

# Books of the Week

For the editorial information of our readers, books received for review 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.

**ADVENTURES IN THE UNKNOWN INTERIOR OF AMERICA**—Cabeza de Vaca, transl. and ed. by Cyclone Covey—*Collier Bks.*, 152 p., map, paper, 95¢. New, annotated translation of report by 16th century expedition into the interior of what now are Florida, Texas, New Mexico and northern Mexico.

**ATLAS PLANT MORPHOLOGY, Portfolio II:** Photomicrographs of Flower, Fruit and Seed—Emma L. Fisk and W. F. Millington—*Burgess*, 70 p., illus., unbound pages, \$2.75. Collection of micrographs, with descriptions pointing out major morphological features characteristic of structures illustrated.

**THE BOUNDARIES OF SCIENCE**—Magnus Pyke—*Barnes*, 224 p., illus., \$3.75. Describes for the layman the special scope of the different sciences, as well as the points at which they merge one into another.

**THE CHEMICAL BASIS OF MEDICAL CLIMATOLOGY**—Giorgio Piccardi—*Thomas, C. C.*, 146 p., illus., \$6.25. Monograph presents physicochemical equilibria involved in the interactions between macrocosm and microcosm, climate and life, environment and man in health and disease.

**CLASSICAL ELECTRICITY AND MAGNETISM**—Wolfgang K. H. Panofsky and Melba Phillips—*Addison-Wesley*, 2nd ed., 494 p., diagrams, \$12.50. Extensive revisions include treatment of radiation reaction and of classical radiation of electrons moving in a circle, as well as new chapter on principles of magnetohydrodynamics.

**COMMON SENSE ABOUT PSYCHOANALYSIS**—Rudolph Wittenberg—*Doubleday*, 216 p., \$3.95. Practising psychoanalyst attempts to explain to the general reader, with many specific examples, the role of psychoanalysis as one of the "significant developments . . . in the art and science of understanding people."

**CONCEPTS OF FORCE: A Study in the Foundations of Dynamics**—Max Jammer—*Harper*, 269 p., paper, \$1.50. Reprint of 1957 edition, deals with the history and significance of the concept of force in physics.

## TO MEN WHO JUST "CAN'T LEARN" MATH!

More and more in our dynamic economy, a knowledge of basic mathematics pays off!

Whether in Engineering, Electronics, Mechanics, Construction, Pure Science, etc.—or in Estimating, or Trade and Finance, or Buying and Selling, etc.—the man who gets there fustest with the mostest, MATH-WISE, is likely to be rewarded handsomest!

Fortunately, there now exists, in a single volume of 240 fact-packed pages (including 195 clarifying illustrations), a basic course in mathematics, from arithmetic to the calculus, arranged logically and in order of difficulty. Explanations of principles are followed by worked examples.

This one-volume math "library" economizes not only your money but, more important, your time. Amazingly, the author, with a rare talent for simplifying the complicated, covers the whole gamut: treatment of fractions, decimals, square root and cube root, logarithms, progression averages, interest, algebra, equations, graphs, plane and solid geometry, trigonometry, differential and integral calculus; useful mathematical tables; summary of mathematical formulas, etc., etc.

This remarkable work, which already has aided thousands, will be of enormous help not only to those who have forgotten their mathematics but also to those now acquiring it. You may try it out at our risk. ORDER NOW.

### A REFRESHER COURSE IN MATHEMATICS

by F. J. Camm

240 pages • 195 Illustrations

\$2.95 Postfree • 10-Day Money-Back Guarantee  
EMERSON BOOKS, Inc., Dept. 410-M  
251 W. 19th Street, New York 11

**CONTEMPORARY PHYSICS**—C. F. von Weizsacker and J. Juilfs, transl. by Arnold J. Pomerans—*Braziller*, 150 p., illus., \$4. Completely revised edition of "The Rise of Modern Physics," written for the educated layman and student in allied fields of science.

**DEVELOPMENTS IN MECHANICS, Vol. 1**—J. E. Lay and L. E. Malvern, Eds.—*Plenum Press*, 622 p., illus., \$19.50. Papers on theoretical and experimental studies presented at the Seventh Midwestern Mechanics Conference, 1961, at Michigan State University.

