

a Member of this Institution and of the Institution of Mechanical Engineers, he took little active part in the proceedings. For some time he had been in indifferent health; but the end came somewhat suddenly. Two of his sons predeceased him; the eldest, Arthur, gave promise, when assistant general manager of the works, of being a distinguished engineer. His surviving son, Stanley, has been general manager of the business for the last three years.

Mr. Brotherhood was elected an Associate of the Institution on the 5th May, 1868, and was transferred to the class of Members on the 4th February, 1879.

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WILLIAM REGINALD CHESTER, born on the 6th October, 1856, received his early engineering training as a pupil of the late Mr. Percy John Wates, who was at that time Engineer to the Loughborough Gas Company and two years later was appointed Engineer of the Greenwich works of the late Phoenix Gas Company. On the expiration of his articles, Mr. Chester was engaged as an Assistant Engineer, first in the service of the Phoenix Company and subsequently in that of the South Metropolitan Gas Company after its absorption of the former. In 1880 he was appointed Engineer of the Rochdale Road works of the Manchester corporation, under Mr. John West, and in 1884 he was placed in charge of the then new Bradford Road works, the largest of the gas stations belonging to that corporation.

In 1888, Mr. Chester was selected to succeed Mr. Lewis T. Wright as Gas Engineer to the corporation of Nottingham, which post he held until his death. In that capacity he remodelled and enlarged the Eastcroft works in 1894, the retort-houses being converted to the regenerator system on a plan designed by him. At the Basford works he introduced regenerative furnaces, mechanical plant for handling coke, a sulphate of ammonia plant and a Claus sulphur-recovery plant. Mr. Chester had charge, in fact, not only of the manufacture of gas, but also of the chemical treatment of the residuals and of the production of the sulphuric acid and the oxide of iron required by the department. At the Eastcroft works he converted, in 1899, a retort-house, erected forty-five years previously, to the inclined system, the walls of the house being raised 21 feet and the mechanical handling of the coal and coke being carried to a high state of perfection.

Mr. Chester was President of the Gas Institute in 1896 and of the Manchester District Institution of Gas Engineers in 1893, to both of which he contributed several Papers. To the Engineering Congress at Glasgow in 1901 he gave an account of the mechanical transport of materials in gasworks. Mr. Chester died in London on the 24th May, 1902.

He was elected a Member of the Institution on the 4th December, 1894.

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CARTER DRAPER was born at Hereford on the 28th February, 1845, of English parents. Two years later he went with them to reside in Dublin. When 18 years of age he entered Trinity College, Dublin, his tutor being Dr. Salmon, the present Provost. He graduated in 1867 with the special certificates of the Engineering School of that College in the separate branches of engineering, practical mechanics and physics. On leaving college he became a pupil of the firm of Messrs. Courtney, Stephens and Bailey, mechanical engineers, of Dublin, and was subsequently employed on various important works executed by Messrs. Bewley, Webb and Company, and by Messrs. Ross, Stephens and Walpole. He then turned his attention to railway work, and acted for three years as an Assistant Engineer to the Great Southern and Western Railway of Ireland, being employed on work connected with the North Wall Extension of that line.

In the year 1878, having obtained the first place in open competitive examination, Mr. Draper was appointed County Surveyor for the Western Division of Galway, and being transferred in 1882 to Co. Wicklow, served the Government in that capacity until his death. The post of County Surveyor in Ireland is one which, besides demanding ability as an engineer, requires considerable capacity for organization, the surveyor being responsible for the design and carrying out of all works executed by the county, and for the efficiency and maintenance of all court-houses, county roads and bridges within its bounds.

In his private capacity Mr. Draper had charge of several important works, and shortly before his death designed the drainage systems of Delgany and Greystones, the latter a rising watering-place about 15 miles south of the city of Dublin. A keen lover of the profession, he gave close attention to the smallest details of every work which he undertook. He was unflagging in his attention to duty, and was held, professionally, as well as personally, in great esteem throughout Co. Wicklow. By his