

of this necessity. By his system plate ingots of any size can be squeezed horizontally and vertically, the ends cut off, and the slab cut into pieces with practically no hand labour, the quality of steel being improved and the waste greatly lessened.

Mr. Walker was a magistrate of the borough of Leeds, and a member of the Liberal Unionist party. He was elected a Member of the Institution on the 2nd of December, 1873, and frequently attended the meetings. In 1880 he contributed a Paper to the Institution, entitled "Machinery for Steel-Making by the Bessemer and Siemens Processes,"¹ for which he was awarded a Telford Medal. In the year 1885 he was a Member of the Jury of the International Inventions Exhibition, receiving a certificate and medal for services rendered. He was also a Member of Council of the Institution of Mechanical Engineers, and of the Iron and Steel Institute. He died on the 4th of April, 1891, after a very brief illness.

Mr. Walker was a thoroughly practical engineer, in whom the inventive faculty was largely developed, and who exhibited great determination and force of character. To these qualities were added a genial nature and an honourable regard for his engagements which won him universal respect.

ARTHUR TURNOUR ATCHISON, the youngest son, by his second wife, of Lieut.-Colonel H. A. Atchison, was born at Bath in 1848. He was at school at Brighton, and in 1866 he went up to Christ's College, Cambridge, with a minor scholarship, which he afterwards exchanged for one on the foundation. He took his degree in the second class of the Mathematical Tripos of 1870. During his residence at Cambridge he acquired considerable distinction as an oarsman and a gymnast. He rowed stroke in his College boat in 1871. In 1869 he rowed in the "trial eights" from which the University crew is selected, and only just missed a place in the Cambridge boat. He also won prizes for sculling and in athletic sports. In the gymnasium he made the friendship of Professor W. K. Clifford, a friendship which

¹ Minutes of Proceedings Inst. C.E., vol. lxiii. p. 2.

continued until Clifford's death. In 1879 an adventure of theirs was referred to in his introduction to Clifford's collected works, by Frederick Pollock, to whom "a friend" (Atchison) wrote: "I am appalled now to think that he (Clifford) climbed up and sat on the cross-bars of the weather-cock on a church tower, and, when by way of doing something worse, I went up and hung by my toes to the bars, he did the same."

On leaving Cambridge, he was a pupil for one year to Messrs. James Simpson and Co., Grosvenor Road, Pimlico. He was afterwards articled to Mr. James Abernethy, Past-President Inst. C.E. In November, 1872, he was sent to Newport, Mon., to assist in superintending the construction of the Alexandra Docks. Then he was employed in making surveys, &c., for the purpose of easing the sharp curves of, and generally improving, the Monmouthshire railway, which had recently been purchased by the Great Western Railway Company.

After passing some little time in the office of Mr. Bailey Denton, he, in 1877, started in London on his own account, in offices in Great George Street. Thence he moved, in 1883, to Parliament Street. His chief work in London was connected with the preparation of reports and plans for parliamentary deposit in connection with railways, tramways, schemes for water supply, &c., and he was attaining an increasing practice when his career was interrupted by the illness which eventually caused his death. He was associated with Mr. Hart in the construction of the Shanghai Waterworks, and assisted in the preparation of a scheme for the water supply of St. Vincent. He also visited Florida (in 1881) to report on some proposed works, and Ceylon (in 1875) in connection with coffee plantations belonging to his father, who had served in that island for the greater part of his military career. Amongst other matters in which he was engaged may be mentioned the Hull and Barnsley railway, and the proposed new line to Brighton.

Arthur Atchison was for some time a contributor to *Nature* of articles on mechanical subjects. He revised and edited the second edition of the catalogue of the Loan Exhibition (1876) of Scientific Apparatus, the first edition of which was hurriedly issued and very incomplete. He was also associated with the Smoke Abatement Exhibition (1882), and with the Health and Inventions Exhibitions (1884 and 1885). He took an active part in the Jury work of both the latter, and in the organization of the conferences held in connection with the Health Exhibition.

In 1872 he became, at the instance of his friend Clifford, a Member of the British Association, and in 1874, at the Belfast Meeting, he

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undertook the duties of Secretary of Section G (Mechanics). He filled the same office again in 1877, and from that time continuously until 1886, accompanying his Section to Montreal in 1884. In 1886 he was elected Secretary to the Association in succession to Professor Bonney. This position he held for the Meetings at Birmingham (1886), Manchester (1887), Bath (1888), and Newcastle (1889); though even in 1887 his health was failing, and in 1889 he was really much too ill to have persevered in the work. To many members of the Association he will, however, be best remembered, not for his official connection with it, but as the witty and popular secretary of the "Red Lion" dining club—a club which probably owes its continued existence to the interest taken in it by Clifford and Atchison, and a few of the special friends who were always happy to be associated with the latter in anything he undertook. The humorous speeches which year after year never failed at the annual dinner, will long live in the memory of the "Red Lions" of the British Association of that date. Full of quaint conceits, brimming over with pure fun, lighted up with flashes of the readiest wit, and wholly free from malice or even the slightest touch of sarcasm, they never contained a word which could annoy or hurt anyone.

It was in 1885 that signs of the illness (pulmonary consumption), which eventually proved fatal, first showed themselves. In the autumn of that year he was ordered abroad, and a voyage to the Cape causing no improvement, he stayed to the end of the winter (1886) at Madeira. In the autumn of 1889 he went to Mentone, and there he spent the winters of that and the following year. He died at that town on the 21st of April, 1891.

Endowed with a singular power of attracting and attaching to himself all with whom he was associated, Atchison had made a large circle of personal friends, all of whom appreciated and admired his quick and ever-ready humour. To a smaller number he was endeared by his sweet and affectionate nature, while the few who saw the cheery courage which never failed through the course of a long and painful illness, or even when the inevitable end came, feel that for them at least a notable amount of the brightness of life disappeared with the passing away of that genial spirit.

Mr. Atchison was admitted a Student of the Institution on the 29th of November, 1870; was elected an Associate on the 13th of January, 1874, and was transferred to the class of Associate Member, on its creation, on the 2nd of December, 1878.