He also designed and laid out the Elphinstone Circle Gardens, the Parsee Bazar Sale Garden, the Jehangir Garden, the Northbrook Garden, the Falkland Road Garden, the Hanging Gardens at Malabar Hill, and the New Gardens at Mahalacksmi.

In 1889, in consequence of illness, Mr. Walton was compelled to return to England, and in that year he was appointed an Engineering Inspector under the Local Government Board, from which post he was promoted in 1898 to Second Deputy Chief Inspector, and in 1900 to Deputy Chief, the post he held at the time of his death, which was so sudden and unexpected that he attended at the Local Government Board offices as usual on the 28th December, 1900, but, not feeling well, returned home, and on the following day expired from a lesion in the brain in the 58th year of his age.

Mr. Walton in his leisure moments always turned to art, painting skilfully in both water and oil colours. He was unassuming in manner, a firm friend, and popular with his colleagues. His personal character is perhaps best described by quoting the words of one with whom he was officially connected for many years:—"Mentally and morally a strong man, who never feared to say and do what he thought right, he had the entire respect and affection of every one who knew him."

Mr. Walton was elected an Associate of the Institution on the 6th February, 1872, was subsequently placed in the class of Associate Members, and was transferred to the class of Members on the 9th December, 1879.

JAMES WILSON, Engineer to the Edinburgh and District Water Trust, formerly Engineer to the Greenock Water Trust, died at Edinburgh on the 21st July, 1900, aged 58 years. Born on the 21st July, 1842, in Glasgow, he served his apprenticeship with Mr. J. Henderson, of that city, and shortly after went to Mr. James Gale as an Assistant on the Glasgow Waterworks. At that time the Loch Katrine water was being introduced into Glasgow, and for some years Mr. Wilson was engaged on the drawings for the valve chambers, valves and connections between the new and old mains throughout the city, laying new mains and extending the piping to the adjoining districts. He remained with the Glasgow Corporation from 1860 to 1865, and prepared drawings for an additional line of 48-inch pipes across the Endrick Valley to bring a further supply from Loch Katrine.

In 1865, Mr. Wilson left the Corporation and became private Assistant to Mr. Gale in carrying out as Resident-Engineer various waterworks throughout the country, and in getting up information required in promoting and opposing Water Bills. In 1868, he was appointed by the Greenock Water Trust Resident-Engineer on their works for obtaining water from the River Gryffe. These works consisted of two reservoirs containing 900 million gallons and 430 million gallons respectively, a tunnel 1½ mile long carrying the water from these reservoirs to a service reservoir above Greenock, a set of high-level filters, pure water reservoir and new main to the higher parts of the town; they were completed in 1872. In 1869, while acting as Resident-Engineer for the Gryffe Works, Mr. Wilson was appointed Engineer for existing works as well.

The original works acquired from the Shaws Water Company in 1866 consisted of seventeen separate reservoirs with over 16 miles of open aqueduct winding round the hills behind Greenock, and capable of supplying from 14 million gallons to 15 million gallons per day, principally used for water-power to mills and factories. The largest reservoir, Loch Thom, contained 1,780 million gallons, and, in 1875, Mr. Wilson prepared parliamentary plans for enlarging this reservoir, so as to increase the capacity to 2,480 million gallons. This extension was carried out by him without a contractor, and was successfully completed in 1884. At present Loch Thom, as extended, is one of the largest reservoirs with earthen banks in the kingdom. There are now twenty reservoirs, large and small, in connection with the Greenock Works which can afford a supply to the town of over 20 million gallons per day. It is one of the few places in Scotland where water-power is sold to manufacturers in the town, one of the factories (Fleming, Reid, and Company) having a turbine of 580 HP. The mill aqueduct is arranged to carry 1 million gallons per hour for 12 hours per day. About 3½ million gallons a day were sold to sugar refineries, etc., for condensing water and refining purposes, and about 4 million gallons per day for domestic supply, and to shipping and other purposes in the burgh.

