

OBITUARY.

SIR ISAAC LOWTHIAN BELL,¹ Bart., LL.D. (Edin.), died at his residence, Rounton Grange, Northallerton, on the 21st December, 1904, in his eighty-ninth year. Born at Newcastle-on-Tyne on the 15th February, 1816, he was the son of Mr. Thomas Bell, a partner in the firm of Messrs. Losh, Wilson, and Bell, of Walker Ironworks, near Newcastle; his mother was the daughter of Mr. Isaac Lowthian, of Newbiggin, Cumberland. After studying at Edinburgh University and at the Sorbonne, where he laid the foundation of the chemical and metallurgical knowledge which he applied so extensively in later years, Lowthian Bell spent some time in travel on the Continent, and at the age of 24 entered his father's ironworks. There he remained until 1850, when he took a part in establishing chemical works at Washington, 8 miles from Newcastle. Here it was that the firm of Messrs. Bell Brothers, which he subsequently formed, started the first works in England for the manufacture of aluminium by the Deville sodium process. In 1852, in conjunction with his brothers Thomas and John, he founded the Clarence Ironworks, near the mouth of the Tees, opposite to Middlesbrough. From the first these works were carried on in an enterprising spirit, the firm being always prompt to adopt any improvement in process or apparatus that seemed likely to be advantageous. The three blast-furnaces erected there in 1853 were at that time the largest in the kingdom, each having a capacity of 6,012 cubic feet, and the escaping gases were utilized for heating the blast. Later furnaces were increased up to a capacity in 1873 of 25,500 cubic feet. At Clarence, too, Messrs. Bell Brothers sank a bore-hole in 1874, and found a bed of rock-salt at a depth of 1,127 feet; but the discovery remained undeveloped till 1882, when they began to make salt, being pioneers in this important industry in the district. They were also among the largest colliery-proprietors in South Durham, and owned extensive iron-stone mines in Cleveland, and limestone quarries in Weardale.

Sir Lowthian's literary career, which was especially associated

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with the iron and steel industry, both in its practical pursuit and in its scientific investigation, may probably be said to have been begun in 1863, on the occasion of the second British Association meeting in Newcastle-on-Tyne, during his second mayoralty of that city; he presented a report on the manufacture of iron in the Northumberland and Durham coal-fields, and also two Papers, on "The Manufacture of Aluminium," and on "Thallium." His prolific pen was thenceforth busily employed for the enlightenment of his fellow iron-masters, and the advancement of their interests. His important researches on the chemistry of iron and steel, which appeared first in the form of Papers, were subsequently collected and published in book form, under the title of "The Chemical Phenomena of Iron Smelting." In 1884 Sir Lowthian published his other large work, entitled "The Principles of the Manufacture of Iron and Steel." For this treatise he received the Howard quinquennial prize awarded by the Institution.

The subject of this memoir was closely associated with the foundation of the Iron and Steel Institute, and subsequently contributed many valuable papers to its proceedings. He served as its President in 1873 and 1874; and during his presidency in the latter year the Bessemer Gold Medal was awarded to him. For Papers contributed to the Institution of Civil Engineers he was awarded a George Stephenson medal and a Telford premium.

In 1876 he served as a Commissioner to the International Centennial Exhibition at Philadelphia, where he was properly called upon to occupy the position of president of the metallurgical committee, and on his return he presented to the Government a report on the iron manufacture of the United States. In the following year, at the request of the Prince of Wales, he undertook similar duties at the Paris Exhibition of 1878, when he was enrolled a member of the Legion of Honour. The honorary degree of LL.D. was conferred upon him by the University of Edinburgh.

Turning to the engagements of public life, Mr. Bell served the office of Mayor of Newcastle-on-Tyne in 1854-5 and again in 1862-3. He was elected a member of Parliament for North Durham in 1874, but was unseated; he sat for the Hartlepoons from 1875 to 1880, and then retired from parliamentary life. For many years he was a director of the North Eastern Railway and Chairman of the Locomotive Committee. For the County of Durham he was a Justice of the Peace and Deputy-Lieutenant, and became High Sheriff in 1884. He was a Fellow of the Royal Society, a member of the Society of Arts and of the Institution of Mechanical Engi-

neers, of which latter society he was elected President in 1884. The honour of a baronetcy was conferred upon him in 1885. Sir Lowthian married, in 1842, Margaret, the second daughter of Mr. H. L. Pattinson.

He was elected an Associate of the Institution on the 21st May, 1867, served as an Associate of Council in 1872, and was transferred to the class of Members on the 8th April, 1873.

EDWARD RICE SWEET ESCOTT, died at Halifax on the 18th September, 1904, aged 64. Educated at Foyle College, Londonderry, of which at the time his father, the Rev. W. Sweet Escott, was principal, he obtained his professional training under Messrs. Fraser and Campbell, architects and surveyors of Londonderry. In 1864 he acted as an assistant to Mr. Richard Davids, Surveyor to the Carnarvon Corporation, and in the following year was appointed an assistant to Mr. Thomas Thorburn, Town Surveyor of Birkenhead, with whom he remained for 3 years.

In 1869 Mr. Escott accepted a temporary engagement upon the trigonometrical survey of the Borough of Halifax, and on the completion of this work, he received an appointment as Assistant Engineer on the permanent staff of the borough. This position he retained until December, 1872, when he was appointed Borough Engineer of Burnley, but returned to Halifax in July, 1873, as Borough Engineer and Surveyor, in succession to Mr. Borrie, a position which he occupied for 27 years. During his tenure of this post he carried out many works incidental to the growth of a large town, and on his retirement his services were retained as Consulting Engineer to the Corporation until his death.

Mr. Escott served for several years as a member of the Halifax School Board, in the work of which he took great interest, attending regularly both board and committee meetings; and to the various charitable institutions in Halifax he extended constant and generous support. He became a member of the Incorporated Association of Municipal and County Engineers on its formation, and after serving on the council of that body, he was, in 1895, elected to the office of President.

Mr. Escott was elected a Member of the Institution on the 6th December, 1881.
