

however, that the greater part of his life was to be devoted. For the next forty years—1910–50—(except for a period during the First World War, when he occupied posts with the Explosives Department of the Ministry of Munitions, finally as controller of that Department) his professional work was entirely linked with the manifold activities of the Johannesburg Consolidated Investment Co., first as consulting engineer, then as managing director in Johannesburg, and later as director and consulting engineer in England.

Lawn possessed wide technical knowledge and experience and, above all, was one of the wisest of the long line of mining engineers whose reputations have been made on the goldfields of South Africa.

During his long association with the Institution of Mining and Metallurgy, of which he was elected president for 1930–31, he took a very active part in discussions on technical and scientific matters. His comments were clear, concise and always constructive, even when critical. The award of the Institution's Gold Medal in 1935 and his subsequent election as an honorary member were fitting tributes to his long and unremitting services to mining education and to the mining industry.

In 1934 the University of the Witwatersrand conferred on him the honorary doctorate of science and

in 1943 he was elected to the honorary fellowship of the Imperial College of Science and Technology, thus forging another link with the Royal School of Mines which he had entered as a student fifty-five years before.

In later years Prof. Lawn had found an absorbing hobby in botanical pursuits. I well remember a chance meeting with Prof. Lawn in a hotel on the Great North Road, after returning from a successful plant-hunting expedition on the slopes of Ingleborough; he was most enthusiastic about some of his finds. His last letters from South Africa were also full of details regarding interesting plants he had recently discovered near his South African home

J. A. S. RITSON

WE regret to announce the following deaths:

Sir William Dampier, F.R.S., senior Fellow of Trinity College, Cambridge, on December 11, aged eighty-four.

Dr. Sven Hedin, Hon. K.C.I.E., known for his explorations of Central Asia, aged eighty-seven.

Dr. C. H. Kellaway, F.R.S., director-in-chief of the Wellcome Research Institution, London, on December 13, aged sixty-three.

NEWS and VIEWS

Long Range Weapons Establishment, Australia : Dr. C. F. Bareford

DR. C. F. BAREFORD has been appointed to the post of chief superintendent of the Long Range Weapons Establishment, Australian Department of Supply, in succession to Mr. H. C. Pritchard, who returns to the United Kingdom next year. In his new office, Dr. Bareford will be responsible for the operation of both the base research and development establishment at Salisbury, and the ranges at Woomera, where trials are carried out for the Australian Government and also the Guided Weapons Directorate of the U.K. Ministry of Supply.

Dr. Bareford is a graduate of the University of Sheffield, where he carried out research under Prof. S. R. Milner on the vacuum arc and spark discharges. He gained some industrial experience with the Mazda Valve Organization during 1934–36, before joining the experimental staff of H.M. Signal School, Portsmouth. He was one of the small band of early workers on naval radar. As early as 1937, together with the late Mr. E. M. Gollin, he built a 20-cm. radar equipment, and a little later the first experimental prototype of the 50-cm. gunnery radar. In 1940, when the need for radar navigational aids became more pressing, he transferred his attention to this field, and to the associated field of precision direction-finding equipment. An early form of pulsed navigational aid was conceived and developed by a team under his leadership in the New Cavendish Laboratory in Cambridge. Special direction-finding equipments using radiation from 100 Mc./s. (33 cm.) to 10,000 Mc./s. (3.3 mm.) were evolved by this team, and were used extensively in the months prior to the Normandy landings by the Allies in 1944. Dr. Bareford had, meanwhile, assumed the control of the Radio Reception Division of the Admiralty Signal Establishment in Haslemere, and sponsored the development of the

communication receiver series which is now standard equipment in H.M. ships. In 1947 Dr. Bareford became head of the Mullard Research Laboratory. Under his leadership the staff of the laboratory has grown from less than twenty to more than a hundred scientists, in addition to the ancillary staff, and has completed many important projects in the broad field of electronic engineering. In particular, the 15-MeV. linear electron accelerator and neutron spectrometer now in use at Harwell were built there. A radar system for the automatic exploration of the meteorological conditions in the upper atmosphere has been developed. The laboratory has also studied extensively cavitation phenomena, and developed instrumentation for various measurement problems and techniques for the mass production of precision components.

Melchett Medal for 1953: Dr. H. Hartley, C.B.E.

THE Institute of Fuel has awarded the Melchett Medal for 1953 to Dr. Harold Hartley, in recognition of his high scientific attainments in the development of domestic heating appliances, coupled with the administrative skill with which he has guided a great industrial organization devoted to the practical efficient use of fuel. Dr. Hartley is chairman of Radiation, Ltd., manufacturers of heating and cooking appliances for domestic, commercial and industrial purposes. A native of the Isle of Man, he was educated there, at the Manchester Grammar School and at the University of Manchester, graduating in chemistry in 1907. He was then elected to a Gartside scholarship of industry and commerce, and, after a year spent in the School of Economics at Manchester, he visited Norway and Canada to study the production of power for electrochemical industries. Returning to England, he worked for three years as a Gas Research Fellow at the University of Leeds under the