**FARES, PLEASE! A Popular History of Trolleys, Horse-Cars, Street-Cars, Buses, Elevateds and Subways**—John Anderson Miller—*Dover*, 204 p., illus., paper, \$1.50. Essentially the story of the first century of the local transportation industry.

**GEOMETRY: An Introduction**—H. G. Forder—*Harper*, 200 p., illus., paper, \$1.35. Reprint of revised edition, book surveys the main branches of geometry, apart from topology, from a modern point of view.

**HINTS & KINKS FOR TV, RADIO, AUDIO**—Martin Clifford, Ed.—*Gernsback Lib.*, 128 p., illus., paper, \$2.35. Suggestions of gimmicks and gadgets that have proven useful on test instruments and in the shop.

**INTUITION AND SCIENCE**—Mario Bunge—*Prentice-Hall*, 142 p., paper, \$1.95. The author, a philosopher and theoretical physicist, makes clear the differences and similarities among diverse kinds of intuition, and what their roles are in philosophy, mathematics and physics.

**IT BEGAN IN BABEL: The Story of the Birth and Development of Races and Peoples**—Herbert Wendt, transl. from German by James Kirkup—*Houghton*, 444 p., photographs, \$6.50. Author quotes from the works of ethnologists, anthropologists and explorers in this roaming story about mankind's races.

**LABORATORY STUDIES IN DEVELOPMENTAL ANATOMY**—Theodore W. Torrey—*Burgess*, 2nd ed., 113 p., illus., paper, \$3. Manual treats both comparative vertebrate anatomy and vertebrate embryology.



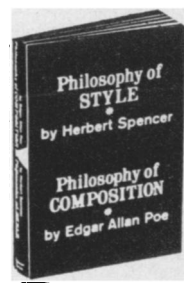
## RADIOMETER

American made. Balanced four arm vane, in a 3" diameter evacuated glass globe, turns upon exposure to light, any light, even a lighted match. Highly decorative, interesting, educational, instructive. A conversation piece. We guarantee yours to operate.

\$3.00 p.p. 2 for \$5.00 p.p.

HARRY ROSS

Scientific & Lab Apparatus  
61-L Reade St., N.Y. 7, N.Y.



## IF YOU WRITE FOR MONEY!

Enrich your writing by applying Herbert Spencer's and Edgar Allan Poe's classic principles that have inspired many of the world's greatest authors. Indispensable if you want to get published! Send \$1.00 to

PAGEANT PRESS

Dept. SN

101 5th Ave., N.Y.C. 3.

**LIFE IN THE UNIVERSE: A Scientific Discussion**—Michael W. Ovenden—*Doubleday*, 160 p., illus., paper, 95¢. Astronomer's graphic discussion of cosmic time scales, of life as a process within the physical universe, and the evolution of that universe. See story, p. 66.

**MAN AND CIVILIZATION: Control of the Mind**—Seymour M. Farber and Roger H. L. Wilson, Eds.—*McGraw*, 340 p., illus., \$6.50. Record of symposium held at the San Francisco Medical Center of the University of California in 1961.

**MATHEMATICS: A Cultural Approach**—Morris Kline—*Addison-Wesley*, 701 p., illus., \$7.75. One-year terminal course in mathematics, attempts to show what mathematics is, what the mathematical approach to real problems can accomplish, and the extent to which mathematics is an integral part of our civilization and culture.

**MEDICAL GENETICS 1958-1960: An Annotated Review**—Victor A. McKusick and contributors—*Mosby*, 534 p., illus., \$14.50. These reviews of medical genetics literature attempt a critical appraisal of recent reports, and are intended to supplement available textbooks in the fields of general genetics and human genetics.

**MEDICAL TEACHING IN WESTERN CIVILIZATION: A History Prepared from the Writings of Ancient and Modern Authors**—William B. Wartman—*Year Bk. Medical*, 307 p., \$7.50. Presents a continuous history of medical teaching, from ancient Greece to our age, in the great teachers' own words.

