

Books of the Week

For the editorial information of our readers, books received for review since last week's issue are listed. For convenient purchase of any U. S. book in print, send a remittance to cover retail price (postage will be paid) to Book Department, Science Service, 1719 N Street, N.W., Washington 6, D. C. Request free publications direct from publisher, not from Science Service.

ADVANCED CALCULUS: A Text upon Select Parts of Differential Calculus, Differential Equations, Integral Calculus, Theory of Functions, with Numerous Exercises—Edwin Bidwell Wilson—*Dover*, 566 p., paper, \$2.45. Reprint of standard text.

ANALYTICAL TRANSIENTS—T. C. Gordon Wagner—*Wiley*, 202 p., \$8.75. Text for graduate electrical engineering course.

THE BOOK OF MISSILES—Clive E. Davis—*Dodd*, 96 p., illus., \$2.75. Information on U. S. missiles, written for the layman.

CAUSALITY: The Place of the Causal Principle in Modern Science—Mario Bunge—*Harvard Univ. Press*, 380 p., illus., \$7.50. Essay on determinism, showing how the causal principle actually works in various departments of modern science.

THE CHALLENGE OF SPACE EXPLORATION: A Technical Introduction to Space—*National Aeronautics and Space Administration*, 47 p., illus., paper, free upon request direct to publisher, 1520 H Street, N.W., Washington 25, D. C. Concise little handbook, with additional sheets giving data on satellites and lunar probes 1957-58-59.

THE CHALLENGE OF THE SPACESHIP: Previews of Tomorrow's World—Arthur C. Clarke—*Harper*, 213 p., \$3.50. Collection of scientific and speculative articles on space travel, containing minimum of technical matter.

COLLECTIVE BARGAINING AS VIEWED BY UNORGANIZED ENGINEERS AND SCIENTISTS—John W. Riegel—*Bureau of Industrial Relations, Univ. of Mich.*, 105 p., \$4. See SNL March 28, 1959, p. 201.

ASTRONOMY For Everyone

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CONCEPTS OF MENTAL HEALTH AND CONSULTATION: Their Application in Public Health Social Work—Gerald Caplan, supplemented by Virginia Inasley—*Children's Bureau (Govt. Print. Off.)*, 269 p., paper, \$1. Among other aspects discusses personality development and mother-child relationships.

DEVELOPMENTAL CYTOLOGY—John R. Preer Jr. and others, Dorothea Rudnick, Ed.—*Ronald*, 215 p., illus., \$7. Papers presented at the 16th Symposium of the Society for the Study of Development and Growth, surveying advances in the understanding of cellular structure and function.

DIRECTORY OF PERIODICALS PUBLISHED BY INTERNATIONAL ORGANIZATIONS—Union of International Associations—UIA, (Palais d'Egmont, Brussels 1, Belgium), 2nd ed., 241 p., paper, \$3. Information on 1,340 periodicals published by non-governmental and inter-governmental international agencies.

ELEMENTS OF MATERIALS SCIENCE: An Introductory Text for Engineering Students—Lawrence H. Van Vlack—*Addison-Wesley*, 528 p., illus., \$8.50. Elementary textbook aimed at giving the prospective engineer a basic understanding of the structure and characteristics of materials.

FIVE FAMILIES: Mexican Case Studies in the Culture of Poverty—Oscar Lewis, foreword by Oliver La Farge—*Basic Bks.*, 351 p., illus., \$5.50. Using technique of ethnological reportage, anthropologist describes a day in the life of five Mexican households, illustrating thus the dynamics of poverty.

THE FLOORS OF THE OCEANS: I. The North Atlantic—Bruce C. Heezen, Marie Tharp and Maurice Ewing—*Geological Soc. of Am.*, Special Paper 65, 122 p., illus., \$1.50. Text accompanying the physiographic diagram of the North Atlantic, describing continental margin, ocean-basin floor and mid-oceanic ridges.

