

Mr. Trickett gave much attention to the manufacture of yarn and rope, and made many improvements in the machinery, in all the details of manufacture, which resulted in much better and stronger cordage being produced, and the cost of manufacture lessened. He was a member of the Boiler Committee formed in June, 1874, and was present in taking nearly all the evidence of persons examined by the Committee.

He retired from the post of Chief Engineer of H.M. Dockyard, Devonport, in December, 1879, and his long and able services were recognized by the Admiralty awarding him a special pension, which he enjoyed till his death, on the 9th of November, 1888.

Mr. Trickett was elected an Associate of the Institution on the 1st of February, 1853, and when the division into professional and non-professional Associates was made, he was graded Associate Member.

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JOHN WAKEFORD was born on the 17th of December, 1833. He served a pupilage under the late Mr. R. Allen Stickney, Surveyor to the Public Health Commissioners of Brighton, who was employed at that time on trigonometrical surveys and in drainage and sea-defence works. Mr. Wakeford was then engaged by the Brighton, Hove and Preston Waterworks Company to prepare plans of the mains, hydrants, &c., belonging to the Company. In 1854 he became assistant to Mr. J. G. Poole, Surveyor to the Local Board of Health, Southampton, when he revised the Board's copy of the Ordnance Survey of the town. From 1854 to 1857 Mr. Wakeford was Assistant Borough Surveyor of Leicester, having the superintendence of extensive drainage operations, street-works, and surveys. During 1857-8 he was engaged temporarily with Mr. J. G. Poole, and also Mr. C. E. Bernard, of Cardiff. In 1858-9 he was Clerk of the Works and assistant to Mr. Edward Gibbs, Surveyor to the Local Board of Stratford-upon-Avon, in charge of the main-drainage works. In 1859-60 he was engaged by Messrs. Flint and Shenton, surveying extensions of the Borough of Leicester and in making a copy of the plans of that borough. In 1860 he was appointed Assistant Borough Surveyor of Wolverhampton, engaged in preparing a scheme of main drainage for that town, which was approved by the Local Government Board. He held this appointment until 1865, when he became assistant to Mr. R. A. Marillier, Engineer to the Hull Docks. From 1866 to 1867 he was

Surveyor to the Beverley and Barmstone Drainage Commissioners. The experience gained in these very varied engagements prepared him for the post in which he was destined to pass the remainder of his life. In 1868 he was engaged by the late Mr. J. J. Montgomery, Borough Surveyor of Belfast, as an assistant, and on that gentleman's death in 1884, Mr. Wakeford became Chief Assistant Borough Surveyor under his successor, Mr. J. C. Bretland. Mr. Wakeford held this office until his death on the 6th of June, 1888. Mr. Wakeford was elected an Associate Member on the 6th of May, 1886. He was a very careful and painstaking engineer of the second rank, and although not destined to attain an independent position, he left a considerable reputation for good and thorough work.

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HERBERT FRANCIS WARING, second son of Mr. Thomas Waring, of Cardiff, was born at that place on the 2nd of October, 1859. He was educated chiefly at Cheltenham College, where he took a good position in Physics and Mathematics. He entered his father's office in 1875, and making rapid progress in the profession, was elected an Associate Member of the Institution on the 4th of March, 1884. He soon took charge of the engineering portion of the business, and carried out a scheme of waterworks for the Borough of Aberavon; a filtration system of sewerage for the City of Llandaff; sewerage and sanitary works for various estates, and, up to the day before his death, was engaged in completing a scheme of drainage for the Cardiff Union Sanitary Authority.

Mr. Herbert Waring became a partner in the firm of T. Waring and Sons, Civil Engineers and Land Agents, in 1885. Being of a quiet and retiring disposition, he took no active part in the proceedings of the Institution. His death, on the 12th of August, 1888, from a fit of apoplexy after a few hours' illness, was a great shock to his family and to a numerous circle of personal friends.

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JOHN ASHWORTH was born on the 3rd of August, 1826. From his earliest youth he evinced an aptitude for mechanics, and was constantly making models of small pieces of machinery. When quite a boy he constructed several miniature water-wheels, which he fixed in small streams near his father's house. As he