**METHODS OF EXPERIMENTAL PHYSICS, Vol. 3: Molecular Physics**—Dudley Williams, Ed.—*Academic Press*, 760 p., illus., \$19. Reference volume on general experimental methods employed to determine sizes and shapes, electric and magnetic properties, internal energy levels, and ionization and dissociation energies of molecules.

**MODERN DICTIONARY OF ELECTRONICS**—Rudolf F. Graf—*Sams (Bobbs)*, 370 p., illus., \$6.95. Authoritative and up-to-date technical dictionary giving definitions of more than 10,000 current terms in the rapidly expanding field of electronics.

**MODERN PHYSICS**—F. W. Van Name, Jr.—*Prentice-Hall*, 2nd ed., 319 p., illus., \$11. Broad survey of modern physics, from elementary atomic physics, through the study of individual particles in atoms and molecules, to the discussion of nuclei and nuclear particles, cosmic rays, mesons and hyperons.

**MOLECULAR BIOPHYSICS**—Richard B. Setlow and Ernest C. Pollard—*Addison-Wesley*, 545 p., illus., \$11.75. Textbook on advanced undergraduate level, treats properties of biological systems and phenomena in terms of the properties of molecules, both small and large.

**THE MOLECULAR CONTROL OF CELLULAR ACTIVITY**—John M. Allen, Ed.—*McGraw*, 328 p., illus., \$10.50. Series of lectures viewing the cell as a whole, covering topics pertinent to a comprehension of the regulation of cellular activity in terms of molecular action and interaction.

**MULTIPLE MOLECULAR FORMS OF ENZYMES**—Felix Wroblewski, Ed.—*N. Y. Acad. of Sciences, Annals*, Vol. 94, Art. 3, 375 p., illus., paper, \$5. Monograph contains conference papers and discussions.

## FREE BOOK!

"Dover Science Sampler," 64-page book, with entertaining, instructive selections from Mach, Galileo, Newton, Poincare, Hubble, Steinman, etc. Island universes, fata morgana, genetics, phase rule, etc. Entirely free, no string attached; no obligation, no salesmen will call. Supply limited, write now. Dept. SNL DOVER, 180 Varick St., N. Y. 14, N. Y.

**NERVES AND MUSCLES**—Robert Galambos—*Doubleday*, 158 p., illus., paper, 95¢. Introduction to biophysics, author shows how this new branch of science grew out of physical and chemical measurements on living tissue.

**THE NEW AMERICAN GUIDE TO COLLEGES**—Gene R. Hawes, introd. by Virgil M. Hancher—*New Am. Lib.*, rev. 2nd ed., 349 p., paper, 75¢. Authoritative, enlarged edition features specific information on more than 2,000 colleges and universities, including Mexico and Canada.

**NEW STUDENT'S HANDBOOK OF SCIENCE: A Guide to Study, Hobbies and Careers**—Bernard Udane and Herman W. Gillary—*Ungar*, 270 p., illus., paper, \$1.45. Sourcebook of background material related to students' work in science, encouraging extracurricular activity. Formerly entitled: How to Enrich Your Science Studies.

**1961 RESEARCH HIGHLIGHTS OF THE NATIONAL BUREAU OF STANDARDS: Annual Report, Fiscal Year 1961**—A. V. Astin, Dir.—*NBS (GPO)*, 204 p., illus., paper, 75¢. Brief reports of selected studies and achievements from the various fields in which the Bureau is active, with summary of additional programs.

**PARASITOLOGY OF FISHES**—V. A. Dogiel, G. K. Petrushevski and Yu. I. Polyanski, Eds., transl. from Russian—*Oliver & Boyd*, 384 p., illus., \$12. Comprehensive review of wide range of research on the problems of fish parasitology, both marine and freshwater. Includes discussion of zoogeography of the fish parasite fauna.

**PHYSICS AND PHILOSOPHY: The Revolution in Modern Science**—Werner Heisenberg, introd. by F. S. C. Northrop—*Harper*, 213 p., paper, \$1.40. Gives reader insight into the school of philosophic thought based on the author's principle of indeterminacy of quantum mechanics.