FRUIT KEY AND TWIG KEY TO TREES AND SHRUBS: Fruit Key to Northeastern Trees, Twig Key to the Deciduous Woody Plants of Eastern North America—William H. Harlow—*Dover*, 56 p., illus., \$1.25. Reprint combines books published in 1941 and 1946, respectively.

FUNDAMENTALS OF PHYSICAL CHEMISTRY—H. D. Crockford and Samuel B. Knight—*Wiley*,



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GEOCHEMICAL METHODS OF PROSPECTING AND EXPLORATION FOR PETROLEUM AND NATURAL GAS—A. A. Kartsev and others, English transl. edited by Paul A. Witherspoon and William D. Romey—*Univ. of Calif. Press*, 349 p., illus., \$12.50. Comprehensive coverage of geochemical prospecting for petroleum in the Soviet Union, with detailed descriptions of methodology and results.

THE HARVEY LECTURES: Delivered under the auspices of The Harvey Society of New York, 1957-1958—John H. Dingle, Joshua Lederberg and others—*Academic*, 254 p., illus., \$7.50. Contains epidemiological study of illness in families, lectures on bacterial reproduction, cell division and other subjects.

HIGH ALTITUDE AND SATELLITE ROCKETS Symposium—A. D. Baxter, Chmn.—*Philosophical Lib.*, 136 p., illus., \$15. Papers and discussions of British high-altitude rockets, sponsored by The Royal Aeronautical Society, The British Interplanetary Society and The College of Aeronautics in 1957 before the Russian and American satellites were launched.

THE HUMAN MEANING OF THE SOCIAL SCIENCES—Daniel Lerner, Ed.—*Meridian Bks.*, 317 p., paper, \$1.45. Original essays on the history and application of the social sciences by Margaret Mead, Harry Alpert, Harold D. Lasswell and others.

THE IDEA OF THE UNIVERSITY—Karl Jaspers, Karl W. Deutsch, Ed., preface by Robert Ulich, transl. from German by H. A. T. Reiche and H. F. Vanderschmidt—*Beacon Press*, 135 p., \$3.75. Analyzes (1945) the whole organization of the university, the relation of research and instruction, the logic behind academic departments, the roles of administrator, teacher and student.

INTRODUCTORY CHEMISTRY—Lillian Hoagland Meyer—*Macmillan*, 2nd ed., 528 p., illus., \$6. Simplified textbook for the non-chemistry major.

INTRODUCTORY COLLEGE MATHEMATICS—Thomas L. Wade—*Wiley*, 319 p., \$5.50. Textbook for the better prepared freshmen.

LET'S HAVE HEALTHY CHILDREN—Adelle Davis—*Harcourt*, rev. ed., 314 p., illus., \$3.50. Nutritionist's guide for mothers and expectant mothers.

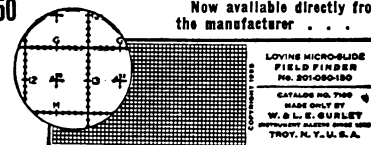
MATHEMATICAL RECREATIONS OF LEWIS CARROLL, Vol. I: Symbolic Logic and The Games of Logic. Vol. II: Pillow Problems and A Tangled Tale—Lewis Carroll—*Dover*, 4th ed., 296 and 261 p. resp., illus., paper, \$1.50 each volume. Reprint of 1895 edition of the mathematical puzzles by the author of "Alice in Wonderland."

METHODS OF EXPERIMENTAL PHYSICS, Vol. I: Classical Methods—Immanuel Estermann, Ed.,

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L. Marton, Ed.-in-Chief—*Academic*, 596 p., illus., \$12.80. Presentation of the most important methods and general principles used in experimental physics, for the advanced student, teacher and research scientist.

A MODERN INTRODUCTION TO COLLEGE MATHEMATICS—Israel H. Rose—*Wiley*, 530 p., \$6.50. Contains common course for first semester, followed by two alternative semesters for either the technical or the liberal arts student.

