

THOMAS ALFRED ENGLISH, a descendant of the ancient family, English of Buckland, near Maidstone, was the eldest son of Mr. Thomas English, who settled in Denmark at the beginning of this century, and established copper refining and rolling works at Frederiksværk, in the north of Zealand, and at Leeren, near Drontheim, in Norway. During the war between England and Denmark, and the financial crisis in Denmark after that war, Mr. English, sen., lost his fortune, and died as manager of the works at Leeren, to which place the son had accompanied his father. Young Alfred, who, like his father and grandfather, was a born engineer, left Norway at the age of fifteen and returned to Denmark, where he had many years of uphill work as engineering apprentice, workman, and steam-boat engineer, till he advanced to be manager at Messrs. Cottam and Hallen's, Oxford Street, London, and all this time he supported, out of his wages, his mother and younger sisters and brothers. In 1849 he entered into partnership with a young engineer, Mr. C. J. Hanssen. The firm of English and Hanssen, civil engineers in Copenhagen, were the pioneers of civil engineering in Denmark. They gained competition prizes for schemes of gas-works and water-works for the city of Copenhagen, and succeeded in forming the Danish Gas Company, under Mr. G. P. Bidder, Past President Inst. C.E., and Sir S. M. Peto, as Directors, with Mr. T. Hawksley, Past President Inst. C.E., as Consulting Engineer; they built seven gas-works for that company, various water-works, gas-works, drainage-works for town corporations; schemed the Odense Svendborg Railway, and reclaimed lands, built bridges, public baths, mills, factories, &c. The high-service constant-supply water-works at Odense, built in 1852 at the expense of the town corporation, but proposed, designed, and carried out by Mr. English's firm, were among the first of their class in the north of Europe. The gas-works at Odense, the first erected in Denmark, were built at the same time, at the expense of an English company formed at the firm's initiative, and later amalgamated with the Danish Gas Company. It was no easy task to introduce these improvements; both partners had to canvass from house to house to find subscribers for the four hundred and fifty lights stipulated by the Directors of the Odense Gas Company, and only long perseverance and the energetic persuasion of the Chairman of the Town Council could induce the citizens to vote the £8,000 required for building the water-works. After the completion of the works, however, other towns desired similar benefits; the Danish Gas Company was formed, and gas-works at Elsinore, Aalborg, Randers, Aarhus, Assens, and Flensburg were built simultaneously by

Messrs. English and Hanssen, besides water-works for the town of Aalborg. All the pipe-laying and similar work, except at Odense, was done by Danish workmen. The engineers had to organize everything, educate foremen and workmen, and travel constantly from one end of the land to the other by slow mail-coaches. But in spite of these difficulties, the works were completed to the satisfaction of the Company's Consulting Engineer, and have grown into a very profitable investment. During the year 1883 Messrs. English and Hanssen laid before the English public "A Scheme for Supplying Compressed-Air Motive Power in the Town of Birmingham;"¹ and a company was formed which has established compressed-air works in that town, which have been carried out by Mr. John Sturgeon and Professor H. Robinson.

Mr. English died on the 14th of April, 1889. He was elected a Member of the Institution on the 13th of January, 1885.

ARTHUR SAMUEL HAMAND was one of Mr. Brunel's last pupils, having been taken on the works of the Cornwall Railway, under Mr. H. S. Bush, in 1858, for a three years' term. On Mr. Brunel's death Mr. Hamand was transferred to Mr. Brereton, and after the expiry of his pupilage was by that gentleman employed on the extension of the Cornwall line to Falmouth. Mr. Hamand then came to London, and after a temporary engagement under Mr. George Berkley, became associated with Messrs. Galbraith and Tolmé, for whom he took charge, as Resident Engineer, of the Newport Pagnall, the Garstang and Knott End, the Potteries, Shrewsbury and North Wales, and the Harborne railways. In 1867 Mr. Hamand began practice on his own account in Birmingham, and, both alone and in conjunction with Mr. J. H. Tolmé, acted as engineer to various railway and tramway companies, among them the Whitby, Redcar, and Middlesborough Union, the Halesowen and Bromsgrove, the Birmingham Tramways, and the Staffordshire Extension Tramway. He also had works in Sussex and Hampshire, especially in regard to Pagham Harbour, and it was in connection with the sluices on the east side of Selsey Bill that he lost his life. He was of an eccentric, or rather original, turn of mind, fond of doing things in different ways to others. Among his odd customs was one of bathing at night in the sea.

¹ Published by E. and F. N. Spon.