

Books of the Week

► APPROXIMATELY 2,000 terms used in machine shops, industry and engineering literature are given in **DICTIONARY OF ENGINEERING AND MACHINE SHOP TERMS** by A. H. Sandy. They are defined in language that is understandable to the ordinary machinist. (Chemical Pub. Co., \$2.75).

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► THE PRINCIPLES and underlying theory in the field of crystal structure is given in **THEORY OF X-RAY DIFFRACTION IN CRYSTALS** by W. H. Zachariasen. It is a book for advanced students based on lectures given graduate students in an American university. (Wiley, \$4).

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Just Off the Press

AIDS TO TECHNICAL WRITING—Richard C. Jordan and Marion J. Edwards—*Univ. of Minn.*, 117 p., paper, illus., 50c (Univ. of Minn., Eng'g Exp. Station Bull. no. 21).

AMERIGO VESPUCCI, PILOT MAJOR—Friedrich J. Pohl—*Columbia Univ. Press*, 249 p., illus., \$3.

BOOK REPUBLICATION PROGRAM, List III (Cumulative)—Office of *Alien Property Custodian*, 102 p., paper, free.

A COMPARATIVE DICTIONARY OF THE TAHITIAN LANGUAGE, Tahitian-English with an English-Tahitian Finding List—Edmund Andrews and Irene D. Andrews—*The Chicago Academy of Sciences*, 253 p., paper, \$5.

CURRENT ABBREVIATIONS—George Earle Shankle—*H. W. Wilson*, 207 p., \$3.

DICTIONARY OF ENGINEERING AND MACHINE SHOP TERMS—A. H. Sandy—*Chemical Pub. Co.*, 153 p., \$2.75.

ENRICHMENT OF FLOUR AND BREAD, a History of the Movement—Russell M. Wilder and Robert R. Williams—*National Research Council*, 130 p., paper, free (National Research Council, Bull. no. 110).

THE FLORIDA SEMINOLE CAMP—Alexander Spoehr—*Field Museum*, 33 p., paper, illus., 50c (Anthropological Series, Pub. no. 567).

THE HOPI WAY—Laura Thompson and Alice

Joseph—*Univ. of Chicago Press*, 151 p., illus., \$3.

HOW YOU CAN GET A BETTER JOB—Willard K. Lasher and Edward A. Richards—*Am. Tech. Soc.*, 206 p., illus., \$1.50, 2nd ed. An inspirational book on how the worker can improve himself.

MANUAL OF CLINICAL MYCOLOGY—Norman F. Conant and others—*W. B. Saunders*, 348 p., illus., \$3.50.

MEGAFALUNAL ZONES OF THE OLIGOCENE OF NORTHWESTERN WASHINGTON—J. Wyatt Durham—*Univ. of Calif. Press*, 211 p., paper, illus., \$1.50 (Dept. of Geological Sciences, Bull., vol. 27, no. 5).

METHODS IN CLIMATOLOGY—Victor Conrad—*Harvard Univ. Press*, 228 p., illus., \$4.

MUMMIES—Richard A. Martin—*Chicago Natural History Museum*, 18 p., paper, illus., 25c (Anthropology Leaflet no. 36).

NEW NORTH AMERICAN FLEAS—Robert Traub—*Field Museum*, 9 p., paper, 10c (Zoological Series, no. 566).

THE NOCTURNAL MAXIMUM OCCURRENCE OF THUNDERSTORMS IN THE MIDWESTERN STATES—Lynn L. Means—*Univ. of Chicago Press*, 38 p., paper, illus., 75c (Dept. of Meteorology, Misc. Report, no. 16).

PEACE IS A PROCESS, Selected Articles from The Rotarian Magazine Charting Postwar Opportunities Created by New Forces in World Affairs—Leland D. Case, ed.—*Rotary International*, 127 p., paper, illus., 25c.

THEORY OF X-RAY DIFFRACTION IN CRYSTALS—William H. Zachariasen—*Wiley*, 255 p., illus., \$4.

WAVES IN THE EASTERLIES AND THE POLAR FRONT IN THE TROPICS—Herbert Riehl—*Univ. of Chicago Press*, 79 p., paper, illus., \$1.25 (Dept. of Meteorology, Misc. Report, no. 17).

WHAT IS VOCATIONAL EDUCATION—George H. Fern—*Am. Tech. Soc.*, 159 p., illus., \$2.50. Of interest principally to teachers.

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AERONAUTICS

Veteran Mechanical Lung Presented to Inventor

► A MECHANICAL LUNG, or turbosupercharger, that has served on a B-17 Flying Fortress for over 1,000 hours of flying was presented to Dr. Sanford A. Moss, inventor of the turbosupercharger, by the 381st Bombardment Group of the Eighth Air Force in England. The lung has been used on 102 combat missions against German industrial and military targets.

"Although grueling demands of high altitude combat flying wear out the average good turbo in around 500 hours, this turbo apparently is as sound in its 1,004th hour as in its first," stated a report from

an AAF sergeant who had examined the lung in England.

Under the direction of Dr. Moss, the General Electric Company has produced nearly 300,000 turbosuperchargers, making efficient stratosphere operations possible for fighting planes and bombers of the U. S. armed forces.

The turbosupercharger is essentially a combination of compressor and gas turbine. In the turbosupercharger, flaming hot gases exhausted from a combustion engine operate a turbine which drives a compressor for supplying air to the engine. The engine thus is enabled to "breathe" normally in the thin air of high altitudes.

As exhaust gases leave an airplane engine at super-hurricane speed and are destructive to ferrous metals, many problems in metallurgy and design engineering had to be overcome before the device would operate successfully. It spins at whirlwind tempo, with the turbine blazing hot at approximately 1,500 degrees Fahrenheit. The compressor, only a few inches away, compresses air as cold as 76 degrees below zero.

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