

Books of the Week

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BIRDS OF MALAYSIA—Jean Delacour—*Macmillan*, 382 p., illus., \$5. A practical handbook of birds inhabiting Malaysia for those interested in birds but not having special technical knowledge.

CAREERS FOR NURSES—Dorothy Deming—*McGraw-Hill*, 358 p., illus., \$3.50. A guide for graduate nurses, this text discusses 15 branches of special nursing with job description written by a nurse active in that specialty; it should help all students choose wisely in their profession.

CATALOGUE OF NORTH AMERICAN BEETLES OF THE FAMILY CLERIDAE—Albert B. Wolcott—*Chicago Nat. Hist. Museum, Fieldiana: Zoology*, Vol. 32, No. 2, 105 p., paper, 75 cents. Designed for the purpose of informing those concerned with North American Cleridae of some necessary changes in nomenclature and systematics.

THE GEOGRAPHICAL NAMES OF ANTARCTICA—Dept. of the Interior, U. S. Board on Geographical Names, Special Pub. No. 86, 253 p., free. The result of most careful study by the board and examination of all available material.

LESSONS IN ARC WELDING—*Lincoln Elec. Co.*, 3rd ed., 152 p., illus., 50 cents in U. S. A., 75 cents elsewhere. Complete and thorough instruction in all phases of arc welding for both new and experienced welders.

MATHEMATICS AS A CULTURE CLUE—Cassius Jackson Keyser—*Scripta Mathematica*, Vol. 1, 277 p., \$3.75. Essays develop the nature of mathematics, mathematical applications, and the bearings of mathematics.

MEDICAL ADDENDA: Related Essays on Medicine and the Changing Order—*Commonwealth Fund*, 156 p., \$1.75. Further development of the trends underlying the practice of medicine reported by the New York Academy of Medicine Committee on Medicine and the Changing Order; psychosomatic medicine, medical social work, psychiatric social work, rehabilitation and convalescence, and chronic diseases.

METHODS OF VITAMIN ASSAY—Assn. of Vitamin Chemists—*Interscience*, 189 p., \$3.50. This manual for the analyst includes only those methods which have been tried on a variety of materials by several committee members.

MUSCULAR CONTRACTION—Sandow, et al.—*N. Y. Academy of Science, Annals*, Vol. XLVII, Art. 6, pp. 665-930, paper, \$3. A discussion of contractile muscle fiber, dealing with dynamics, ultrastructure, chemistry, and mechano-chemical coupling.

PROCEEDINGS OF THE FIRST CANADIAN MATHEMATICAL CONGRESS—Montreal, 1945—*Univ. of Toronto*, 367 p., \$3.75. Contains discussions on secondary school mathematics, statistics, engineering mathematics, and research and graduate work and emphasizes the need for cooperation

among mathematicians for the exchange of ideas.

THE PROCEEDINGS OF THE THIRD PSYCHOTHERAPY COUNCIL—*Inst. for Psychoanalysis*, 176 p., \$2. This two-day council discusses "A Case of Peptic Ulcer", "A Case of Migraine", and "The Psychiatric Out-Patient Clinic of the Future".

STATISTICAL ANALYSIS IN BIOLOGY—K. Mather—*Interscience*, 2nd ed. rev., 267 p., \$5. Designed to help the biologist appreciate the potentialities of statistics in the interpretation of data, it shows the scope of various methods and their interrelation.

STUDIES ON CARBOHYDRATE AND FAT METABOLISM WITH SPECIAL REFERENCE TO THE PIGEON—Oscar Riddle and Associate—*Carnegie Inst. of Wash.*, Publication 569, 128 p., paper, \$1.85, cloth, \$2.25. Information on the physiology of the pigeon and the relatively few observed differences in mechanisms for carbohydrate and fat metabolism in birds and mammals.

TRAIN YOUR HEARING—Mary Wood Whitehurst—*Volta Bureau*, 90 p., \$3. An outlined method of self-training for those wearing hearing aids to help them re-educate their residual hearing. Although emphasizing the fact that personal teacher contacts are most desirable in all rehabilitation work, the author recognizes that this is not always possible and writes to help the numerous hard of hearing who want to help themselves.

THE WATER-SOLUBLE GUMS—C. L. Mantell—*Reinhold*, 279 p., illus., \$6. A coordination and clarification of information in gum technology to bridge the gap between art and science in this field.

WORKING WITH ALUMINUM—Douglas B. Hobbs—*Bruce*, 126 p., illus., \$2.50. For the instructor, student, and home craftsman, this manual contains 25 useful projects described in detail.

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ENGINEERING

Super-Locomotive Planned Has Two Turbine Engines

➤ RAILROADS, seeking near-airplane speeds and power for ever-increasing loads, are trying turbine-powered locomotives. Such an engine, delivering 9,000 horsepower to 16 drive wheels, is the subject of newly-issued U. S. patent 2,424,676, assigned by Frank L. Alben of Pittsburgh to the Westinghouse Electric Corporation.

All told, the monster has 24 wheels; the eight unpowered ones are mounted on two four-wheel guide trucks, at the forward end and under the middle of the locomotive. There are two turbines, with reducing gears to the drive shaft. Trans-

mission is entirely mechanical. Controls are either mechanical or hydraulic.

The design, the inventor points out, permits the distribution of weight over practically the entire length of the engine. Use of multiple small driving wheels makes possible development of high speeds with minimum wear on rails.

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PHYSICS

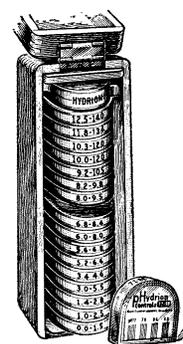
Compact Electron Microscope

➤ A MORE COMPACT type of electron microscope, which uses electrostatic fields instead of the more commonly used magnets for focussing its electron beam, is the invention offered by two General Electric Company physicists, Dr. Charles H. Bachman and Simon Ramo, for a series of four patents, 2,424,788 through 2,424,791. An outstanding advantage claimed for the new design is that the vacuum chamber is small, thereby reducing the time needed for evacuating between changes of specimens. Patent rights are assigned to the employing corporation.

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Hydron pH Papers In One Compact Case



This new variety of sensitive pH papers offers a sharp color change within 0.25 pH unit of almost any point of interest from pH 0 to 14.

Hydron test papers are so simple, so accurate, now so nearly universal, that this Set H-20 should be in the hands of every worker making pH measurements in laboratory or plant.

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