

• Books of the Week •

AN INTRODUCTION TO POLYNESIAN ANTHROPOLOGY—Te Rangi Hiroa (Peter H. Buck)—*Bishop Museum*, 136 p., map, \$1. Bernice P. Bishop Museum, Bulletin 187.

COLLOID CHEMISTRY: Theoretical and Applied, Vol. VI—Jerome Alexander, ed.—*Reinhold*, 1222 p., tables and illus., \$20. General principles and specific industries; synthetic polymers and plastics. Papers by selected international contributors.

CRANIOMETRY OF AMBRY ISLAND—Wilfrid D. HAMBLY—*Chicago Natural Hist. Museum*, 158 p., maps, tables, illus., \$2.75. Fieldiana: Anthropology, Vol. 37, No. 1.

HOW CHARACTER DEVELOPS: A Psychological Interpretation—Fritz Kunkel, M. D., and Roy E. Dickerson—*Scribner*, 287 p., \$2.50. The first presentation in English of the psychological system of the senior author. The book is intended to give parents and teachers an insight into the development of personality during childhood.

MODERN MANAGEMENT IN CLINICAL MEDICINE—F. Kenneth Albrecht, M. D.—*Williams & Wilkins*, 1238 p., tables and illus., \$10. A reference book for everyday practice, presenting for 21 different categories of diseases, a clear picture of the rationale of therapy together with useful and usable information.

THE NATURE OF PATENTABLE INVENTION: Its Attributes and Definition—John E. R. Hayes—*Addison-Wesley*, 183 p., \$5.

SCIENCE AND SEIZURES: New Light on Epilepsy and Migraine—William G. Lennox—*Harper*, 258 p., tables and illus., \$2; 2nd ed. A new edition of an important book, containing information on the new drug tritidone.

THE SKELETAL ANATOMY OF FLEAS (SIPHONAPTERA)—R. E. Snodgrass—*Smithsonian Inst.*, 110 p., illus., 65 cents. Smith-

sonian Miscellaneous Collections, Vol. 104, No. 18.

TECHNIQUES OF GLASS MANIPULATION IN SCIENTIFIC RESEARCH—Julius D. Heldman—*Prentice Hall*, 144 p., diags. and illus., \$3.60. Designed for the technician, the chemist, the biologist, the physicist, and all others who at some time find it desirable to repair breaks in glass apparatus or to fabricate not-too-complicated pieces of glass equipment.

TRAINING YOU TO TRAIN YOUR DOG—Blanche Saunders—*Doubleday*, 180 p., illus., \$3. A scheme for training which offers something beyond the routine obedience tests, and is aimed at forming the dog's character; the book is based on the idea that it is the owner that needs training.

VALUES FOR SURVIVAL—Lewis Mumford—*Harcourt*, 314 p., \$3. Essays, addresses, and letters on politics and education written during the period between 1938 and 1946, reviewing the struggle that lies behind and defining the even greater struggle that lies ahead.

Science News Letter, April 13, 1946

ENGINEERING

Smokeless Coal Furnace Will Go on Market Soon

► SMOKELESS coal furnaces, a dream of inventors for more than a century, will be on the market within two years, J. R. Fellows, professor of mechanical engineering at the University of Illinois, predicted at the spring meeting of the American Society of Mechanical Engineers.

Prof. Fellows said that trial furnaces of the new type developed by the University of Illinois, and the Battelle Memorial Institute of Columbus, Ohio, are being used successfully, and manufacturers are now getting service experience before making the furnace generally available.

The Illinois hand-fired smokeless furnace uses a down-draft coking principle with fresh coal being slowly converted into coke in the coking chamber in the upper forward portion of the furnace. This coke is then burned in the coke-burning chamber in the lower rear part of the unit.

As the coal gases are released, they are drawn under the baffle and mixed with secondary air coming in through passages in the baffle wall. This gas-air mixture is ignited by the incandescent surface of the bed of burning coke.

Nearly 100 samples of coal from all parts of the country were tested at the University of Illinois with the conclu-

sion that most varieties of bituminous coal can be burned smokelessly in the new furnace, Prof. Fellows said.

He said records for one of the furnaces installed in his home showed a 30% fuel saving, and tests on more than 100 trial installations indicate that the hand-fired smokeless furnace will duplicate the efficiency of conventional stoker-fired furnaces.

Science News Letter, April 13, 1946

METALLURGY

Balsa Wood and Aluminum Alloy Form New Material

► LAYERS of balsa wood between thin sheets of high-strength aluminum alloy, and all bonded together to form single light, rigid units, constitute a new construction material suitable for use in airplanes, prefabricated homes and for many other purposes. The new material, which will be known as Metalite, was announced by the Chance Vought Aircraft Division of the United Aircraft Corporation in Stratford, Conn.

In the new material, the grain direction of the balsa core is set perpendicular to the metal faces. The core material is relatively thick in comparison to the face plates. In its fabrication, a core material of greater density than balsa can be used in spots where greater strength is desired. The bonding is carried out under moderate heat and pressure. It can be done in a mold where single pieces of special shapes are desired.

In airplane construction, it has a particular advantage, the manufacturer claims, because whole panels can be fabricated with scarcely a single protuberance to interrupt the air flow, a difficulty which rivet heads present.

Metalite will be suitable for use in the construction of prefabricated houses, it is claimed, and for many other uses including household equipment, where its lightness and strength are an advantage.

Science News Letter, April 13, 1946

YOUR HAIR and Its Care

By Oscar L. Levin, M.D.
and Howard T. Behrman, M.D.

NEW, REVISED, EXPANDED EDITION—JUST OUT! If you want healthy hair, lovely hair, then you need the expert advice in this book.

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