

By means of this last a narrow-gauge communication was effected between London, Plymouth, and Devonport. Mr. Horn was also secretary of the Rhymney Railway Company from its incorporation to the opening of the line, four years later, when the offices were removed to Cardiff; and was actively interested in several metropolitan schemes for connecting some of the great trunk lines in the outskirts of London. He was elected an Associate of the Institution of Civil Engineers on the 5th of December, 1865. Earlier in life he was for a time a Member of the Royal Archæological Institute of Great Britain and Ireland. In 1868, shortly after the murder of his only son near Rosario, in the Argentine Republic, Mr. Horn relinquished all his appointments except two auditorships. Energy and interest in life returned in time, and he spent his remaining years chiefly in travelling. After a short illness, he died at Inter-laken on the 9th of July, 1873, in his seventy-second year.

Throughout life Mr. Horn took a keen interest in social and political questions, regarding them from the point of view of the Philosophical Radicals. His character was singularly well-balanced and harmonious. He was unsparing of trouble, and put his whole strength into all he undertook. Upright and honourable, affectionate, generous and genial, with no littleness nor pretence in his nature, he was warmly loved by his friends and always a favourite with the young. Preserving to the last an energetic freshness of heart, and a memory wont to revert to the brighter side of things, he said, two days before death, "I have had a long life, and have enjoyed it to the end."

Mr. JOHN LAWSON was born at Skerton, near Lancaster, on the 25th of May, 1824, and was educated at the national school in that town. At the age of fourteen he entered, as a pupil, the office of the late Mr. William Lamb, of Hay Carr, near Lancaster, who was then agent for the extensive estates of the Duke of Hamilton in the County Palatine. Mr. Lamb, though nominally a land agent, had been brought up under the late Mr. Miller, of Preston, who called himself a surveyor, as was customary in those days, but who was really engaged in all the engineering works of the district, such as the laying out and making of roads and canals, the reclamation of land, main drainage operations, &c. Mr. Lawson spent nearly seven years at Hay Carr, during which time he was engaged in surveying and preparing plans of several townships for tithe-commutation purposes; in laying out roads, water-courses and extensive drainage works; in the valuation of land

for railways and buildings, and in settling accommodation works for landowners, in connection with the railways—the Lancaster and Preston and Lancaster and Carlisle—then in course of construction in the neighbourhood.

He also had to undertake the preparation of plans for new farm buildings, and to superintend their erection, and other works of improvement in roads, fences, drains, &c., on large estates under the management of a progressive, educated, and thoroughly competent agent. For the last two years of his pupilage, Mr. Lawson was responsible for the management of the office and the general direction of the whole staff. Mr. Lamb was a person of precise and rigorous habits, who required that his work should be done with the utmost regularity and accuracy, and the result of this seven years' training on a man of Mr. Lawson's acuteness and industry was evinced in the clear, systematic, and painstaking intelligence which he subsequently brought to bear upon all that he undertook. After leaving Hay Carr in the year 1845, he was appointed the Resident Engineer and agent for the Bold Hall, Burtonwood, and Sutton estates in the neighbourhood of Warrington, then belonging to Sir Henry Bold Houghton, Bart., and he held this appointment for about three years. During this period he laid out and executed extensive improvements in the roads, drives, watercourses and drainage of the estates, and erected some of the most extensive farm buildings in the north of England. In 1848, in conjunction with Mr. Hugh U. M^cKie, Assoc. Inst. C.E., he purchased the business of Mr. John Watson, M. Inst. C.E., and carried that business on in Lancaster until the year 1856, during which time he was actively occupied in railway and estate surveys, in road making, bridge building, harbour works, laying out building land, &c., and all the varied practice of a country engineer's office. In 1850 he commenced the preliminary investigations, gaugings, surveys, &c., in connection with the Lancaster water supply, and subsequently got up the parliamentary plans for these works. After the passing of the Act he was engaged by Mr. Rawlinson, C.B., M. Inst. C.E., and under him he carried out, as Resident, the whole of the works of water supply and sewerage of the town.

In 1856 he left Lancaster and entered Mr. Rawlinson's office in London, as principal assistant and manager, and was thus for several years intimately connected with the various works of town improvement that Mr. Rawlinson was then engaged upon. In 1862, on Mr. Rawlinson's retirement from active private practice, Mr. Lawson took over the business, and carried it on up to the

time of his death; for the later years of his life in partnership with Mr. James Mansergh, M. Inst. C.E.

Having devoted his attention principally to sanitary engineering, Mr. Lawson was extensively employed in reporting upon and constructing works for the supply of water to towns, and for the removal and treatment of sewage. Among others may be enumerated Bedford, Cockermouth, Workington, Maryport, Grantham, Horncastle, Tunbridge Wells, Hexham, Keswick, Rotherham, Reading, Lincoln, Middlesbrough, Barnet, Burton-on-Trent, Clevedon, Sherborne, &c. In 1867 Mr. Lawson was sent out, by the Colonial Office, to report upon the sanitary condition of Valetta and the other towns adjoining in the island of Malta, and to prepare a scheme for the sewerage of those places. In later years he was consulted as to the disposal of the sewage of many towns, such as Birmingham, Darlington, Windsor, Twickenham, Southport, &c., and was Consulting Engineer for two of the earliest Bills—viz., Blackburn and Reading—that were brought into Parliament for the purpose of obtaining compulsory powers for the purchase of land for sewage purification purposes. For some time prior to his death Mr. Lawson's health gradually broke down, as a consequence, it is believed, of overwork and the anxieties specially incident to his occupation, and he died on the 7th of February, 1873, at the comparatively early age of forty-eight.

Mr. Lawson had a remarkable faculty for unravelling the mysteries of masses of figures, and so marshalling them in a tabular form as to make them self-explanatory. He was a self-possessed and trustworthy witness on public inquiries and before Parliamentary Committees, where his honest, serious style of giving evidence was effective and convincing. He was a man of modest and unobtrusive habits, and attained his position by dint of sterling merit. He was highly esteemed by all with whom he was brought into contact on business matters, for his quiet, earnest thoughtfulness, and his conscientious devotion to his clients' interests. Possessing a clear head and sound judgment, he was looked up to by his friends as a safe and reliable counsellor, and his unselfish kindness of heart never permitted him to spare himself labour or trouble which would benefit them.

Mr. Lawson was elected an Associate of the Institution on the 1st of March, 1859.

Mr. JAMES GARTH MARSHALL was born at Leeds on the 20th of February, 1802. He was the third son of the late Mr. John Marshall, of Headingley, Leeds, sometime M.P. for Yorkshire,