After 1875, Mr. Wilson carried out a number of water undertakings throughout the country, amongst others, Port Glasgow and Langbank, Inverkip, Kilmalcolm, Vale of Leven, Helensburgh, etc. In 1884–85, he prepared parliamentary plans for bringing an additional supply of water from Loch Finlas to Ayr, a distance of over 20 miles. This included the raising of Loch Finlas; arrangements for compensation to Loch Doon; 2¾ miles

of conduit winding round the hills; 16 miles of cast-iron mains with high-level filters, distributing tanks, etc. These works were for 3 million gallons per day, and were completed in 1888. In 1891, Mr. Wilson went to Roumania to report on the new works at Braili for the Glenfield Company, of Kilmarnock, who were erecting engines, making service reservoirs, tanks, etc., there, and in 1892 he was engaged, amongst other things, in the Falkirk Water Works Reference.

On the death of Mr. Alexander Leslie, of Messrs. J. and A. Leslie and Reid, in 1893, Mr. Wilson was taken into partnership by Mr. Reid, and on Mr. Reid's death a few months after, Mr. Wilson was appointed Engineer to the Edinburgh and District Water Trust, and was instructed to advise the Trustees as to the available sources for providing an additional water-supply to the City of Edinburgh and surrounding district. Under his advice the Tweed scheme was ultimately adopted, and Mr. Wilson was authorised to proceed with the carrying out of the scheme. Under his directions parliamentary plans were prepared, and in 1895 the Act empowering the Trustees to proceed with the work was passed.

Mr. Wilson was keenly alive to the assistance which the other branches of science, such as chemistry and bacteriology, could afford to the engineer in his work. He urged upon the pupils in his office the importance of gaining some practical acquaintance with these subjects, especially in their bearings on ventilation, water-supply and sewerage-purification, and granted them sufficient time for study in the University Public Health Laboratory. He considered the bacterial character of water of great importance, and held that bacterial examination was the best measure of the efficiency of the working of filtering plant. Such regular bacterial control he intended to recommend in connection with the working of the new filter-beds which he was constructing as Engineer to the Edinburgh and District Water Trust. Rule-of-thumb work of all kinds he opposed, and thoroughness, care and accuracy were with him as necessary in the apparently unimportant matter of taking water samples for analysis as in carrying out an important engineering undertaking.

During the last six years Mr. Wilson was much engaged in the preparing and maturing of the detailed plans and specifications for the construction of the large and important works involved in the Tweed scheme. He was also much occupied, as partner of his firm, in other important water schemes and as adviser and arbiter.

He was engaged professionally in the following cases, amongst others:—Belfast Waterworks; Derby, Sheffield and Leicester Water Scheme; Mid-Lanark Waterworks; Airdrie and Coatbridge Water-supply; and the Highland Water-Power Scheme.

For about a year previous to his death Mr. Wilson had so much constant and onerous work to do, that he gradually got into bad health. In December, 1899, he went to the Mediterranean, where he stayed till the following May, but unfortunately had bad weather and did not benefit so much as was expected. After his return home, however, he appeared to improve rapidly and his friends hoped that he had recovered. On Saturday, the 21st July, he was out at the new reservoir at the Talla, examining the works, and appeared to be in fairly good health. On returning home he became unwell, and then unconscious, and passed away peacefully the same evening. Mr. Wilson was a painstaking and capable engineer, and enjoyed the respect and esteem of his professional brethren and of the Public Boards by which he was consulted. By his death at a comparatively early age the profession has lost a man of sound judgment and ripe experience. Many local authorities will miss his skilful guidance and counsel in connection with water undertakings, and those who knew him cannot but mourn the loss of a genial and constant friend, whose whole career was marked by the strictest integrity and by an earnest devotion to the proper discharge of professional duties. He was a Member of the Institution of Engineers and Shipbuilders in Scotland since 1868.

Mr. Wilson was elected a Member of the Institution of Civil Engineers on the 6th March, 1888.

THOMAS BURNSIDE CROWTHER, born on the 22nd December, 1866, was the second son of the late Mr. James Addington Crowther, of Mannamead, Plymouth. In 1885 he became a pupil of Mr. James C. Inglis, under whom he was engaged on Compton Gifford drainage, Cattewater Harbour, and other works. On the expiration of his pupilage in 1890, he was appointed an Assistant Engineer on the staff of the Buenos Aires Great Southern Railway Company. Proceeding to Argentina, he was employed, in addition to general railway work, on surveys at Las Flores and Bahia Blanca Harbour, on the repair of the Naposta Bridge, and on the construction of the line from Quequen to Nicochea, including a bridge over the River Quequen and a station at Nicochea.