

**Portraits of men of eminence in literature, science, and art, with
biographical memoirs. The photographs from life, by Ernest Edwards,
B.A., ed. by Lovell Reeve ... v. 1.**

Reeve, Lovell, 1814-1865.

London, L. Reeve & Co., 1863.

<http://hdl.handle.net/2027/gri.ark:/13960/t7np4rd8c>

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THE great Railway movement of the present age, and the numerous engineering works which have grown almost, as necessities, out of it, has been the means of developing a very remarkable class of men. The character of these works, their magnitude, and the many difficulties which crossed their path, demanded a self-reliant, earnest-thinking, and most persevering class. England has proved herself rich in such, and their works, not only in these islands, but in other parts of the world, have become the monuments by which a late posterity will know them. Amongst the engineers, there are not many to whom a more exalted place will be given, than to the subject of our present memoir.

John Hawkshaw was born in Leeds, in 1811, and he received his education at the Grammar School of that town. Starting into active life about the time when railways were first beginning to excite attention, he resolved that his career should be closely connected with that of the infant giant which has since taken possession of the land. Mr. Hawkshaw was placed as a pupil with Mr. Charles Fowler, who was at that time chiefly engaged in the construction of turnpike roads in the West Riding of Yorkshire. He subsequently became an assistant to that celebrated engineer, Mr. Alexander Nimmo, who was constructing several important public works for the Government in Ireland. In 1831 Mr. Nimmo died, and at the early age of twenty, John Hawkshaw was engaged to undertake the management of the Bolivar Copper Mines, in South America. This was an office of considerable responsibility, and, the fact of the appointment falling upon so young a man, proved the stability of his character at this age.

Mr. Hawkshaw returned to England after a few years, and he became an assistant to the late well-known engineer, Mr. James Walker. With him he worked most assiduously until 1837, when he was appointed engineer to the Manchester and Bolton Canal and Railway. This was followed soon afterwards by a similar appointment in connection with the Manchester and Leeds Railway. This line formed the nucleus of the widely-extended Lancashire and Yorkshire system, nearly the whole of which railways—embracing many works of considerable magnitude—were constructed by Mr. Hawkshaw.

Those who are acquainted with the railway between Leeds and Manchester, will be enabled to form some idea of the difficult nature of the country, through which many of those lines had to pass. In some districts it became necessary to adopt steeper gradients than had hitherto been attempted to be worked by locomotive engines. The discussions on this point were long continued, and much warmth of feeling was imported into them. Mr. Hawkshaw, however, maintained his position, and proved, in the face of much opposition, the practicability of introducing the steep gradients, and indeed its desirability, even when, by taking circuitous routes, they could be avoided. The correctness of the conclusions of this engineer has been confirmed by the lapse of years, and the views which he so successfully advocated are now universally admitted.

Mr. Hawkshaw has constructed many other railways in different parts of England, and up to the present time he continues to be the consulting engineer of his own—the Lancashire and Yorkshire Railway—and also to the South-Eastern Railway Company.

In Russia, the Riga and Dunaburg Railway was constructed by Mr. Hawkshaw, and to the railway from Dunaburg to Witepok, the works of which are now in active operation, he is the consulting engineer. In India he is connected with the Madras Railway, and the Eastern Bengal Railway. The government of the Mauritius selected Mr. Hawkshaw as consulting engineer to the railways which are now being constructed in that colony.

On the death of Mr. Rendel, the engineering fame which Mr. Hawkshaw had secured, gave him the appointment of engineer-in-chief to the Government Harbour of Refuge at Holyhead, and the other works connected with it. For some time he has also been engaged for the War Office, in constructing the foundations

in the sea at Spithead, for the forts, which are to form an important part of the defences of the Harbour of Portsmouth.

Perhaps there are no works by which this eminent engineer will be better known than those upon which he is now engaged in London. The Charing Cross Railway, although it is only three miles long, involves the necessity of two large bridges across the River Thames. The massive character of the bridge at Charing Cross is such as to give it an almost Egyptian aspect, securing at the same time an appearance of the utmost stability and endurance; the great railway-bridge at Blackfriars is no less grand in the simplicity of its details. It is to be regretted, that it is scarcely possible to find in the same mind great mechanical capabilities, and a perception of the beautiful. Had there not been a considerable absence of the latter in the mind of this eminent man, the inhabitants of London might have escaped the infliction of those unsightly beams of iron, which bridge over many of the best thoroughfares. Mr. Hawkshaw is engineer to the Penarth harbour, dock, and railway, and also to the Hull docks, where he is constructing extensive works, amongst others the Hull South Bridge. The Londonderry bridge in Ireland has just been completed by him.

In 1860 Mr. Hawkshaw was appointed sole Royal Commissioner, to decide between the numerous contending schemes for the water-supply of the City of Dublin. After a lengthened investigation, he recommended a plan, which is now being carried out.

In May, 1862, the failure of the middle level sluice at St. German's, near Lynn, occurred, whereby a large tract of country was flooded, and the safety of the district endangered. The commissioners called Mr. Hawkshaw to their aid, and he succeeded in adopting speedy remedial measures, which have proved successful. Instead of constructing a new sluice, he invented and erected the siphons, for the drainage of the district, which continue to act most satisfactorily.

At the end of the same year, Mr. Hawkshaw visited Egypt at the request of his Highness the late Viceroy, Said Pasha; the object of this visit being to examine into and report upon the practicability of constructing the Suez Ship Canal, for connecting the Red Sea and the Mediterranean. His advocacy of the practicability of that measure as an engineering work is now well known.

Mr. Hawkshaw, from the position which he has secured for himself, is frequently called upon to report, by both the British and foreign governments, upon engineering works and schemes. He was one of the Metropolitan Commissioners of Sewers, when that body was appointed by the Crown, and he is constantly employed as arbitrator between contending parties. This speaks highly for the estimation in which he is held. As a witness before Parliamentary committees, and other tribunals, Mr. Hawkshaw is remarkable for the clearness with which he gives his evidence, and the honesty with which he maintains the opinions which his experience has convinced him to be correct.

On the death of Mr. Cubitt, Mr. Hawkshaw solicited the suffrages of the electors of Andover, desiring to keep the Parliamentary ranks of the engineers complete. He was not returned, his failure being attributed by his friends to the lateness of his appearance in the field. The honour which attaches to a representative man in Parliament, is to be coveted by all high and energetic minds ; but Mr. Hawkshaw may find consolation in the endurance which he has given to his name in structures of stone and iron, which are fine examples of private enterprise and of public usefulness.

Mr. Hawkshaw's life has been too busy for any literary labours of moment ; his only work being "Reminiscences of South America," excepting a few pamphlets on mining and engineering subjects, and some papers read before the Geological Societies of London and Manchester.