

EDWARD RUSH TURNER, who died at his home, near Ipswich, on the 10th February, 1904, was one of the pioneer engineers who helped to build up the great trade in agricultural and milling machinery which this country enjoys. Born in December, 1823, he was the son of Mr. Walton Turner, a leather merchant, and after serving a pupilage to the firm of Bond, Turner and Hurwood, he was sent to Messrs. Wren and Bennett, of Manchester, to learn general engineering and mill-wrighting. From 1847, in partnership with Mr. Hurwood, he carried on the business at St. Peter's Works, Ipswich, and on the retirement of Mr. Hurwood in 1851, after conducting the business alone for a time, he ultimately took into partnership his brother, Mr. Frederick Turner, and established the firm which now enjoys a wide reputation. The company was successful practically from the first, and the works were rapidly developed. The subject of this notice took great interest in mills of all kinds for the crushing of cereals, and was an active competitor in the trials of the Royal and Smithfield shows. The manufacture of all kinds of implements was also undertaken. In traction-engine work also Mr. E. R. Turner interested himself, and he is credited with the invention or introduction of the extension of the fore part of the boiler, so arranged that the fore-carriage might swing through a large arc.

While actively engaged in this work Mr. Turner found time to devote to municipal matters, and it is largely to his efforts that the present extensive sewer system of Ipswich is due. On the death, in 1864, of Mr. Hurwood, who had held the office of Engineer to the Dock Commission from the time of the construction of the dock, Mr. Turner was appointed his successor, and his relinquishment of the post after seven years' service was due solely to the increasing claims of private business. He served the office of Mayor in 1882.

Mr. Turner was elected an Associate of the Institution on the 5th December, 1865, was subsequently placed among the Associate Members, and was transferred to the class of Members on the 1st April, 1879. Not long before his death he was enrolled as an Honorary Life Subscriber.

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HENRY BARRATT, born at Heaton Norris in February, 1840, entered the service of the North Cheshire Water Company at the age of 20, and in 1869 was appointed Manager to that Company, which post he held until his death. He acted also for some years as Engineer to the Knutsford Gas and Water Company. For forty-

three years he was connected with the Newtown Night Mission, the flourishing condition of which is largely due to his untiring exertions; he was also for some time Chairman of the Altrincham Free Library and Technical Instruction Committee, and he was largely interested in charitable work for the poor of the district.

Mr. Barratt was elected an Associate of the Institution on the 3rd February, 1874, and was subsequently placed in the class of Associate Members.

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GEORGE HENRY COBB, born in 1832 at Bredgar, Kent, served his pupilage in the works of Messrs. John Penn and Son at Greenwich, with which firm he subsequently remained for nine years, being chiefly occupied in the drawing office. In 1863 he was appointed Chief Engineer to the Arsenal at Trieste, and after holding that post for a time he went to Peru as Naval Engineer to the Peruvian Government. About the year 1873 he gave up active pursuit of the profession and from that time lived in retirement in England, although he took keen interest in engineering matters until his death, which took place at Tunbridge Wells on the 26th February, 1904.

Mr. Cobb was elected an Associate of the Institution on the 12th January, 1864, and was subsequently placed in the class of Associate Members.

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WILLIAM FREDERICK CRAWFORD, B.A. (*Dublin*), died at Johannesburg, Transvaal, on the 8th October, 1903, from pneumonia. Educated at Trinity College, Dublin, where he graduated in Arts and Engineering, he gained his early engineering experience in the works of Messrs. Emerson and Murgatroyd, at Stockport. In 1863 he went to India as Assistant to the Madras Irrigation and Canal Company, and subsequently acted as Engineer during the construction of the Kurnool and Cadapa Canal. He then acted for four years as Agent for Messrs. Wythes and Jackson on the construction of the Maritzburg and Durban Railway, in Natal, and afterwards undertook a contract to supply the labour required to construct the Kimberley Waterworks. Subsequently he constructed the Karachi Steam Tramways and worked them for some months. On the completion of that undertaking he returned home and was engaged for some years in reporting on various mines and in studying the chemical analysis of minerals. Latterly he was in business in Johannesburg as a Consulting Engineer. Able as an engineer, he was modest, genial