankments, bridges, irrigation and drainage works. At the close of the famine relief operations he was posted to the Southern Shan States, and remained there until 1896, when he came home on furlough. Later he acted for a time as Engineer of the Myeitkyina division, and retired from the Government service with the rank of Executive Engineer of the second grade in February, 1900. On several occasions he received the thanks of the Government for excellent service rendered by him. After his retirement, he practised as a consulting engineer in England. He was a Fellow of the Royal Geographical Society and a Member of the Institution of Mechanical Engineers. His death occurred at Oswestry on the 29th January, 1908.

Mr. Litster was elected an Associate Member of The Institution on the 6th December, 1887, and was transferred to the class of Members on the 30th November, 1897.