

motion, and *vice versa*, by means of tilting pads against a swash plate. Like the original thrust bearing, these inventions are notable for their simplicity. The crankless engine has never been widely adopted, although it was successful in Australia in various applications.

Among Michell's other inventions were an impulse turbine, a viscometer, the Michell-Seggel floating pad bearing (jointly with his associate, A. J. Seggel) and hydraulic transmission gear. In 1904 he published in the *Philosophical Magazine* a most original paper on the optimum design of framed structures, the importance of which is only now being recognized by aircraft engineers. He was also the author of "Lubrication" and part-author of "The Mechanics of Fluids"—both standard works. He wrote as he thought, with precision, clarity and deep mathematical insight. In 1934 he was elected a Fellow of the Royal Society in the year in which he was first proposed, and in 1943 the Institution of Mechanical Engineers bestowed on him its highest honour, the award of the James Watt International Medal.

Michell never married. Always a modest, retiring man, living quietly with his brother, he was rarely before the public eye. Those who knew him intimately speak of his keen sense of humour, his love of French literature and his wide knowledge of the Australian flora and fauna, which he cultivated at his country home in Victoria. With his passing Australia has lost its most distinguished engineer.

A. J. FRANCIS

Mr. William Hanson, M.B.E.

IN the recent death, at a comparatively early age, of Mr. William Ralph Hanson, head of the London Forecasting Office, the Meteorological Office has sustained the loss of one of its most devoted servants.

Born in 1904 into a family of teachers, he too spent some years in that profession, having graduated B.Sc. in geography while at Birkbeck College; but in 1937 he entered the Scientific Civil Service as a forecaster, serving at various stations in the south of England. He received his commission in the R.A.F.V.R. shortly before the Second World War but did not go into uniform until 1941. Associated intimately with the organization of meteorological

services in the North African and Italian campaigns, he quickly reached the rank of squadron leader. It was during this period that he first showed his unusual skill in negotiation and, in satisfying not only the Royal Air Force, the Navy and the Army, but also the Americans in these theatres of war, he performed outstanding services and was mentioned in dispatches.

After the War he accepted an interesting appointment in New Zealand, and while there had his early experience of the routine broadcasting of 'weather', experience which was later to be of such value at home. In 1951 he was posted to Habbaniya, returning to Britain in 1953 to take over control of the London Forecasting Office, where until his death on May 3 he filled a post requiring not only a detailed knowledge of the working of the Meteorological Office and of other Government departments, but also an appreciation of the needs of those, outside the Service, needing weather information and advice, be they in industry, commerce, law, the Press or radio. Under his immediate direction, the automatic telephone weather service for London was inaugurated, the 'weather men' of the B.B.C. Television were put on the screen and the Meteorological Office Centenary Exhibition prepared and sent around the country. Hanson was perhaps at his happiest when dealing with such publicity and was particularly successful in bridging the gap between the anonymity of the Civil Service and the extrovert activities of Fleet Street and Lime Grove, in which places he was regarded with respect and affection. Although he worked mainly in the background, from time to time he broadcast to farmers on television and on the sound programme "The Countryside".

Early promise at the piano, violin and organ indicated a possible career in the musical profession, but of latter years his main interest, apart from Freemasonry, was undoubtedly the London Forecasting Office and the developing of new ways of presenting weather to the public. He engaged in no research and published no papers, but nevertheless was always experimenting in novel forms of presentation, and he will long be remembered for his contributions in this field.

He was much devoted to his wife and four children who survive him.

N. B. MARSHALL

NEWS and VIEWS

The Queen's Birthday Honours List

THE following names of scientists and others associated with scientific work appear in the Queen's birthday honours list:

Baronet: Prof. R. Platt, professor of medicine, University of Manchester, and president, Royal College of Physicians.

K.B.E.: Sir David Brunt, emeritus professor of meteorology, University of London, for services in the organization of the International Geophysical Year; Prof. C. A. Cotton, emeritus professor of geology, Victoria University College, Wellington, New Zealand.

Knights Bachelor: Prof. D. Baird, regius professor of midwifery and gynaecology, University of Aberdeen; L. C. Gamage, chairman and managing director, General Electric Co., Ltd.; Prof. W. V. D. Hodge, Lowndean professor of astronomy and geo-

metry, University of Cambridge; Prof. A. J. Lewis, professor of psychiatry, University of London.

C.M.G.: T. S. Leach, chief inspector of fisheries, Ministry of Agriculture, Fisheries and Food; Prof. J. P. Baxter, vice-chancellor, University of New South Wales, and chairman, Australian Atomic Energy Commission; A. J. Haddow, director, East African Virus Research Institute; J. G. M. King, director of agriculture, Uganda; T. A. M. Nash, director, West African Institute for Trypanosomiasis Research; R. J. M. Swynnerton, director of agriculture, Kenya.

C.B.E.: Prof. W. J. G. Beynon, professor of physics, University College, Aberystwyth, for services in the organization of the International Geophysical Year; W. E. China, keeper of entomology, British Museum (Natural History); Prof. S. J. Davies, dean, Royal Military College of Science; Prof. W. R. Hawthorne,