

In addition to his duties at Dundee, he superintended the construction of the harbour of Buckie, Banffshire, and he found time to make several contributions to engineering literature. In 1884 he presented to the Institution an "Account of Shifting one of the Lighthouses at Buddonness, near Dundee Harbour"¹; and ten years later a Paper entitled "The Estuary of the Tay,"² in which he embodied the results of an elaborate survey of the currents and sandbanks in that estuary. For the latter he was awarded a Telford Premium. Mr. Cunningham was also the author of a volume of "Tables for Facilitating the Calculation of Earthwork"; and of an inquiry into the material and moral position of the populations of Europe and America under the title "Conditions of Social Well-being."³ He took much interest in the progress of technical education, and encouraged the study of science and art in Dundee by the offer of medals and prizes for competition. He was elected Member on the 1st of February, 1876, besides which he was connected with the Royal Society of Edinburgh, the Royal Meteorological Society and the Statistical Society.

Mr. Cunningham died at his residence in Newport, near Dundee, on the 13th of June, 1896. For some time he had been suffering from an incurable malady, and for several months it had been apparent that his strength was rapidly failing. By his death, at the comparatively early age of fifty-seven, has been removed an engineer who was well known throughout the east of Scotland and who was identified with the extensive growth of Dundee Harbour during the past quarter of a century.

JOHN HENRY DAVIS, born on the 24th of December, 1837, was the son of the late Mr. John Griffin Davis, of Clapham. He commenced his engineering career at the age of fifteen, when he entered the locomotive works of the London and North Western Railway Company at Crewe. There he remained four years, after which he was engaged for twelve months in the Locomotive Department of the London and South Western Railway. He then entered the drawing office of Messrs. Neilson & Co., of Glasgow, and after spending eighteen months there passed into the employment of Messrs. Sharp, Stewart & Co. in 1859. Mr.

¹ Minutes of Proceedings Inst. C.E., vol. lxxix. p. 347.

² *Ibid*, vol. cxx. p. 299.

³ These works are in the Library of the Institution.

Davis remained with that firm until 1872, and during ten years of that time he was manager of the design department. He was next for five years manager to Messrs. Nasmyth and Wilson, and while there a 100-ton steam-hammer was made under his supervision, subsequently erected at Woolwich Arsenal under his personal care.

In 1877 Mr. Davis left Patricroft and established himself in London as a Consulting Engineer. During the following sixteen years he was engaged upon work of a varied character, for the Majorca Railway Company, the Salt Company of Ibiza and the Flour Mills Company of the Balearic Islands. He carried out under difficult conditions the narrow-gauge railways in the Island of Majorca and also large flour and jute mills, together with the necessary water-supply. For some years he acted as Consulting Engineer and Agent in London for the Egyptian Railway Administration, and was rewarded by the Khedive with the Order of the Medjidieh for his services in connection with the railway during the last war in Egypt. About the year 1893 Mr. Davis unfortunately developed brain trouble and from that time he was obliged to retire from active work. He died at his residence, Albert House, Sutton, Surrey, on the 20th of February, 1896. Mr. Davis was elected a Member on the 7th of March, 1882.

ELIAS DORNING, born on the 25th of January, 1819, was articled to the late Mr. William Benson, of Bury, in 1836. After serving a pupilage of five years, he was engaged from 1841 to 1843 as Resident Engineer on the Bury Waterworks. Mr. Dorning then commenced to practise on his own account in Manchester as a civil and mining engineer, surveyor and land agent. He became connected with many large works during the early stages of railway development, including extensive Parliamentary surveys and valuations of properties involved, and rapidly extended his business. He was associated with Sir Thomas Bouch¹ in the purchase of land for the Eccles, Tyldesley and Wigan branch of the London and North Western Railway, and he performed similar work for the North Union Railway, the Cheshire Lines Committee and the Wirral Railway Company. He acted as surveyor for the Lancashire and Yorkshire Railway until that Company appointed a permanent surveyor on its staff. He again

¹ Minutes of Proceedings Inst. C.E., vol. lxiii. p. 301.