

Books of the Week

AMERICAN NATIONAL RED CROSS; Annual Report for the Year Ending June 30, 1945—*American National Red Cross*, 209 p., charts, free. A record of the accomplishments of what may well be the outstanding year in the whole history of the organization.

THE CHEMISTRY OF ANESTHESIA—John Adriani, M.D.—*Charles C. Thomas*, 502 p., diags., \$7. Deals with the inorganic chemistry related to anesthesia, the organic chemistry of depressant drugs, and the biochemical aspects of anesthesia, including the chemical changes in tissues induced by the administration of anesthetic drugs to man and animals.

HEALTH GUIDES AND GUARDS—Francis P. Wall and Louis D. Zeidberg—*Prentice-Hall*, 392 p., illus., \$3.67. 3rd edition. The principles of hygiene presented in a concise and practical manner; corrects popular fallacies and explains accepted facts of health.

HOWELL'S TEXTBOOK OF PHYSIOLOGY—John F. Fulton, ed.—*W. B. Saunders*, 1304 p., illus. and charts, \$8. 15th ed. In this 15th edition of a famous textbook, many new chapters have been added and others have been rewritten by the editor.

THE LITTLE FISHERMAN—Margaret Wise Brown—*William R. Scott*, 32 p., illus., \$1.50. A book for children charmingly illustrated by Dahlov Ipcar. An accurate description of deep sea fishing as well as a delightful fantasy.

MATHEMATICAL CUNEIFORM TEXTS—O. Neugebauer and A. Sachs—*American Oriental Society*, 226 p., diags. and plates, \$5. Devoted to the editing of hitherto unpublished Babylonian mathematical texts chiefly from American collections. *American Oriental Series*, Vol. 29.

MOLLUSCA OF THE TERTIARY FORMATIONS OF NORTHEASTERN MEXICO—Julia Gardner—*Geological Society of America*, 332 p., illus. and charts, \$3.25. *Geological Society of America*, Memoir 11.

PAPERS OF THE MICHIGAN ACADEMY OF ARTS AND SCIENCES: Vol. XXX, 1944—Eugene S. McCartney and Henry Van Der Schalie, editors—*Univ. of Michigan Press*, 684 p., charts and illus., \$5. Papers on specialized fields in botany, forestry, zoology, geography, geology, anthropology, economics, literature, medicine and sociology.

PLANNING FOR JOBS—Lyle Fitch and Horace Taylor—*Blakiston* 463 p., charts, \$3.75. The suggestions submitted in the employment plan contest sponsored by the Pabst Brewing Co. Material covers a wide range of views from a group of writers which includes some of America's most distinguished businessmen and economists.

PRIMITIVE MONEY—H. A. Wieschhoff—*Univ. of Pennsylvania*, 43 p., illus., 50 cents. Description of monetary concepts as shown in primitive forms of currency. *University Museum Bulletin*, Vol. 11, No. 3.

PROTOZOOLOGY—Richard R. Kudo—*Charles C. Thomas*, 778 p., illus., \$8, 3rd ed. A textbook presenting comprehensive and up-to-date information on the common and representative genera and species of all groups of both free-living and parasitic protozoa.

THE PUEBLO INDIAN WORLD—Edgar L. Hewett and Bertha P. Dutton—*Univ. of New Mexico Press*, 176 p., illus., \$4. Studies on the natural history of the Rio Grande valley in relation to Pueblo Indian culture. *Handbook of Archaeological History*, No. 6.

RADIO TEST INSTRUMENTS—Rufus P. Turner—*Ziff-Davis*, 219 p., diags. and illus., \$4.50. Technical, fully illustrated descriptions.

REVISION OF THE UPPER CAMBRIAN FAUNAS OF NEW JERSEY—B. F. Howell—*Geological Society of America*, 46 p., illus., 85 cents. *Geological Society of America*, Memoir 12.

WARRIORS WITHOUT WEAPONS: A Study of the Society and Personality Development of the Pine Ridge Sioux—Gordon Macgregor—*Univ. of Chicago Press*, 228 p., illus., \$3.75. What the decline of the Sioux Indians has meant to the Indian children. Attempts to find out why these children are what they are and what can be done to help them take their place in our democracy.

Science News Letter, February 2, 1946

ENGINEERING

Sea-Level Channel Urged for Panama Canal

➤ **LOCKS AND DAMS** of the present Panama canal are its parts vulnerable to enemy bombing, and the canal should now be a lock-less, dam-less sea-level cut across the Isthmus, John G. Claybourn, Panama Canal engineer, reported to the American Society of Civil Engineers in New York. This was recommended by a majority of the engineers on the commission which studied the project in 1905-06.

Mr. Claybourn is superintendent of the Panama Canal's dredging division and has been associated with the canal since 1910. The proposed sea-level canal, he said, would have no dams or locks other than readily-reparable underwater tidal locks. The reconversion to the sea-level channel could be accomplished most economically by doing the work now, simultaneously with the resumption of the construction of the third set of locks authorized by Congress in 1939 and interrupted by the war.

Only half the channel would be excavated an additional 30 feet of depth at a time, he said, and when the work was completed, the channel would be 500 feet wide and of an average depth of 55 feet.

Mr. Claybourn pointed to the Suez Canal as proof of the superiority of a

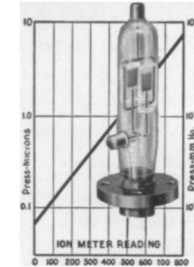
sea-level route over the American lock and dam structure. The Suez, he stated, passed the largest ships efficiently, at low cost, and with practically no hazard. It was blocked by sunken vessels during the war but only for days. Its effectiveness as a world-wide waterway has been demonstrated, Mr. Claybourn said, with channels less than half the minimum recommended for Panama at sea level.

"Authoritative statements have been made by high officials of the Government that the present lock canal cannot be protected against bombing," Mr. Claybourn continued. "These statements were made before the advent of the atomic bomb. With this instrument of devastation, destruction of our control works would be infinitely greater, resulting in the disintegration of structures and even removing the possibility of making repairs, as might be possible with ordinary bombing."

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Sulfur dusts distributed from airplanes to control certain potato diseases are best applied early or late in the day; heat waves arise from the plants during the midday and prevent the dusts from settling on the foliage.

HIGH VACUUM GAUGES



IONIZATION GAUGE COLD CATHODE TYPE

Measures high vacuums with galvanometer down to 10⁻⁴ mm. Hg. in electron microscopes and other high vacuum apparatus. Utilizes discharge current between electrodes in magnetic field. Extremely sensitive and accurate.

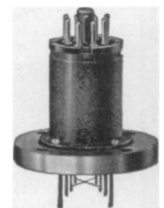
The Universal line includes two types of vacuum gauges of special interest to users of electron microscopes—the Universal highly sensitive cold cathode ionization gauge and the rugged Universal thermocouple gauge.

Both gauges are standard equipment on R. C. A. electron microscopes—and can be supplied for other high vacuum work.

Universal offers a complete production service in special glass and tube work—including metal-to-glass seals of all types and sizes. Your problems will receive our immediate and courteous consideration.

THERMOCOUPLE GAUGE

Measures low pressure levels with millivoltmeter which indicates variation in thermocouple voltage due to changes in vacuum. Ideal for systems requiring rapid verification of high vacuums. Heater and instrument terminals fit standard 8-prong tube socket.



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