

chemical factors, even in a predominantly engineering department, and was followed by work on toxic and inflammable gases and the development of techniques for minimizing their potential hazards. Intensive study of the causes and prevention of corrosion made him an acknowledged authority and enabled the Post Office to effect substantial savings on the maintenance of its large network of external and underground plant. During this period, he was also active in many other fields such as the use of new alloys for cable sheaths, plastics for wire and cable insulation and telephone instruments, new magnetic materials. Before the Second World War he foresaw the probable interruption of supplies of many vital materials such as certain magnetic alloys, natural rubber and tin, and took steps to provide less vulnerable sources of supply of these materials or acceptable substitutes for them. Drawing on wide experience of cable technology, he and his staff discovered the causes of certain failures which at first threatened the success of *Pluto* (for providing fuel for the Normandy invasion) and showed how to eliminate these. The success of the Trans-Atlantic telephone cable systems is in no small measure due to the advice given by him and his staff on all the materials used therein. With the post-war re-organization of the Scientific Civil Service, it was Mr. Richards's task to implement the changes which this required in the Post Office Engineering Department—a responsibility to which he brought as much skill and judgment as he applied to all his scientific work.

Dr. G. H. Metson

DR. G. H. METSON, who has succeeded Mr. C. E. Richards, joined the Post Office in 1925. After eight years in the Physics Laboratories, with spectrography as one of his main interests, he was posted to Northern Ireland, where he had extensive experience of field-work in the Engineering Department and obtained M.Sc.(Eng.) and Ph.D. degrees as the result of research work at The Queen's University, Belfast. He served in the Royal Corps of Signals throughout the Second World War, being awarded the M.C. for gallantry during the evacuation from France in 1940, and held the rank of Lieut.-Colonel during the North African and Italian campaigns. Returning to the Research Branch in 1946, he undertook the formidable task of developing a long-life thermionic valve for use in submerged repeaters. Characteristically, his approach was to make a fundamental study of the processes which occur in oxide cathodes. His insight had led to many notable advances in the understanding of these phenomena which he and his staff have recorded in numerous scientific papers, particularly in the *Proceedings of the Institution of Electrical Engineers*. For a paper, "The Conductivity of Oxide Cathodes", he was awarded the Kelvin Premium of the Institution in 1957. Practical application followed quickly, and the production line which he set up in the Research Branch was the first, and is still one, of the main sources of long-life valves for British submerged repeaters in various underwater cable schemes. His work was rewarded by successive promotions and, in 1956, he was appointed deputy chief scientific officer under the 'special promotion on individual merit' scheme for the Scientific Civil Service.

Commonwealth Scientific and Industrial Research Organization (Australia): Dr. O. H. Frankel, F.R.S.

DR. O. H. FRANKEL has been appointed to the executive of the Commonwealth Scientific and Indus-

trial Research Organization (Australia) in succession to Dr. R. N. Robertson, who has been appointed professor of botany in the University of Adelaide (*Nature*, 187, 740; 1960). Dr. Frankel obtained a doctorate in agriculture in 1925 from the Institute of Genetics in Berlin. After carrying out research in Czechoslovakia, Israel and Great Britain, he went to New Zealand in 1929 to join the Wheat Research Institute of the Department of Scientific and Industrial Research. For twenty-two years there he made outstanding contributions to science and to the welfare of that country's wheat industry. He was associated with the breeding of every variety of wheat grown in New Zealand for the past twenty-five years. In 1942 he became director of the Wheat Research Institute, and in 1949 director of the D.S.I.R. Crop Research Division. In 1951 Dr. Frankel went to Australia to lead the C.S.I.R.O. Division of Plant Industry. Under his leadership the Division has become one of the world's foremost centres for plant research. He has attracted research workers of the highest calibre to his laboratory in Canberra, and built up strong teams of scientists working in all the important fields related to plant production. He is a Fellow of the Royal Society of London and the Royal Society of New Zealand, and Fellow and former vice-president of the Australian Academy of Science.

Botany in the British Museum (Natural History) :
Mr. A. W. Exell, O.B.E.

A LEADING authority on the flora of tropical Africa, Mr. Arthur Wallis Exell, since 1950 deputy keeper of botany in the British Museum (Natural History), retires from his official duties on March 31. Mr. Exell joined the Museum staff in 1924. From 1903 onwards the Museum had been receiving extensive botanical collections made in Portuguese West Africa by John Gossweiler. One of Mr. Exell's first tasks was to prepare a systematic enumeration of Gossweiler's Polypetalae. Thus began his long series of contributions to the botany of Angola and other African countries, leading to the close and cordial Anglo-Portuguese botanical co-operation of which the *Conspectus Florae Angolensis* (1937 onwards) and the *Flora Zambesiaca* (1960 onwards) provide examples; both are largely the outcome of Mr. Exell's enterprise, industry and genial diplomacy. In 1932 he made an expedition to the Portuguese islands in the Gulf of Guinea which resulted in his *Catalogue of the Vascular Plants of S. Tomé* (1944), in 1937 to Angola, in 1955 to the Rhodesias and Mozambique preparatory to the *Flora Zambesiaca*. Side by side with this floristic work he has made special studies of the families Combretaceae and Polygalaceae. He has also taken an active part in the affairs of learned bodies, notably the Association pour l'Etude de la Flore d'Afrique Tropicale, the Linnean Society of London, the Ray Society and the Systematics Association. Fortunately, his official retirement does not terminate his services to botany.

Mr. R. Ross

MR. R. ROSS has been appointed to succeed Mr. A. W. Exell. Mr. Ross was educated at St. Paul's School and St. John's College, Cambridge, where he took a first-class honours degree in natural sciences in 1934. He was a member of the Cambridge Botanical Expedition to West Africa in 1935, and in 1936 joined the staff of the British Museum (Natural History), to take charge of the Diatomaceae. During