

He was the Author of a book on masonry structures<sup>1</sup> and part-author with W. V. Shearer of a book on astronomy for surveyors,<sup>2</sup> and of several scientific articles. He is survived by his widow, a son, and a daughter.

EDGAR GOWER RITCHIE, who was born on 15 July, 1871, died in Melbourne on 23 July, 1956.

He was educated at Scotch College, Melbourne, and at the Royal Melbourne Technical College.

He served for a short period with the Victorian Railways and with the Department of Public Works before, in 1891, joining the Melbourne and Metropolitan Board of Works as an engineering draughtsman. After serving for a number of years as Principal Assistant, he became, in 1908, the Engineer of Water Supply. This position he retained until his retirement in 1936.

During his tenure the population of Melbourne Metropolitan area more than doubled itself and the construction and maintenance of an ever-increasing water supply was his principal responsibility.

Among the many schemes which he directed were the Maroondah, O'Shannassy, and Silvan dams. His duties included the making of extensive survey of areas suitable for future water provision.

His services as a Consultant were frequently in demand and he acted in that capacity in the planning or advising on water-supply problems of Perth, Sydney, and Brisbane among other places. He also served on many Boards of Enquiry.

In 1935 Mr Ritchie was awarded the Kernot Memorial Medal by the University of Melbourne and in 1943 he received from the Institution of Engineers, Australia, the Peter Russell Memorial Medal. He contributed several Papers to learned societies and institutions.

He was elected an Associate Member in 1899 and transferred to the class of Members in 1913. He was also a Member of the Institution of Engineers, Australia, and an Honorary Member of the American Water Works Association.

He is survived by his wife, a son, and a daughter.

THOMAS HAYNES UPTON, O.B.E., D.Eng., M.Sc., M.C.E., who was born on 2 June, 1889, died in Australia on 25 October, 1956.

He was educated at Wesley College and the University of Melbourne and was awarded the degrees of Bachelor of Civil Engineering and of M.Sc. both with first-class honours.

In 1912 he became Assistant to Sir John Monash, G.C.M.G., K.C.B., M.I.C.E., and in 1913 Assistant to B. L. Hurst, M.I.C.E.

At the beginning of the first world war he joined the Royal Engineers as a sapper and attained the rank of captain. He was twice wounded and three times Mentioned in Dispatches. Towards the end of the war he served as Chief Instructor of the Royal Engineers Bridging School and was created O.B.E. in 1919.

In the same year he returned to Melbourne and obtained the degree of M.C.E. He became in turn Assistant Engineer, Designing Engineer, and Engineer to the Country Roads Board, Victoria, and in 1922 he was appointed Senior Lecturer in Civil Engineering at the University of Melbourne. In 1925 he joined the Main Roads Board of New South Wales and in 1935 he became President of the Metropolitan

<sup>1</sup> "Masonry engineering structures." Ministry of Education, Cairo, 1916.

<sup>2</sup> "Astronomy for surveyors." Methuen, London, 1929.

Water, Sewerage, and Drainage Board, Sydney. He contributed a number of Papers to Australian scientific societies.

Mr Upton was elected an Associate Member in 1917, transferred to the class of Members in 1926, and was made a Member of Council in 1951. He was also a Member and Past-President of the Institution of Engineers, Australia.

In 1947 he was awarded the Kernot Memorial Medal and in 1949 he received from the Institute of Engineers, Australia, the Peter Russell Memorial Medal.

He is survived by his wife, two sons, and three daughters.

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