

JOHN OCTAVIUS BUTLER, born in 1812, was the second son of the late Mr. Thomas Butler, of Kirkstall, near Leeds, descended from a family possessing lands at Baildon, near Bradford, for upwards of two hundred years. He was educated at two Yorkshire schools with a view to the engineering profession, and was articled to Messrs. Fenton, Murray and Jackson, engineers, Leeds, in 1829 for five years, and in 1835 went to Messrs. Rothwell and Co., Bolton, as draughtsman.

He entered into partnership in 1848 with his brothers Thomas and Ambrose, and his cousin George Skirrow Beecroft, late M.P. for Leeds, at the old ironworks at Kirkstall Forge, of which the Butler and Beecroft families had been proprietors since 1778. The style of the firm, Beecroft, Butler and Co., was altered in 1858 to the Kirkstall Forge Co., on the retirement of Mr. Beecroft. Mr. J. O. Butler introduced important improvements at Kirkstall Forge, where railway-plant, engine- and bridge-work, steam-hammers, &c., &c., were turned out on an extensive scale, and under his management one of the largest hydraulic forging presses ever made in this country was constructed for forging and stamping of malleable iron on the system of Mr. Haswell, of Vienna.¹

On his retirement from the Kirkstall Forge Co. in 1878, the engineering department was discontinued, but the extensive ironworks are still carried on by his nephews. Mr. Butler re-edited and greatly enlarged "Beecroft's Companion to the Iron Trade," a work brought out by his uncle, the late Mr. George Beecroft, Sen.

Mr. Butler was for many years Major in the 1st West York Artillery Volunteers, was a Justice of the Peace for Leeds, and held various other important offices in connection with his native town. He died from paralysis on the 16th of October, 1883, after an illness of eighteen months. Mr. Butler's connection with this Institution dated from the 12th of March, 1844, when he was elected an Associate; he was transferred to the class of Members on the 27th of January, 1857.

EDMUND SMALL CATHELS was born near Perth in 1827. Coming to London he acquired considerable practical experience at the Surrey Consumers Gasworks under Mr. George Anderson,

¹ The Journal of the Iron and Steel Institute, 1876, p. 428.

then Engineer of the works. In 1853 he was employed at Northfleet, and was appointed Manager of the gasworks at Northfleet. In 1856 he became Resident-Engineer of the Gasworks and East Dover Waterworks, Dover, and in 1861 Engineer and Secretary of the Shrewsbury Gasworks, a post which he occupied till 1866, meanwhile designing and carrying out the Curwen Gasworks. At the latter date he was appointed Engineer to the Crystal Palace District Gas Company. In 1872 he left England under a five-years' engagement as Engineer and Manager of the New City Gas-Company at Montreal, where he carried out very extensive works. On fulfilling this engagement he commenced business on his own account as a Consulting Gas-Engineer and Lessee of Gasworks in the United States and Canada. Mr. Cathels occupied these positions with credit to himself and satisfaction to those whom he served. He was the inventor of a district gas-governor, of a four-way disk-valve, and in conjunction with Mr. D. Terrace, of Glasgow, introduced an improved valve. He was author of "The Gas Consumer's Manual," and other works, and was one of the founders of the British Association of Gas Managers (now the Gas Institute) in 1863. A week or two before his death, which took place on the 29th of April, 1883, at St. Paul, Minnesota, from pneumonia, he accepted the position of Engineer and Superintendent of the gasworks of that city. Mr. Cathels was elected an Associate of this Institution on the 7th of May, 1872, and was transferred to the class of Members on the 30th of October, 1877.

ALEXANDER DRYSDALE, son of Robert Drysdale, an engineer and surveyor, was born on the 14th of January, 1817, at Dumfermline, where he was educated at the Commercial School, and afterwards by a private tutor. At the age of seventeen he was articled for three years to Mr. George Buchanan of Edinburgh, it being stipulated that time was to be allowed him "for attending classes or otherwise improving himself"; however, he was so much employed on extensive surveys in the North of Scotland, including the Cromarty and Beaully Firths, that he was unable to pursue his studies as intended. On the termination of his apprenticeship Mr. Drysdale spent two years at the University of Edinburgh, and attending some private classes. The subjects included Botany, Natural Philosophy, and Mathematics, in the last of which he attained considerable proficiency, particularly in the higher departments, comprising the various applications of the Differential