**PHYSIOLOGICAL AND BEHAVIORAL ASPECTS OF TASTE**—Morley R. Kare and Bruce P. Halpern, Eds.—*Univ. of Chicago Press*, 149 p., illus., \$6. Papers and discussions of a symposium held at Cornell University in June, 1960, probing the anatomy and physiology of the gustatory system for clues to a better understanding of the function and stimuli of taste in connection with food intake.

**THE PLASMA DISPERSION FUNCTION: The Hilbert Transform of the Gaussian**—Burton D. Fried and Samuel D. Conte—*Academic Press*, 419 p., \$12. Tables of particular value to anyone concerned with waves of linearized disturbances in a very hot, not too dense, uniform plasma, such as occur in hypersonics, ionospheric physics and space physics.

**PROCEEDINGS OF THE THIRD ANNUAL INDUSTRIAL AND ECONOMIC DEVELOPMENT CONFERENCE**, Oct. 5-6, 1961—*Wash. State Univ.*, 91 p., charts, paper, \$3. Discussion centered on the role of resources in economic growth.

**THE QUESTION AND ANSWER BOOK OF EVERYDAY SCIENCE**—Ruth A. Sonneborn—*Random House*, 70 p., illus. by Robert J. Lee, \$1.95. Answers such questions as what makes a ball bounce and why things get rusty.

**RADAR OBSERVES THE WEATHER**—Louis J. Battan—*Doubleday*, 158 p., illus., paper, 95¢. Introduces students and layman to radar and its applications as a weather-observing instrument.

**RADIO ASTRONOMY**—J. H. Piddington—*Harper*, 128 p., illus., \$2.50. Compact introduction to the science of radio astronomy, with chapters on wave propagation, hydrogen line emission, radio waves from space, and radar astronomy.

**REX BRASHER, PAINTER OF BIRDS: A Biography**—Milton E. Brasher—*Rowman & Littlefield*, 347 p., illus., \$5.95. Told by his nephew, this is a modern odyssey of the painter who fulfilled his ambition to record every known species and subspecies of the birds of North America in their habitat.

**ROCKS AND MINERALS OF FLORIDA, A GUIDE TO IDENTIFICATION, OCCURRENCE, PRODUCTION AND USE**—Ernest W. Bishop and Lawrence L. Dec, Jr.—*Fla. Geological Survey*, 41 p., illus. by Andrew R. Janson, paper, \$1; specimen set of 18 typical minerals, \$1.50. Booklet intended to be a simple reference guide for students.

**THE RULE OF FOLLY**—James R. Newman, preface by Erich Fromm—*Simon & Schuster*, 64 p., paper, \$1. Collection of articles and letters to the editor, considering critically current nuclear and civil defense policies.

**SEED IDENTIFICATION MANUAL**—Alexander C. Martin and William D. Barkley—*Univ. of Calif. Press*, 221 p., 824 plates, illus., \$10. Basic reference tool for the expert as well as the layman, lists families and genera of seeds, describes size, appearance and other characteristics, under three headings: farmlands, wetlands and woodlands.

**SOIL MANAGEMENT FOR CONSERVATION AND PRODUCTION**—R. L. Cook—*Wiley*, 527 p., illus., \$9.95. Text sets forth in simple language the principles and practices of soil management, treating individual practices in six climatic areas, from the North Central Region to Florida and adjoining flatwoods.

**THE STORY OF OUR TIME: 1961 Encyclopedia Year Book**—Marian Lockwood, Ed.-in-Chief—*Grolier*, 432 p., illus., \$7.50. Science Service contributed section on "Science Highlights in 1960."

**STRAIGHT UP: The Story of Vertical Flight**—Richard G. Hubler—*Duell*, 340 p., photographs, \$5. The story of the development of VTOL vehicles, from early experiments to the versatile helicopters of today.

**THE STRUCTURE AND FUNCTION OF SKIN**—William Montagna—*Academic Press*, 2nd ed., 454 p., illus., \$16.50. Scholarly presentation of the embryology, histology and anatomy of the skin in terms of function as well as structure; largely rewritten to include the more important findings of the past five years.

**SUCCESSFUL MINERAL COLLECTING AND PROSPECTING**—Richard M. Pearl—*McGraw*, 164 p., illus., \$5.95. Well-illustrated book, combines the interests of prospectors and hobbyists, describes the modern equipment used, the minerals to look for, how to stake a claim, collector's work at home and gemology.

