

• Books of the Week •

► IMPROVED methods of navigation, up-to-date information concerning the internal constitution and age of the earth; and new observations of the planets and their satellites are included in the revision of *ASTRONOMY*, Vol. I, by Henry Norris Russell, Raymond Smith Dugan and John Quincy Stewart of the Princeton University Observatory. (Ginn, \$3.)

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► VIRUSES are still much-disputed things; it is not even fully agreed whether they are living organisms or remarkably lifelike, complex, but non-living protein molecules. Dr. Frank M. Burnet regards them as living, and so presents them in *VIRUS AS ORGANISM*. It may be a good thing that virus particles are all but invisible, since this does away with the temptation to concentrate on their morphology and leaves a study of their behavior as the only practical avenue of approach. This avenue Dr. Burnet exploits fully, with close observation and shrewd deduction on virus evolution, physiology, host-relations and general ecology. (*Harvard Univ. Press*, \$2.)

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● Just Off the Press ●

ACTIVE PSYCHOTHERAPY—Alexander Herzberg—*Grune*, 152 p., \$3.50.

AMERICA'S INDIAN BACKGROUND—Edwin F. Walker—*Southwest Museum*—19 p., with tribal map, 30 cents.

AMPUTATION PROSTHESIS—Atha Thomas, M.D., and Chester Haddan—*Lippincott*, 291 p., illus., \$8.

THE CALENDAR STICK OF TSHI-ZUN-HAUKAU—Robert H. Merrill—*Cranbrook Inst. of Science*, 12 p., illus., 35 cents.

EVERYDAY PROBLEMS IN ECONOMICS—May Wood-Simons—*American Technical Society*, 544 p., illus., \$3.50.

FLUOROCHEMISTRY—Jack De Ment—*Chemical Pub. Co.*, 796 p., \$14.50.

FUNGICIDES AND THEIR ACTION—James G. Horsfall—*Chronica Botanica*, 239 p., \$5.

THE HERBAL OF RUFINUS—Lynn Thorndike—*Univ. of Chicago Press*, 475 p., \$5.

HOLLYWOOD QUARTERLY—*Univ. of Calif. Press*, 129 p., \$1.25 per issue, Vol. 1 No. 1. New magazine presenting the record of research in motion pictures and radio for a clearer understanding of their social, educational and aesthetic functions.

THE IROQUOIS: A STUDY IN CULTURAL EVOLUTION—Frank Gouldsmith Speck—*Cranbrook Inst. of Science*, 94 p., illus., \$1.

THE LOST WOODS: ADVENTURES OF A NATURALIST—Edwin Way Teale—*Dodd*, 321 p., illus., \$4.

THE NATURE OF COSMIC RAYS—W. F. G. Swann—*Sky Publ. Corp.*, 31 p., illus., 50 cents.

THE NEWSPAPER: ITS MAKING AND ITS MEANING—by members of the staff of *The New York Times*—*Scribner*, 207 p., \$2.

THE PSYCHOLOGY OF SEEING—Herman F.

Brandt—*Philosophical Lib.*, 240 p., illus., \$3.75.

RACE AND DEMOCRATIC SOCIETY—Franz Boas—*J. J. Augustin*, 219 p., \$2.50.

THE ROLE OF THE AGED IN PRIMITIVE SOCIETY—Leo W. Simmons—*Yale Univ. Press*, 308 p., \$4.

VOLCANOES DECLARE WAR—LOGISTICS AND STRATEGY OF PACIFIC VOLCANO SCIENCE—T. A. Jaggar—*Paradise of The Pacific, Ltd.*, 166 p., illus., \$3.75.

"YOUNG MAN, YOU ARE NORMAL"—Earnest Hooton—*Putnam*, 210 p., illus., \$2.50.

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MEDICINE-PHOTOGRAPHY

Easy-to-Use Camera For Surgical Operations

► A NEW aid to the surgeon who wants to record pictorially the details of a new operation or technic but who has no expert photographer at his service was demonstrated for the first time at the meeting Nov. 12 to 15 of the Southern Medical Association in Cincinnati.

It consists of an easily operated, high-speed camera developed by the Army's Pictorial Service for the Surgeon General's Office. Black and white or color still pictures on 35 mm. film can be taken indoors and outdoors at distances of from six inches to 12 feet. Every phase of the picture-taking except focusing and clicking the shutter is automatic.

The camera was devised from an idea originally conceived by Capt. Rollin W. King and Emanuel Berlant. It weighs approximately 5½ pounds, is operated from a portable electric power pack, which weighs approximately 27 pounds, and it may be plugged into any ordinary current line.

The camera contains its own built-in light source, a coiled circular quartz vapor discharge tube. The tube, designed and constructed by the General Electric Company, gives a flash of approximately 1/25,000 of a second duration, too short a period of time to harm the eye.

The device has been used by the Medical Corps to photograph open eyes at close-up ranges. It is estimated that the flash tube is capable of withstanding the strain of 50,000 flashes, each of which, at its peak intensity, is brighter than sunlight. The brilliance of the flash is so great that the surrounding general illumination of the subject need not be taken into consideration.

Due to the extremely rapid flash dis-

charge, the camera has a phenomenal motion-stopping ability, which is capable of "freezing" the whirring of a moving fan blade.

Four models of the camera are now in existence, and others are being developed.

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CHEMISTRY

Acid Treatment For Pulp Production

► TWO SWEDISH inventors, A. J. A. Asplund of Alsten and J. W. Holst of Stockholm, offer a new process for digesting straw and other cheap cellulose materials for the production of paper pulp. Instead of employing the time-honored alkaline sulfate or acid sulfite processes, they use dilute sulfuric or other acid, under steam pressure, and follow the chemical digestion with appropriate mechanical beating, washing, etc. Rights in their patent, No. 2,388,592, are assigned to Aktiebolaget Defibrator, a Swedish corporation.

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The loon is the champion bird diver and swimmer.



THESE SELSYN MOTORS

are available at much less than production cost! Take advantage of this opportunity to purchase from stock. Selsyn Motors have many applications, from indicating the angle of bridges and lock gates, levels of liquids, and direction and speed of wind, to communicating the volume of gases in tanks many miles distant. Made with three-pole, three-phase wound stators and two-pole rotors with winding for connection to single phase A.C. Designed for use on 115 volts, 400 cycles A.C., for experimental purposes it will operate on 15 to 25 volts, 60 cycles A.C. and on other frequencies. The rotor voltage is 115 and the stator, 90. The estimated torque gradient in ampere degrees is .05, meaning the in.-oz. per degree measured between two identical machines. The excitation is .75 nominal amperes and 8.2 nominal watts. No. 5670 Selsyn Motor, \$7.50 each (\$6.75 in lots of 4—\$6.37 in lots of 8—\$6.00 in lots of 12).

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