

# Books of the Week

TO SERVE YOU: To get books, send us a check or money order to cover retail price. Address Book Dept., SCIENCE NEWS LETTER, 1719 N St., N. W. Washington 6, D. C. Ask for free publications direct from issuing organizations.

ADVANCED SURVEYING AND MAPPING—George D. Whitmore—*International Textbook*, 619 p., illus., \$5.00. Provides material for a college course covering such subjects as geodetic surveying and mapping, precise surveying in city work, and aerial photogrammetry.

THE ECONOMIC PROBLEMS OF FORESTRY IN THE APPALACHIAN REGION—William A. Durr—*Harvard University Press*, 317 p., illus., \$5.00. A regional approach aimed at defining the field of the economics of forestry.

EXCERPTS FROM RECURRING CYCLES OF FASHION—Agnès Brooks Young—*Foundation for the Study of Cycles*, illus., paper, \$1.00. A brief study of women's fashions since 1760, showing that there are three recurring cycles per century. Originally published by Harper in 1937.

GREGORIO, THE HAND-TREMBLER—Alexander H. Leighton and Dorothea C. Leighton—*Peabody Museum of American Archaeology*, 177 p., paper, \$2.50. This psychobiological personality study of a Navaho Indian who practices hand-trembling as a religious rite and a form of divining, is part of long-time study of the Ramah Navaho and the effect of their culture on the individual.

GUIDING HUMAN MISFITS—Alexandra Adler—*Philosophical Library*, 114 p., \$2.75. A guide for those who come in contact with the misfits of human life. Practical application of individual psychology.

HANDBOOK OF CHEMISTRY AND PHYSICS—Charles D. Hodgman, Ed.-in-Chief—*Chemical Rubber*, 31st ed., 2737 p., illus., \$6.00. New edition of this important reference work.

HUMAN RELATIONS IN A CHANGING WORLD—Alexander H. Leighton—*Dutton*, 354 p., \$4.50. Observations on the practical uses of social sciences, largely the result of a visit by the author to Hiroshinta.

INTRODUCTION TO GAS-TURBINE AND JET-PROPULSION DESIGN—C. A. Norman and R. H. Zimmerman—*Harpers*, 286 p., illus., \$5.00. Explains in detail the performance and the design of gas turbines and jet-propulsion apparatus.

THE KANSAS STORY ON UNESCO—*Gov't Printing Office*, 41 p., illus., paper, 20 cents. How Kansas has organized a State Council, supplemented by local councils in support of UNESCO's programs and purposes.

A NEW THEORY OF HUMAN EVOLUTION—Sir Arthur Keith—*Philosophical Library*, 451 p., \$4.75. The results of many years study on the nature and habitat of man's pre-human ancestors.

NUTRITION AND THE SOIL: Thoughts on Feeding—Lional James Picton—*Devin-Adair*, 374 p., illus., \$4.00. An examination of our nutritional practices.

PARAGUAY—Harris Gaylord Warren—*University of Oklahoma Press*, 393 p., illus., \$5.00. Interestingly written history of a South American country with romantic past almost completely neglected by historians.

PRESENT CONCEPTS OF REHABILITATION IN TUBERCULOSIS—Norvin C. Kiefer—*National Tuberculosis Association*, 398 p., \$3.50. The result of the author's monumental research into 1,007 papers covering more than 10 years of rehabilitation activity.

PROCEEDINGS OF THE INTERNATIONAL CONGRESS ON POPULATION AND WORLD RESOURCES IN RELATION TO THE FAMILY—*Family Planning Association of Great Britain* (U. S. distributor: *Planned Parenthood Federation of America*), 246 p., paper, ten shillings and sixpence (approx. \$2.60). Leading authorities discuss the many problems of family planning, at a meeting in Cheltenham, England, August 1948.

PSYCHIATRY FOR THE MILLIONS—Benzion Liber—*Fell*, 307 p., \$2.95. To help the layman understand mental illness especially in the lighter or incipient forms as they affect one out of every 20 of us.

PSYCHOLOGY, Occupational Abstract No. 119—George J. Dudyca—*Occupational Index*, 6 p., paper, 50 cents. A composite summary of the available literature in 264 references.

THE PSYCHOLOGY OF EVERYDAY LIFE—James Drever—*Methuen* (U. S. distributors: Sherwood Press), 11th ed., 180 p., \$3.00. Includes a supplementary chapter but is otherwise essentially as published in 1921. Of British origin.

## ENGINEERING

# New Device Tests Steel

► HIDDEN magnetic properties of steels which make them suitable for certain uses but not for others are determined by an improved device revealed in New York by the United States Steel Corporation. It can determine steel suitable for making automobile fenders and bottle caps and other steel which may be used in the cores of electric transformers.

The new instrument, which utilizes two strong electromagnetic coils, is called a torque magnetometer. The sample for testing is a circular piece of sheet steel about an inch in diameter. When it is placed in the magnetic field of the coils, it will rotate to a particular position, and then come to rest. This rotation accounts for the term torque in the name of the device.

This behavior on the part of the disk is due to the minute crystals of iron of which the sample is composed. They have certain directions in which they are easily magnetized. The inherent magnetic property of the metal in the disk determines the resulting turn or torque.

In the magnetic field of the coils, the crystallites want to turn the sample disk so that one of the directions of easy magnetizing is parallel to the field. If the preferred directions in the sample were uniformly distributed in all directions, there would be no torque in the disk. But in most kinds of sheet steel these preferred directions are more or less concentrated about certain directions in the sheet.

PUBLIC HEALTH IN THE WORLD TODAY—James Stevens Simmons, Ed.—*Harvard University Press*, 332 p., \$5.00. Presents up-to-the-minute symposium of what is being done, thought, and planned for community, national, and world public health. The outgrowth of Harvard's Health Forums.

TABLES OF BESSEL FUNCTION OF FRACTIONAL ORDER, Vol. II—Computation Laboratory of the National Applied Mathematics Laboratories—*Columbia University Press*, 365 p., illus., \$10.00. Functional values are given either to ten decimal places or ten significant figures.

TORCHBEARERS OF CHEMISTRY—Henry Monmouth Smith—*Academic Press*, 270 p., illus., \$8.00. Portraits and brief biographies of scientists who have contributed to the making of modern chemistry.

THE UTILIZATION OF SUGAR CANE BAGASSE FOR PAPER, BOARD, PLASTICS, AND CHEMICALS—Clarence J. West—*Sugar Research Foundation*, 20 p., paper, free upon request to publisher, New York. An annotated bibliography.

THE VALLEY OF FLOWERS—Frank S. Smythe—*Norton*, 325 p., illus. (16 color plates), \$5.00. An exciting narrative of four months in the Himalayan mountains by a professional mountain climber.

WHAT BUTTERFLY IS IT?—Anna Pistorius—*Follett*, 24 p., illus., \$1.25. A beautiful and delightful book for boys and girls. An excellent introduction to a pleasant hobby.

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The practical use of this magnetometer, developed by Donald S. Miller of the steel corporation's research laboratory, is to select steel for specific applications. Steels with little magnetic directional properties are preferred if deep bottle or other caps, or rich curves as in a car fender, are to be formed. A strong directional indication is preferred in steel of a high silicon content to be used in cores of transformers. Minimum directional properties are desired in the same type of steel for the construction of electric motors and generators.

Science News Letter, April 30, 1949



**TESTA MICROSCOPES**

**Model F** ----- \$89.00  
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