**TITRIMETRIC METHODS: Proceedings of the 1961 Symposium, held at Cornwell, Ontario**—D. S. Jackson, Ed.—*Chem. Inst. of Canada (Plenum Press)*, 185 p., illus., \$7.50. Concerned with advances in electrometric methods, complexometric methods, and titrations in nonaqueous solvents.

**TRANSISTOR CIRCUIT MANUAL**—Allan Lytel—*Sams (Bobbs)*, 255 p., illus., \$4.95. Reference manual of typical designs for general applications in industrial, commercial and entertainment devices.

**VECTOR MECHANICS FOR ENGINEERS, Part I: Statics**—Harry R. Nara, Ed.—*Wiley*, 455 p., illus., \$6.50. Designed to give engineering student understanding of and proficiency in vector methods, as a tool of analysis in more advanced studies.

**THE WORLD ALMANAC 1962 and Book of Facts**—Harry Hansen, Ed.—*N. Y. World Telegram (Doubleday)*, 77th ed., 896 p., \$2. Compact reference of facts, with summarized record of events in the U.S. and abroad during 1961.

**THE WORLD IS OUR CAMPUS**—Based on 1960 Annual Report of Hollis L. Caswell, Pres.—*Teachers College*, 16 p., photographs, paper, single copies free upon request direct to publisher, Columbia Univ., New York 27, N. Y. Attractive brochure depicting worldwide educational programs in developing countries.

• Science News Letter, 81:76 February 3, 1962

## SLIDE RULES

America's Finest and most Complete line of Slide Rules for Beginners, High School Students, College Engineering Students and Professional Engineers. Wholesale Prices. You save 30 to 50%. Postcard with your name and address will bring our latest Catalog. Write today to.

**CRAWFORD ENGR. EQUIP CO.**  
BOX 6380 JOANNA, SOUTH CAROLINA

## Experts reveal secrets of CHESS!



Absolute beginners learn to play chess in just a few hours thanks to startling new "animated movie" technique perfected by talented young grandmaster Larry Evans—Modern short cuts will help almost anybody to play chess quickly! Youngsters and old folks too. Famous chess grandmasters Fischer, Bisguier, Evans, Lombardy and other prominent chess personalities offer lively, stimulating, up-to-date advice on technique, strategy and winning methods in chess!

**NOW—FOR A PERIOD OF 10 DAYS ONLY**, we will accept introductory subscriptions to **THE AMERICAN CHESS QUARTERLY** at the special rate of **ONLY \$1 per year. MAIL YOUR SUBSCRIPTION TODAY**

**NATURE FOOD CENTRES - E-1**  
292 Main St., Cambridge 42, Mass.

**USED AND APPROVED BY LEADING UNIVERSITIES**  
Model RV-6  
**6-INCH DYNASCOPE**  
Reflecting Telescope

includes these features:  
• Electric Drive  
• Rotating Tube  
• Setting Circles  
Only  
**\$194.95**  
F.O.B. Hartford Shipping Wt. 50 lbs. Express charges collect  
Easy Terms Available!

Completely Portable!  
Entire telescope dismantles in minutes for easy carrying.

Finest American-made 6-inch reflector in its price range! Save \$100 or more, yet get all these fine features. f/8 6-inch mirror accurate to 1/4 wave • 3 matched eyepieces (76X, 150X, 343X) • 6 x 30 Achromatic finderscope • Heavy-duty mount with setting circles • Rack & Pinion eyepiece holder • Sturdy lightweight tripod.  
**CRITERION MANUFACTURING COMPANY**  
Dept. NL2, 331 Church St., Hartford 1, Conn.

—FREE FACTS! MAIL COUPON!

Criterion Manufacturing Company  
Dept. NL2, 331 Church St., Hartford 1, Conn.  
 Under your unconditional guarantee, please ship me promptly the RV-6 DYNASCOPE. My payment of \$194.95 is enclosed.  
 Please send FREE LITERATURE on the RV-6 Dynascope and your other DYNASCOPEs priced as low as \$49.95.  
Name.....  
Address.....  
City.....State.....