

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.

ACTION FOR MENTAL HEALTH: Final Report, 1961—Joint Commission on Mental Illness and Health—Basic Bks, 338 p., \$6.75. Incorporates principal findings of five-year study and recommends programs for meeting the nation's mental health needs.

ADVENTURES WITH THE MISSING LINK—Raymond A. Dart with Dennis Craig—Viking, 255 p., illus., paper, \$1.65. Reprint of first-hand account of the discovery of the fossil man-apes in South Africa, first published in 1959.

THE ALGEBRA OF PROBABLE INFERENCE—Richard T. Cox—Johns Hopkins Press, 114 p., \$5. Essays on the probability, entropy and expectation of probable inference.

THE AMERICAN BUFFALO—Wanda Lynn Pearson—Steck, 30 p., illus. by Betty Cobb, \$1.75. For young readers.

ANIMAL BAGGAGE—George F. Mason—Morrow, 94 p., illus. by author, \$2.50. About animals that carry materials, their young or their food.

BALLOONS FLY HIGH: 200 Years of Adventure and Science—Lynn and Gray Pook—Whittlesey House, 72 p., illus. by Richard Bergere, \$2.75. History of ballooning told for young readers.

BASIC NAVAL ARCHITECTURE—Kenneth C. Barnaby—De Graff, 3rd ed., 472 p., illus., \$10. New material on super-cavitating propellers, hydrofoil boats, plastic materials, and paddle wheel design.

THE BIOCHEMISTRY OF MUCOPOLYSACCHARIDES OF CONNECTIVE TISSUE—F. Clark and J. K. Grant, Eds.—Cambridge Univ. Press, 125 p., \$4.75. Biochemical Society Symposium, held in London, February 1960.

CAREERS IN SCIENCE: A Selected Bibliography for High School Students—Hilary J. Deason

and William B. Blacklow—AAAS, 21 p., paper, 15¢. To assist students who plan to continue their education for careers in the pure and applied sciences.

CARL BECKER: A Biographical Study in American Intellectual History—Burleigh Taylor Wilkins—M.I.T. Press, 246 p., \$5.50. Scholarly study describes much of the growth of the American historical profession.

COMMON PLANTS IN THE SOUTHERN CALIFORNIA MOUNTAINS—Harold F. DeLisle—Naturegraph, 64 p., illus., paper, \$1. Regional guide to woodland and meadow plants.

A COURSE OF ANALYSIS—E. G. Phillips—Cambridge Univ. Press, 361 p., paper, \$2.95. Reprint of 2nd edition, published in 1939.

18 QUESTIONS AND ANSWERS ABOUT RADIATION—U.S. Atomic Energy Commission—GPO, 47 p., illus., paper, 25¢. Answers in non-technical terms some of the more frequent questions on nuclear radiation and radioactivity.

FLOWERING EARTH—Donald Culross Peattie—Viking, 252 p., illus. by Paul Landacre, paper, \$1.45. Reprint of beautifully written essays on the evolution of plant life.

GARDENING THE EASY WAY: The Homeowner's Complete Guide to Gardening—Edwin F. Steffek—Holt, Rinehart & Winston, 198 p., illus. by author, \$3.95. Practical and professional advice on how to get the most for your labor and money in your own garden.

HEATHLAND ECOLOGY—C. P. Friedlander—Harvard Univ. Press, 94 p., illus., \$1.75. Presents principles of ecology as revealed by a study of sandy-soil heathland.

INTERNATIONAL REVIEW OF CYTOLOGY, Vol. 10—G. H. Bourne and J. F. Danielli, Eds.—Academic, 409 p., illus., \$13. Among others, reports on chemistry of Schiff's reagent, spontaneous and chemically induced chromosome breaks, and epidermal cells in culture.

INVERTEBRATE ZOOLOGY: Laboratory Workbook—D. Elden Beck and Lee F. Braithwaite—Burgess, 290 p., illus., paper, \$6. Selected laboratory exercises.

KINETICS AND MECHANISM: A Study of Homogeneous Chemical Reactions—Arthur A. Frost and Ralph G. Pearson—Wiley, 2nd ed., 405 p., \$11. Contains new material on gas phase and solution kinetics, free radical and chain reactions.

LINEAR ALGEBRA—G. Hadley—Addison-Wesley, 290 p., \$6.75. Aims to meet the needs of engineers, physicists, economists and operations research men, rather than mathematicians.

THE MANIPULATION OF HUMAN BEHAVIOR—Albert D. Biderman and Herbert Zimmer, Eds.—Wiley, 323 p., \$7.95. On the techniques of "third degree" and brainwashing together with possible defenses against them.

MAN'S PRESUMPTUOUS BRAIN: An Evolutionary Interpretation of Psychosomatic Disease—A. T.

W. Simeons, M.D., foreword by Joost A. M. Meerloo, M.D.—Dutton, 290 p., \$5.75. A physician's analysis of modern man's psychosomatic diseases, offering his own hypothesis about the psychosomatic mechanism.