NEW FACTS ABOUT BIRTH CONTROL—Alan F. Guttmacher and Joan Gould—*Public Affairs Committee*, Pamphlet No. 136B, 20 p., illus., paper, 25¢. Authoritative information about how couples can plan parenthood.

THE NEW SCIENCE: Where is Science Going? The Universe in the Light of Modern Physics. The Philosophy of Physics.—Max Planck—*Meridian Bks.*, new ed., 328 p., \$5. Philosophical writings of the late physicist-Nobelist, of whose work Einstein wrote in the 1932 preface that "it has given one of the most powerful of all impulses to the progress of science."

1959 HEAT TRANSFER AND FLUID MECHANICS INSTITUTE: Preprints of Papers—R. Schamberg and others—*Stanford Univ. Press*, 243 p., illus., paper, \$7.50. Held at University of California, Los Angeles, June 11, 12, 13, 1959.

OFF INTO SPACE: Science for Young Space Travelers — Margaret O. Hyde — *Whittlesey House*, 64 p., illus. by Bernice Myers, \$2.50. Acquaints eight-to-twelve-year-olds with facts about gravity, atmosphere, the principles of rocket travel and astronomy.

THE ORCHIDS: A Scientific Survey—Carl L. Withner, Ed.—*Ronald*, 648 p., illus., \$14. Emphasis is on the botanical, rather than horticultural approach to orchids; work covers present scientific literature on the biology of orchids, pointing out areas for future research.

ORGANIC CHEMISTRY—Melvin J. Astle and J. Reid Shelton—*Harper*, 2nd ed., 771 p., illus., \$7.50. Text presents theoretical discussion of organic chemistry, calling also attention to its applications in industry.

RADIATION PROTECTION: Recommendations of the International Commission on Radiological Protection—Giacchino Failla, Chmn.—*Pergamon Press*, 18 p., 50¢. Report of Main Commission, with recommendations on maximum permissible doses for individuals, special groups and general population, and general principles regarding working conditions.

RADIOACTIVE FALLOUT: A Two-Year Summary Report—Charles L. Dunham—*U. S. Atomic Energy Commission (Off. of Tech. Serv.)*, 110 p., paper, \$1.25. Includes seven reports on specific AEC studies relating to fallout.

THE RAINBOW: From Myth to Mathematics—Carl B. Boyer—*Yoseloff*, 376 p., illus., \$10. History of man's ideas about the rainbow from antiquity to the twentieth century, fully documented.

THE ROMANCE OF CHEMISTRY: From Ancient Alchemy to Nuclear Fission—Keith Gordon Irwin—*Viking*, 148 p., illus. by Anthony Ravielli, \$3.75. Story of the great chemists and their contributions, with very fine line-drawn portraits.

SOME SUNSPOTS AND FLARE STATISTICS—Barbara Bell and Harold Glazer—*Smithsonian Contributions to Astrophysics (Govt. Print. Off.)*, 38 p., paper, 20¢.

SOUNDING ROCKETS—Homer E. Newell Jr. and others—*McGraw*, 334 p., illus., \$12.50. Comprehensive survey of the principal high-altitude rockets used for geophysical and solar research in the U. S., England, France and Japan. Reference work for rocket engineers and high-altitude researchers.

THE STORY OF MADAME CURIE—Alice Thorne—*Grosset*, 176 p., illus. by Frederico Castellon, \$1.95. Biography for young children.

