

three years, being responsible during that time for the construction of the tunnel under the town of Preston. He then acted for two years as an assistant to Mr. Park, and in 1851 joined the firm of Park, Son and Garlick, and carried on business in Preston.

Among the works executed by Mr. Garlick may be mentioned the Sea Wall, Carriage Drive and Promenade at Blackpool, and the construction of many miles of embankment on the Lancashire coast. As Engineer to the Ribble Navigation Company he constructed the old quays and river training-walls, and reclaimed from the sea several hundred acres of land. He was appointed Engineer to the Ribble Navigation after the Corporation purchased the undertaking, and he subsequently designed the present dock, tidal basin and river diversion, and the dredging plant, but owing to ill-health he was compelled to relinquish the work and to retire from business for a time.

Mr. Garlick was for many years Engineer and Steward to the Corporation of Preston, in which capacity he carried out many town improvements, including the cattle markets and the large covered market, as well as various works for the water-supply of Preston. In 1868, a very dry season, the storage in the reservoirs was all but exhausted. To meet this emergency, Mr. Garlick erected two engines which pumped water out of the Hodder, the only available supply, the water being conveyed down an aqueduct 7 miles long, with little fall and one incline, the entire work being completed in a few days.

Mr. Garlick constructed many waterworks reservoirs, and at the time of his death, which took place at Preston on the 13th January, 1900, was Engineer to the Fylde Waterworks. For many years he was frequently engaged as a witness in arbitration cases and before Parliamentary Committees.

He was elected a Member of the Institution on the 8th January, 1861.

HARRY PASLEY HIGGINSON, born in 1838 at Thormanby, Yorkshire, was educated at the Collegiate School, Leicester. On leaving school he served an apprenticeship to Sir William Fairbairn, from 1855 to 1859, during which time he became acquainted with all kinds of iron-work and the details of the drawing office. From October, 1859, to November, 1861, he was engaged in Russia on the construction of the Riga-Dünaburg Railway, after which he was appointed in March, 1862, to the Government Staff of the

Mauritius railways. There he was employed for one year in laying out, levelling and surveying the Midland line, and was subsequently appointed District Engineer of the third section of that line, which position he occupied until October, 1865, when the line being opened for traffic, one half of it remained under his charge. In January, 1867, Mr. Higginson was appointed a second class Executive Engineer on the Staff of the Madras Irrigation and Canal Company, and was occupied for the following twelve months in revising the plans and estimates of the tenth section of the works. He then became Assistant Executive Engineer on the second section, which comprised very heavy works, and after their completion in October, 1868, was transferred to the eighth section, on which a great part of the heavy masonry locks were constructed under his direction. In May, 1869, he was promoted to first class Executive Engineer and was entrusted with the tenth section, including, besides locks and head-work, the Pennair anicut or weir, 2,240 feet in length, which was finished on the 1st June 1871, when he returned to England.

In 1872 Mr. Higginson entered the service of the Government of New Zealand, and in September of that year was appointed Superintending Engineer, his duties including the supervision of all the railways and other public works under construction by the Government in the South Island. He held that post until 1878, when, the exigencies of the public service requiring a reduction of the engineering staff, his engagement was terminated. Mr. Higginson then began to practise on his own account in Dunedin, and among the works carried out by him in New Zealand may be mentioned the Waimakariri Gorge Bridge, the Lyttelton Waterworks, the Waimea Plains Railway, the Kawarau Suspension Bridge, and the Balclutha Bridge. For his account of the Kawarau Suspension Bridge,¹ presented to the Institution in 1882, he was awarded a Telford Premium. In the same year he was appointed Chief Engineer, to design and superintend the construction of the Wellington and Manawatu Railway, which was successfully completed in November, 1886. In 1889 he was appointed Engineer and Manager of the Wellington City Gasworks, which posts he held until ill-health compelled his retirement in 1898.

Mr. Higginson died at Wellington on the 26th February, 1900.

He was elected an Associate of the Institution on the 5th February, 1867, and was transferred to the class of Members on the 5th December, 1871.

¹ Minutes of Proceedings Inst. C.E., vol. lxviii. p. 248.