A MANUAL OF SEA WATER ANALYSIS—J. D. H. Strickland and T. R. Parsons—Fisheries Res. Bd. of Canada (Queen's Printer), 185 p., paper, \$2. Basic working instructions for analysts undertaking oceanographic chemical analyses.

THE MATHEMATICAL THEORY OF ELECTRICITY AND MAGNETISM—Sir James Jeans—Cambridge Univ. Press, 5th ed., 652 p., illus., paper, \$3.95. Reprint of 1925 edition.

THE MAYA: Indians of Central America—Sonia Blecker—Morrow, 160 p., illus. by Kisa Sasaki, \$2.75. Vivid story about an impressive civilization that existed 3,000 years ago. For boys and girls.

MECHANICS—L. D. Landau and E. M. Lifshitz, transl. from Russian by J. B. Sykes and J. S. Bell—Addison-Wesley, 165 p., \$6.50. Classical Newtonian mechanics, based on Galileo's principle of relativity and Hamilton's principle of least action.

NUMERICAL METHODS OF CURVE FITTING—P. G. Guest—Cambridge Univ. Press, 422 p., \$15. Comprehensive account of methods for reducing sets of observations and for fitting curves to numerical data.

ONE TWO THREE . . . INFINITY: Facts & Speculations of Science—George Gamow—Viking, rev. ed., 340 p., illus. by author, photographs, paper, \$1.65. Witty presentation of the basic theories of modern science.

PHOTOELASTICITY: Principles & Methods—H. T. Jessop and F. C. Harris—Dover, 184 p., illus., paper, \$2. Reprint, presents theory and techniques of photoelasticity for the engineer.

POWER REACTOR TECHNOLOGY—James K. Pickard and others, Eds.—Van Nostrand, 417 p., illus., \$11.25. Selected material from the Second Geneva Conference on the Peaceful Uses of Atomic Energy.

THE PSYCHOLOGY OF EXPRESSION: Dimensions in Human Perception—Sylvia Honkavaara—Cambridge Univ. Press, 96 p., illus., paper, \$4.50. Monograph probing ingeniously the area of developmental stages of perception.

PSYCHOPHYSIOLOGICAL ASPECTS OF SPACE FLIGHT—Bernard E. Flaherty, Ed.—Columbia Univ. Press, 393 p., illus., \$10. Summarizes recent research done by leading medical, psychological, chemical and engineering scientists.

THE RADIO AMATEUR'S HANDBOOK—Am. Radio Relay League, 38th ed., 616 p., illus., paper, \$3.50. Fully indexed standard manual of amateur radio communication.

RADIO TRANSMITTERS—Laurence Gray and Richard Graham—McGraw, 462 p., illus., \$12.50. Of particular interest to transmitter design engineers and the advanced amateur, incorporating current advances.

RADIO WAVES IN THE IONOSPHERE: The Mathematical Theory of the Reflection of Radio Waves from Stratified Ionized Layers—K. G. Budden—Cambridge Univ. Press, 542 p., \$18.50. Text and reference work for practising engineers and research workers.

RADIOLOGICAL HEALTH HANDBOOK—Div. of Radiological Health, Eds.—Public Health Service (OTS), rev. ed., 468 p., paper, \$3.75. Provides basic radiological information needed in health protection practice.

RECENT ADVANCES IN RENAL DISEASE: Proceedings of Conference at the Royal College of Physicians, London, July 1960—M. D. Milne, Ed.—Lippincott, 254 p., illus., paper, \$5.

RESEARCH FOR PUBLIC POLICY: Brookings Dedication Lectures—Pendleton Herring and others—Brookings, 126 p., paper, \$1.50. Lectures and panel discussions.

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THE RUSSIAN INTELLIGENTSIA—Richard Pipes, Ed.—*Columbia Univ. Press*, 234 p., \$4.50. Scholarly essays examining the condition, role and social function of the intellectuals in pre-Revolutionary and in Soviet Russia.

SCIENCE AND GOVERNMENT—C. P. SNOW—*Harvard Univ. Press*, 88 p., \$2.50. Godkin lectures, concerned with the problem of how advanced democratic societies can make use of scientists in government with the greatest effect and the least risk, based on British experiences during World War II.

SCIENCE SINCE BABYLON—Derek J. de Solla Price—*Yale Univ. Press*, 149 p., \$4.50. Analysis of the roots of our scientific civilization.

SERENGETI SHALL NOT DIE—Bernhard and Michael Grzimek, transl. from German by E. L. and D. Rewald, introd. by Alan Moorehead—*Dutton*, 344 p., photographs by authors, \$6.95. Story and plea for the wildlife on the Serengeti Reserve in Tanganyika which was surveyed on the ground and from the air by father-son team of scholarly naturalists.