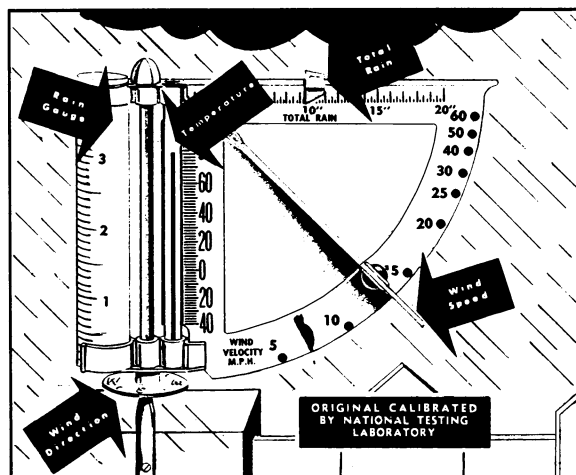
(Continued on p. 382)

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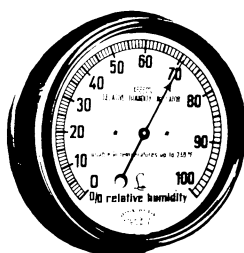
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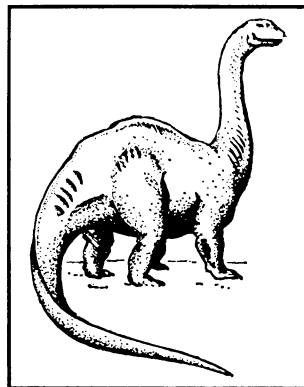
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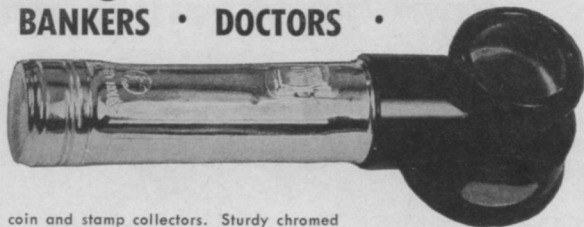
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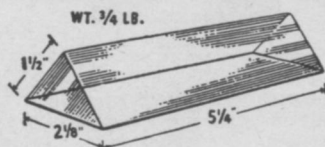


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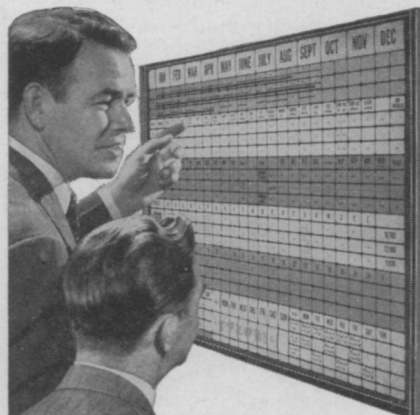
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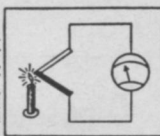
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Books of the Week

(Continued from p. 381)

SURVEY OF STATE LEGISLATION RELATING TO HIGHER EDUCATION, July 1, 1957 to June 30, 1958—Ernest V. Hollis, William G. Land and S. V. Martorana—*Office of Education (Govt. Print. Off.)*, 115 p., paper, 70¢. Abstracts of State legislative action, reflecting national anxiety over the cost of obtaining a college education.

THEORETICAL ELASTICITY—Carl E. Pearson—*Harvard Univ. Press*, 218 p., \$6. Graduate course discussing modern methods of elasticity theory, thoroughly treating thermo-elasticity, wave motion and non-linear elasticity.

THEORY OF FUNCTIONALS AND OF INTEGRAL AND INTEGRO-DIFFERENTIAL EQUATIONS—Vito Volterra, preface by Griffith C. Evans, biography of Vito Volterra and bibliography of his published works by Sir Edmund Whittaker—*Dover*, 226 p., paper, \$1.75. Reprint of 1930 English edition with additions.

TREATISE ON INVERTEBRATE PALEONTOLOGY: Part O: Arthropoda I (Trilobitomorpha)—Raymond C. Moore, Ed.—*Geological Soc. of Am.*, 560 p., illus., \$10.50. Primarily concerned with the trilobites, this volume of the Treatise is the product of the collaboration of 18 specialists from seven different nations.

Science News Letter, June 13, 1959

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