

of several large steamers. In December, 1867, he was appointed the engineering manager of, and ultimately a partner in, the Soho Iron-Works, Bolton, Messrs. Hick, Hargreaves and Co. being the first firm to manufacture the Corliss engine in this country under the Inglis and Spencer patents, and during the twenty-two years of Mr. Inglis's management he perfected many improvements in Corliss engines.

Nearly nine hundred Corliss engines were constructed at Soho for mills, &c., ranging in power from 50 to 10,000 HP., the latter being now in hand for the London Electric Supply Corporation, to indicate 5,000 HP. on each crank. This power (as developed on one crank) is unprecedented on land or sea.

Perhaps more than any one individual, Mr. Inglis was instrumental in bringing mill-engines to their present high state of perfection. He was an earnest advocate of high piston-speed, and high steam-pressure, and in fact of all the features which mark the most advanced practice in steam engineering. He was equally capable in designing other classes of machinery. His name is also well known in connection with cold-air machinery for the imported fresh-meat trade; and automatic Barring-engines for starting large engines, &c.

Personally Mr. Inglis was quiet and self-possessed in manner, kind and considerate, especially to those over whom he had authority. As a technical witness he was invaluable, many a case has been won largely owing to his evidence. In short, his death in the prime of his career, is a great loss to the profession.

Mr. Inglis died on April 22nd, 1890, after only a few days illness, of pneumonia, at his residence, Wilton Grange, Bolton. He was elected a Member of the Institution on the 5th of December, 1876.

FREDERICK JOPLING, born on the 11th of November 1855, was the third son of the late Thomas T. Jopling; after being educated at the Collegiate School, London, he entered the office of Messrs. Meik and Nesbitt, of Sunderland, as a pupil, serving a five years' term until 1876, during which time he was employed in preparing plans and surveying for many important works. Among these were the Hylton and Monkwearmouth Railway (on which work he was engaged until its completion), and a scheme for supplying the district of Bedlington with fresh water, which was subsequently carried out most successfully, Mr. Jopling acting as Resident Engineer. On the expiry of his pupilage, he entered the

service of Mr. James Young, contractor, and was engaged for a year as contractor's engineer on the Bedlington Water-works. On the completion of these works he returned to Thomas Meik and Sons, which firm had succeeded that of Meik and Nesbitt. In their office for the next eighteen months he was engaged in the designs of various harbours in Scotland, including Burntisland, Ayr, and Bo'ness Docks, and in November 1878, he was appointed Resident Engineer on the latter work.

While at Bo'ness he competed, and gained first premium offered by the local authorities for the best scheme for a system of drainage for that town. In 1882 the whole of the harbour works were successfully finished and opened. In March of the same year Mr. Jopling received the appointment of Assistant Engineer under Mr. John Fowler, to the Tees Conservancy Commission, and in the following August entered upon his duties. Here a large sphere of varied work lay before him in the multitudinous works carried on by the Commission, notably the reclamation works, the South Gare Breakwater, and the dredging. On the 22nd of February, 1888, he was appointed to the sole charge of all the works of the Commission, Mr. Fowler being retained as consulting engineer, and on the death of that gentleman in October of the same year, he was appointed Engineer-in-chief. In this capacity he had charge of the many and varied works carried out by the Commissioners, including reclamation-embankments, the construction of the head of the south pier, design and construction of the north pier, erecting lighthouses, patent slipway, compressed-gas lighting-apparatus and beacons, alteration and extension of graving dock, widening and wharfing of the river at Stockton, and the removal of the old stone bridge and foundations, removal by blasting of obstructions in the upper reaches of the Tees, and the construction of a water-pipe bridge across the river, the laying of over $2\frac{1}{2}$ miles of water-pipes, construction of a portion of the Tees Sideroad and railway, deep water berths, laying down additional moorings, and the whole of the dredging, employing a fleet of five dredgers, eight tugs and thirty-two hopper-barges, and the general maintenance of the river.

Unfortunately Mr. Jopling was not destined to live long enough to set his mark on these undertakings, as he died on the 17th of February, 1890, within eighteen months of his appointment. He was elected an Associate of the Institution on the 1st of March, 1881, and was transferred to Member on the 19th of March, 1889.