

During his earlier period in Manchester, Warne had complete responsibility for the degree course in plant physiology for about twelve sessions. He also taught medical (1st M.B.) and dental students for several sessions, and served on various university committees. His outside activities involved him in active membership of learned societies and of examining bodies. He had a large number of published papers to his credit and was jointly responsible for the revision of Lawson's *Text-book of Botany* for use in Britain and also for India, Pakistan and Ceylon. He was also joint author of a *Practical Botany* for home use, and one for use in tropical countries.

In 1941 Warne married Miss M. M. Walker, whom he had met some years before at Long Ashton, and who was a lecturer at Swanley Horticultural College, Kent. He is survived by his wife and three daughters. Both in the Botany Department and more generally in the University he will be greatly missed as an unusually genial, even-tempered and helpful colleague.

W. O. HOWARTH
C. W. WARDLAW

Dr. T. U. Matthew

DR. T. U. Matthew, director of manufacturing of Massey-Ferguson (United Kingdom), Ltd., and the first Lucas professor of engineering production in the University of Birmingham, died in Scotland, following a brief illness, on May 11, at the age of fifty-two.

Thomas Urquhart Matthew was educated at George Heriot's School, Edinburgh, the Royal Technical College, Glasgow, and King's College, Cambridge. He had production engineering and consultative experience in Great Britain and in South Africa, where he was technical adviser to the Government, before his appointment to the newly endowed Lucas chair in 1948. It was said, at the memorial service held on May 23, that the pioneer Department of Engineering Production which he developed at Birmingham would be his lasting memorial. In 1955 Dr. Matthew returned to industry as production director of Tube Investments, Ltd., and joined Massey-Ferguson a little more than a year ago.

As Lucas professor, Dr. Matthew was charged with determining and elucidating the principles of efficient production engineering, and the emergence of production engineering as a university discipline is, in large measure, a tribute to his ability. He pioneered the application of scientific method to complex problems of production planning, organizing and control, and was one of the first to recognize the contribution that operational research could make in this field. He was a modest, courteous and generous man, who devoted the whole of his time and energy, and considerable analytical gifts, to the service of industry and education for industry. He served the Institution of Production Engineers in many capacities, and was a member of its Council, chairman of the Birmingham Section, and chairman of the Education Committee at the time of his death.

In 1952, he led an I.L.O. Technical Assistance Productivity Mission to the engineering and textile industries of India. He was a founder-member of the International University Contact for Management Education, which brought him into close and continuing contact with his colleagues in Europe and America. About the same time, he established, at Birmingham, the University Institute for Engineering Production to serve as a link between his postgraduate

Department of Engineering Production and practising production engineers. After his own return to industry, his keen interest and efforts on behalf of the Department remained undiminished.

Dr. Matthew leaves a widow and three sons.

N. A. DUDLEY

Dr. H. McCombie

DR. HAMILTON MCCOMBIE, reader emeritus in chemistry in the University of Cambridge, died at Woking on May 31, aged eighty-two. McCombie will be remembered for his distinguished service in the First World War, for his work in connexion with chemical defence, and by his many pupils in Birmingham and in Cambridge. A Scot of the Scots, he was born in London, but in 1900 atoned by taking an ordinary M.A. of the University of Aberdeen. A London B.Sc. with honours in chemistry followed, and he went on in the old tradition to Strasbourg to work under Thiele, getting his doctorate there in 1905.

His first appointment was as lecturer in chemistry in the University of Birmingham, where he became interested in reactions in non-aqueous solvents, work which he continued later in Cambridge. He was in Australia in 1914 to attend the meeting of the British Association. There was the rush back home. His enlistment in the Worcesters followed, but he was soon transferred to the Special Company, Royal Engineers, on its formation after the first German gas attack. There his knowledge and steadfastness proved invaluable and were recognized by the awards of the M.C. and the D.S.O., the Croix de Guerre and two mentions in despatches.

He was elected a Fellow of King's College, Cambridge, in 1919 and served his College and University until his retirement in 1945. In King's he became assistant tutor for natural sciences when C. T. Heycock retired, and he held this office until 1945, in the earlier years jointly with Sir Joseph Barcroft. Kingsmen remember him with affection, and acknowledge the debt they owe to him. He was wise in counsel, and long service on the College Council, on its Estates Committee and as an elector to fellowships was demanded from him and given ungrudgingly except, perhaps, when there was an important rugby match at Grange Road. In the University he lectured on inorganic chemistry to the large class of second-year men about to take Part I of the Natural Science Tripos, and he ran a laboratory to which usually only scholars and exhibitioners were admitted. Once in, a man could attend when he liked and do very much what he liked.

Between the Wars, McCombie directed a very substantial volume of fruitful research, first on antidotes to mustard gas and, later, on the phosphorus gases. During the Second World War he was a deputy chairman of the Joint Recruiting Board and acting head of the Chemical Laboratory after the death of Sir William Pope. After his retirement he lived quietly at Woking to be near one of his daughters and his grandchildren.

Prof. P. Hoffmann

PROF. PAUL HOFFMANN, for many years professor of physiology in the University of Freiburg, died on March 9 in his seventy-eighth year. He was a scientist of distinction and a man of great personal charm, modest, tolerant and wise. His most important work dates from 1910, when he began the study