

capacity on their behalf. On informing the parties that he had been engaged by both, he at once received a reply from each to the effect that they would accept his decision, and begging him to act for both sides. Inspection of the boilers revealed the fact that the high pressure had caused leaks in nearly every part. Thereupon Mr. Summers rendered his decision against the builders and prescribed the alterations to be carried out. The award was cheerfully accepted, although it involved a cost to the builders amounting to the supply of almost entirely new boiler-shells.

In 1884 Mr. Summers retired from business, and thereafter occupied himself in various less exacting avocations. He became a director of the Southampton Floating-Bridge Company, of the Southampton and Isle of Wight Steam Packet Company, of the South Hants Waterworks Company, of the Southampton Chamber of Commerce, and a Governor of the Royal South Hants Infirmary. He was elected a Member of the Institution on the 1st of March, 1864, and was also a member of the Institution of Naval Architects. With rare professional attainments Mr. Summers united an amiability and kindness of heart that rendered intercourse with him a real pleasure. This typical Englishman died on the 22nd of March 1889, and his funeral was a quasi public one, at which all the more prominent of his fellow-citizens were represented.

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JOHN PAGAN was born at Maxwelltown, Dumfriesshire, on the 21st of May, 1842. In 1860 he was articled for five years to Mr. George Mackay, County Surveyor of Invernesshire, with whom he remained, as pupil and assistant, for seven years. In 1867 he became an Assistant Surveyor to the Corporation of Preston, and held the appointment for two years, when he was promoted to a similar office under the Corporation of Bradford. His career at Bradford was a busy one, for it embraced the period of the important street improvements carried out during the years 1869-72, which quite transformed the leading thoroughfares of that borough. In 1872 Mr. Pagan became Deputy Borough Surveyor to the Corporation of Sheffield, and held the position until 1875, when he was unanimously, and without previous canvassing on his part, selected for the office of Borough Surveyor of Wakefield. As holder of this office he was responsible for several works of interest in municipal engineering, among the most important being the main sewerage extension of the borough, and ventilation and improvement of the outfall. In the early part of 1879 the office of Borough Surveyor of Bradford became vacant, and Mr. Pagan had

resolved to try and obtain the post, and so return to his old friends and congenial work in the cloth metropolis, but when on the point of sending in his application he was appointed Surveyor General to the Gold Coast. In May of the year mentioned he proceeded to the West Coast of Africa to commence his duties. On leaving Wakefield Mr. Pagan was the subject of a complimentary dinner, and presentation on the part of the Corporation officials, when a most generous appreciation was manifested of his labours in that borough. Of his work at the Gold Coast little need be said. He held the office of Surveyor General for nearly ten years, during which time he designed and carried out various public works of an important character which greatly benefited and improved the sanitary condition of the Colony. He fulfilled his duties with a conscientious and assiduous thoroughness that was, perhaps, unjust to himself, having regard to the treacherous climate. To this he ultimately became a victim, dying of fever at Accra, on the 13th of December, 1888, respected by all his brother officers. As a mark of esteem, they erected to his memory a monument in the graveyard at Accra.

Mr. Pagan was elected an Associate of the Institution on the 2nd of February, 1875, and on the reconstruction of that class in 1878 became an Associate Member.

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PETER ROBERTS was born at Penzance, on the 3rd of April, 1846. At the age of sixteen he was articled for five years to Messrs. Harvey and Co., of the Hayle Foundry, and on the expiration of his pupilage he was sent by that firm to Norway, to superintend the erection of engines and machinery for the Bratsberg Mining Company. On returning to England, in December, 1867, Mr. Roberts was for a year similarly employed at the East London, and the Southwark and Vauxhall Waterworks, when he became an assistant in the drawing-office of Messrs. R. and W. Hawthorne, Engineers, Newcastle-on-Tyne, under Mr. F. C. Marshall, the managing partner. Here he remained until September, 1871, when he accepted a position in the Engineering Department of the Trinity House, under Sir James Douglass, the Engineer-in-chief. Mr. Roberts occupied this post for about four years, when he undertook a series of temporary engagements, successively with Mr. R. T. Longridge, the Engineer of the Manchester Steam-User's Association; Messrs. Mather and Platt, Engineers, Manchester; and Mr. Henry Rofe, Engineer of the Nottingham Waterworks.