

has been carried out for some years by several research organisations in the United States, e.g., Forest Products Laboratory of the U.S. Dept. of Agric.; Chemical Warfare Service of the War Dept.; California Termite Investigations Committee; the Western Union Telegraph Company and others." Various wood preservatives have been experimented with, and the writer of the pamphlet deals with them under three heads. Preservative oils, such as creosotes and combinations in petroleum or tar—especially adapted for penetration of timber to be used in contact with the ground. Water-soluble salts, such as zinc chloride, chromated zinc chloride and several proprietary preservatives, are for use as 'white' or clean pretreatments; they are ordinarily used above ground and the wood can be finished or painted after treatment. Certain toxic chemicals which are nearly colourless, dissolved in light petroleum oils, are adapted for the non-pressure immersion treatment of finished articles. The wood does not swell or shrink, dries rapidly, and is left clean, and after treatment it can be finished or painted. Many methods have now been devised for preserving wood, some simple non-pressure processes, others pressure processes requiring expensive equipment.

#### American Philosophical Society

THE American Philosophical Society Year Book 1942 covers the year January 1, 1942, to December 31, 1942, and, in addition to the minutes of the meetings and of the executive sessions, includes the reports of standing committees, the report of the Special Committee on Zoology in the Library of the Society, awards of prizes and a list of members. The report of the Committee on the Library refers to the study, in furtherance of the policy of selecting the history of American science and culture as one of the two or three major fields in which the Library should develop its holdings, by a committee of Dr. Conklin, Dr. Moore and the Librarian, of the possibility of building up a really great collection on the history of evolution. The report of the Committee on Research details the general principles adopted in regard to grants, requests for which have been fewer than previously because of the participation of many scientific men in research connected with the war effort. Increased demands are anticipated after the War, and the Committee has recommended accordingly that there should be no reduction in the amount assigned for 1943, but that any unexpended balances in the three funds for 1942 and 1943 should be carried over to be disposed of by the Committee after the War. Lists of grants from the Penrose Fund, the Johnson Fund and the Dorland Fund are included with brief reports from recipients of grants on their work. Obituary notices of members include some which will be of interest to British readers.

#### University of Leeds Library

THE report of the librarian of the University of Leeds for the session 1942-43 refers to the rapid growth of the Library as shown by the addition of 5,244 volumes during the year, 4,965 of which were added to the Brotherton Library, as well as 2,182 pamphlets and 8,051 periodicals (parts). The total holding of the Library is now 245,839 volumes and 11,007 pamphlets. In the Brotherton Library, 17,476 slips were added to the author catalogue and 2,800 cards to the subject catalogue during the year,

figures which are, in all, higher than any previously recorded. Although the inter-lending scheme was originally adopted by the Library Committee with reluctance, it is now generally agreed that the scheme has become of great national importance, and instances are quoted in the report of the lending of publications which proved of inestimable value. No further increase can be coped with in this respect if the staff continues to be depleted without efficient replacement. A thorough overhaul of the medical library has been commenced and extensive purchases made; but the problem of accommodation is more acute than ever. The use of the Holden Library also continues to increase, and when the rare books and series that have been removed from Leeds are returned there will be no more vacant shelf space. In spite of the fact that the rare books and manuscripts of the Brotherton Collection remain in places of safety away from the University, inquiries from outside have increased.

#### Repeaters in Submarine Cable Telephony

A PAPER read in London on May 11 before the Institution of Electrical Engineers by Mr. R. J. Halsay considers the problem of multi-channel carrier telephone working on submarine cables, to the permissible limits of attenuation, in relation to present-day practice, and examines the difficulties thereof. While it will be possible to obtain some small increase in the utilization efficiency of such cables by increasing the transmitted power, reduction of the permissible receiving level below the present limit of about -110 db. appears to be impracticable. Development has now reached a stage where the availability of submerged repeaters is essential to further substantial progress, and the design of such repeaters is engaging attention both in Great Britain and in the United States of America. Details of a repeater, laid by the British Post Office in the Irish Sea on June 24, 1943, are given in the paper, and it is believed this repeater is the first to be incorporated in a working cable system. It is suitable for depths down to about 200 fathoms, though at present it is laid in only 35 fathoms. By its use the number of circuits operable over the single cable has been increased from 24 to 48. The further development of repeaters for shallow- and deep-water operation is discussed, the ultimate objective being the provision of considerable numbers of inter-continental telephone circuits over submarine cables.

#### Institute of Industrial Administration

THE report of the October 1943 conference of the Institute of Industrial Administration has now been issued under the title "Management in Action". It includes papers by W. C. Puckey on "Organising for Production", by E. F. L. Breech on "The Personnel Function", by C. E. Holmstrom on "Marketing the Product", and by A. L. C. Chalk on "Financial Administration", together with Sir Cecil Weir's address "Industry After the War" and the presidential address by Viscount Davidson, and also reports of the discussions. The report emphasizes that the idea underlying all the papers is that management must be, first and last, an instrument of service to the community, and indicates that the Institute is facing the problem of the integration of industry and society as one of the first we must solve if we are to build a post-war social and industrial structure which gives full play to individuality and human values.