

MEMOIRS OF DECEASED MEMBERS.

MR. HENRY ORLANDO BRIDGEMAN, the eldest son of the Hon. and Rev. H. E. Bridgeman, was born at Blymhill, Shropshire, on the 26th of January, 1825. After a course of private tuition, he was for about three years at the College for Civil Engineers, Putney. He then entered the office of Mr. Charles Liddell, and became an assistant engineer on a portion of the Syston and Peterborough railway. From 1848 to 1850 he was employed under Mr. John Fowler, Past-President Inst. C.E., as assistant resident engineer on the Leverton to Lincoln extension of the Manchester, Sheffield, and Lincolnshire railway, which embraced the Torksey bridge over the Trent, the subject of an important discussion at the Institution¹ in the year 1850. This was an early example of a tubular girder bridge, and the Inspecting Officers of the Board of Trade had expressed doubts as to its ultimate safety and security. The results of a mathematical investigation by Mr. Pole, M. Inst. C.E., confirmed by experiments on a large scale conducted by Mr. C. H. Wild, demonstrated the increase of strength due to the continuity of the girder over the centre pier, and led to the sanction of the Railway Commissioners for the opening of the line being given after a delay of four months. Mr. Bridgeman was then engaged upon Parliamentary work and surveys for new railways, namely, the Oxford and Brentford, the Worcester and Hereford, the London and Mid-Kent, and the Chipping Norton, in England; and the Rheims and Douai in France. From 1852 to 1856 he was the acting engineer under Messrs. Bidder (Past-President, Inst. C.E.) and Mr. Fowler, on the London, Tilbury, and Southend railway. On the opening of this line he was sent by Mr. Fowler to Algeria, where he was employed upon the surveys of the Philippeville and Constantine railway. On his return to England, in 1858, he took charge of the construction of the Severn Valley railway, also under Mr. Fowler, where he remained till 1862. From this period he occasionally assisted Mr. Bidder and other engineers in estimates for Parliamentary opposition, and in investigating projects in foreign countries; but his health failing, he was obliged to withdraw from the active

¹ *Vide Minutes of Proceedings Inst. C.E., vol. ix., pp. 233-287.*

pursuit of the profession. His death occurred suddenly, on the 14th of June, 1879, extensive disease of the lungs and weakness of the heart being the cause.

Mr. Bridgeman was elected an Associate of the Institution in December 1849, and was transferred to the class of Members in February 1855.

Mr. WILLIAM WHITAKER COLLINS, son of the late Mr. William Young Collins, who for many years held the appointment of accountant at Messrs. Maudslay's, in Lambeth, was born in London on the 11th of February, 1817. After completing his education he served a regular apprenticeship to the firm of Messrs. Maudslay and Field, and was employed for some time in the drawing office. His next engagement was under Sir Marc Isambard Brunel, M. Inst. C.E., at the works of the Thames tunnel, where he was associated with the late Mr. Thomas Page, M. Inst. C.E. From thence he went to the factory of Messrs. Rennie, where he remained for three years, designing machinery and prosecuting other engineering work. His next appointment was that of resident engineer to the Société d'Ougrée, in Belgium, afterwards becoming consulting engineer to the works of Messrs. Cockerill and Co., of Seraing. Here he remained for several years, after which he returned to England, and was employed on the construction of the London docks under Mr. Smeaton.

In the year 1847, that is to say at the age of thirty, Mr. Collins commenced to practice on his own account as a civil engineer. About ten years later he entered into partnership with Mr. T. R. Crampton, M. Inst. C.E.; and it was during this partnership that he, in conjunction with Mr. Crampton, designed and carried out the extensive waterworks for the city of Berlin, as well as several other enterprises of an important character. The partnership lasted about eight years, and at its termination Mr. Collins resumed practice by himself, retaining the same offices, in Buckingham Street, Adelphi, until he retired a few years before his death.

Mr. Collins was elected an Associate of the Institution of Civil Engineers in the year 1846, during the presidency of his old master, Sir John Rennie, and became a full Member of the Institution in the year 1860, when Mr. Bidder was President, his certificate bearing the following well-known names: Joshua Field, Joseph Cubitt, John Fowler, Hamilton H. Fulton, Thomas Page, T. Macdougall Smith, John Rennie, Charles Hutton Gregory, James Simpson, Henry Maudslay, Charles Fox, S. C. Homersham, and T. R. Crampton.