

catalogues and for keeping themselves informed of the developing pattern of acquisitions at Washington.

Mrs. Markuson appeared to have been overwhelmed and even surprised to find that even more ambitious plans for mechanizing the Library of Congress have recently been welcomed by those who hold the pursestrings in Washington. Evidently the prospect is not unreal of a complete automation of cataloguing at the Library of Congress and, by extension, of other American libraries as well. Yet it is plain that much remains to be done before it will be known for certain how much information about a book should be included in the bibliographic record. This, it would seem, is one of the most fruitful fields for international collaboration and agreement, and Mrs. Markuson was eloquent about its urgency. Some librarians present were so mistrustful of the necessarily subjective process of constructing a description of a book that they were inclined to think that nothing but the title page would be a sufficient record.

The computer engineers are clearly aware of all these subtleties. Indeed, the undertone of the conference was that it would necessarily be a long time before enough work had been done to know how quickly and how completely libraries would be mechanized. Yet there is more than cataloguing in prospect. Some engineers talk of how computers will help with keeping records of borrowings from a library, how they could help with finding books scattered through several libraries dependent on a central institution, and how eventually they might also allow librarians to keep track of the frequency with which books are used so as to be able to arrange more adequately their stocks for the convenience of the readers. All this is also linked with the possibility that systems for transmitting information from one library to another may help enormously with the sharing of stocks, or at least with the sharing of experience. And nobody knows, of course, what will not happen when the books are on tape as well as the catalogues.

## OBITUARIES

### William Henry Eccles

W. H. ECCLES, who died on April 29, 1966, at the age of ninety, was a physicist who tackled with notable success some of the early scientific problems associated with radio communication. He was an adviser to both the Army and the Navy during the First World War, and later was directly associated with the development of world-wide wireless telegraphy and telephony, including the beginning of broadcasting.

William Henry Eccles was born at Ulverston, Lancashire. He went from a secondary school to the Royal College of Science at South Kensington, from which he graduated in 1898. The following year he joined Marconi in the laboratory of the Wireless Telegraphy and Signal Company at Chelmsford, where he investigated electrical oscillations in coupled circuits. His study of coherers led to results which were presented in his D.Sc. thesis in 1901.

Shortly afterwards he was appointed head of the Department of Mathematics and Physics at the South-western Polytechnic, Chelsea, and 10 years later he was reader in graphics at University College, London. In 1916 he became professor of applied physics and electrical engineering at the City and Guilds of London Technical College, Finsbury. It was during these early years that Dr. Eccles made his principal contributions to radio research. His work on coherers was continued in a comprehensive study of crystal detectors for radio reception, and in 1912 he presented a paper to the Royal Society expanding the theory put forward some years earlier by Oliver Heaviside to explain the propagation of radio-

waves around the Earth by reflexion in the ionized conducting regions of the upper atmosphere. He suggested that the ionizing influence of the Sun's radiation would account for the observed differences in wave propagation by day and by night. During 1912-13 Eccles played a leading part in the British Association's investigations into the characteristics of atmospheric disturbances in radio reception. His book on *Wireless Telegraphy and Telephony*, of which the second and enlarged edition was published in 1918, was for many years one of the very few comprehensive text-books on the subject. *Continuous Wave Wireless Telegraphy*, published in 1921, was a pioneer work of reference in this subject.

Eccles's interest in electrical science and engineering was wide. He was president of the Institution of Electrical Engineers in the 1926-27 session, president of the Physical Society in 1928-30, and of the Institute of Physics from 1929 until 1931. He was keenly interested in the activities of the radio amateur, and was a founder member of the Radio Society of Great Britain and its president for 1923-24.

R. L. SMITH-ROSE

### Prof. F. Y. Henderson

THE death occurred on April 9 of Prof. F. Y. Henderson only 6 years after his retirement as director of the Forest Products Research Laboratory. Born in 1894, he was educated at the High School, Glasgow, and at the University of Glasgow, where he gained the Gold Medal for Botany and a D.Sc. In the First World War he enlisted in the Royal Engineers but was recalled while on the way to France in order to become superintendent of the Detonator Department of Nobel's Explosive Co. In 1919 he joined the Geological Survey in Nigeria and returned in 1921, as a plant physiologist, to the Imperial College of Science and Technology, where eventually he became professor of timber technology. He investigated the relationship of the food reserves of hardwoods to *Lyctus* powder-post beetle attack, and his book *Timber, Its Properties, Pests and Preservation* is still widely used. He was an outstanding lecturer and was extremely popular with his students.

During this period, Henderson also became director of biological studies at the Sir John Cass Institute (1932-39) and superintendent of examinations in biology for the Pharmaceutical Society from 1928 until 1945. With T. A. Oxley, now director of the Forest Products Research Laboratory, but then at the Pest Infestation Laboratory, Henderson investigated the physiology of grain storage.

In 1945, Prof. Henderson was appointed director of the Forest Products Research Laboratory when post-war timber shortages were a severely limiting factor in the reconstruction of Britain's economy. Investigations into the properties of tropical timbers helped to introduce many new species to the trade.

The programme of the Laboratory was concentrated on the utilization of home-grown timbers when the afforestation schemes, begun after the First World War, yielded mature timber. Henderson co-ordinated programmes of work by serving on the research committees of the Timber Development Association and Furniture Development Council. An excellent chairman of committees, he formed panels with industrial representation to plan work on adhesives and plywood which later became the Composite Wood Panel.

An exceptionally modest man with a dry Scots humour, Henderson was keenly interested in his staff and ever ready to help them in personal problems. His high sense of public duty was evidenced by his war-time service in the Home Guard, in which he commanded a platoon. He was a skilled craftsman in woodwork, a lover of music and a keen gardener. He married Elizabeth Douglas Pringle in 1932 and is survived by her and two daughters.

J. D. BLECHLY