

Copenhagen was carried so far that in April, 1891, the preliminary works for that purpose were commenced, and the completion of the free port on the western shore of the inner roads was the last work upon which Commodore Lüders was engaged, a fitting termination of his long service. His connection with the harbour and port, occurring as it did at a period when great and important improvements were rendered absolutely necessary, may be regarded as most fortunate, not only for himself but for the country he served. Upon everything he undertook he brought to bear technical knowledge of a high order, the utmost energy and zeal, and great powers of administration.

Commodore Lüders was a Commander of the Order of the Dannebrog and had also received several foreign decorations. In 1877 he became a member of the Technical Society of Denmark and in 1892 of the Society of Danish Engineers. He was elected a Member of this Institution on the 4th of May, 1869, and was from time to time in correspondence with the office on matters of engineering interest in Denmark, as to which he was always ready to contribute valuable information.

WILLIAM NETHERSOLE, born at Kingston, Jamaica, on the 17th December, 1829, was the son of a West India merchant. He was educated at King's College, London, and at the Civil Engineering College, Putney, after which he was employed for three years on land drainage works in France. Having then obtained some experience of railway construction in this country, he was appointed Assistant Superintendent in the Army Works Corps in the Crimea, where he served during the war. He was employed on the construction of the strategical railway, much of the work being carried out under fire. The hardships of a winter in the Crimea told severely on his health, and after returning to England he was obliged to rest for a time.

In 1858 Mr. Nethersole entered the service of the Sind, Punjab and Delhi Railway Company, and was placed in charge of the construction of the Mooltan division, a length of 60 miles. From that line he was appointed in 1869 Superintending Engineer on the Indus Valley State Railway. After twenty-five years in India, he retired from the service of the Public Works Department in 1883, from which time, with the exception of some drainage and irrigation work in the island of Jamaica, he was not professionally

employed. In 1886 he married a daughter of Mr. Joseph Nash, M.D., of Box, Wilts, who survives him.

The last few years of Mr. Nethersole's life were spent at Dover. His health gradually declined, and after great suffering, which his hopeful disposition enabled him to bear cheerfully, he died on the 22nd December, 1895. His genial and sympathetic character gained him many friends. He was elected a Member on the 7th February, 1865.

CHARLES RICHARDSON, born on the 14th August, 1814, at Capenhurst Hall, near Chester, was the third son of Mr. Richard Richardson, J.P., Deputy Lieutenant for the County and Chairman of Quarter Sessions, who died when Charles was six years old. From his childhood the latter showed exceptional ability in mechanics and a natural instinct for engineering. He was educated at a private school on the outskirts of Paris and at Edinburgh, which he left in the year 1833.

At the age of nineteen Mr. Richardson was apprenticed to Isambard K. Brunel.¹ His first practical experience was obtained during the construction of the Thames Tunnel, where, as a pupil, he remained for some months while the shield was being slowly forced through the bed of the river.² He possessed great physical strength and activity. It was he for whom Brunel called to scramble down the St. Vincent rocks at Clifton with a message for those below when the work of getting the bar across was in progress, and from his earliest days he displayed a phenomenal taste for tasks of scarcely less danger. As a pupil he saw much work on the Great Western Railway in and around Gloucester, and at the age of twenty-three he was placed by Brunel in charge, as Resident Engineer, of the portion of the Cheltenham and Great Western Railway between Swindon and Cirencester, 18 miles in length. The nature of the ground caused much trouble, landslips occurring to an alarming extent in the banks. The details of a plan devised by Mr. Richardson to stop these landslips are given in a Paper which he read before the Bristol Naturalists' Society in 1891.³ During the construction of the Cheltenham and Great Western Railway Mr. Richardson lived for several years at Chalford, in the Stroud Valley, where there stands now an unimposing but almost unique monument of the artistic taste he brought to

¹ Minutes of Proceedings Inst. C.E., vol. xix. p. 169.

² *Ibid.*, vol. i. (1837), p. 32, and (1840), p. 85.

³ This Paper is in the Library of the Institution.