SMALLER SLANG DICTIONARY—Eric Partridge—*Philosophical Lib.*, 204 p., \$6. Deals mainly with 20th century U.S. catch phrases, school and service slang.

SNAKE MAN: The Story of C. J. P. Ionides—Alan Wykes—*Simon & Schuster*, 273 p., photo-

graphs, \$4.50. Biographical study of a master in his profession: catcher of rare African reptiles.

SOUND LANGUAGE TEACHING: The State of the Art Today—James S. Holton and others—*Univ. Pubs.*, 249 p., illus., \$5.50. Answers questions about language laboratories and electronic teaching.

SPACEFLIGHT TECHNOLOGY—Kenneth W. Gatlund, Ed.—*Academic*, 365 p., illus., \$11. Proceedings of the First Commonwealth Spaceflight Symposium Organized by the British Interplanetary Society in 1959.

THE STORY OF ALCHEMY AND EARLY CHEMISTRY—John Maxson Stillman—*Dover*, 566 p., paper, \$2.45. Reprint of 1924 work entitled "The Story of Early Chemistry."

TRAPPERS AND MOUNTAIN MEN—Evan Jones with Dale L. Morgan—*American Heritage (Golden Press)*, 153 p., illus., \$3.50. Handsomely illustrated history of the early American fur trade.

WHAT DOES AN ASTRONAUT DO?—Robert Wells, foreword by John P. Hagen—*Dodd*, 64 p., photographs, \$2.50. Word-and-picture story for boys and girls.

WONDERS OF ROCKS AND MINERALS—Richard M. Pearl—*Dodd*, 64 p., photographs, \$2.95. For boys and girls.

• *Science News Letter*, 79:220 April 8, 1961

INVENTION

Patents of the Week

A developer for color film and a previewer of motion picture negatives, have been patented. A device for safer dental X-rays was another recent invention.

➤ **TWO PHOTOGRAPHIC DEVICES** just patented could be a boon among do-it-yourself amateur photographers and also help the motion picture industry.

One is a portable automatic film developer for home camera buffs; the other is an "electronic previewer" for developing motion picture films.

Hardy Iwao Tsuno of Gardena, Calif., has invented a film developer, patent No. 2,975,695, that processes color film without any human assistance. The film is inserted in a machine, which is set for the time required by the film manufacturer to develop the film. The film is automatically washed and then dunked in chemical solutions that develop the film. The developing unit can be used at home on the kitchen sink or table and is easily stored in a small closet, the inventor claims.

The "electronic previewer," patent No. 2,976,348, was invented by William F. Bailey of Valley Stream, Bernard D. Loughlin of Huntington, and Charles E. Page of Westbury, N. Y., and assigned to Hazelint Research, Inc., Chicago.

A screen image of what a motion picture negative will look like in color permits photo-developers to make any necessary adjustments before a final print is made. Needless time and expense in the present "trial-and-error" method of print-making are saved by the method, the patent claims.

The image is "shot" on the screen by electron guns that excite differently colored phosphors embedded in the display screen.

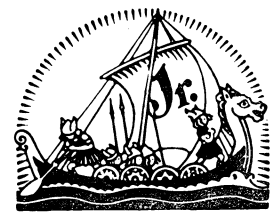
Safer and more comfortable teeth X-rays by a dentist is claimed by inventor Stephan

T. Freeman of Gloversville, N. Y., who was awarded patent No. 2,976,417. A bridge, placed behind the teeth, guides a tiny container housing two spools of X-ray film. As each picture is snapped, the film is wound from one spool onto the other, exposing new film. The bombarding X-rays pass through a small opening in the container, recording the tooth's image on the film. The container traps the dangerous rays, and no tooth is exposed twice to the radiation, Mr. Freeman states in his patent.

A radar antenna with a huge reflector, nestled in a hillside for collecting radio waves, is visualized by Winfield W. Salisbury of Lafayette, Calif., who assigned his patent, No. 2,976,533, to Zenith Radio Corporation of Delaware. The radar unit spots small objects, such as airplanes, at greater distances than other radar units because the huge apron-like reflector scoops up more radio waves and reflects them into the sensitive antenna. A lens at the focal point of the reflector corrects any stray reflected radio waves that would miss the antenna.

A "switchboard" that allows handicapped people to make telephone calls with little effort won patent No. 2,976,370 for Edward T. Duncan, of Bridgeport, Conn., who assigned it to Harvey Hubbel, Inc., also from Bridgeport. By merely flipping a switch, a person can tap into a telephone line or dial a number. A series of numbered electric lights on the switchboard corresponding with the numbers of a standard telephone dialing system tells the person the number he is dialing.

• *Science News Letter*, 79:221 April 8, 1961



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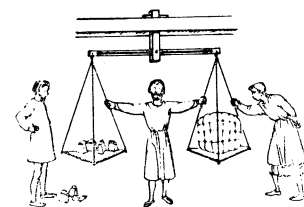
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