

\$3.50. Textbook presenting basic principles of heterogeneous equilibria in terms of laboratory criteria.

PROPAGATION OF SHORT RADIO WAVES—Donald E. Kerr, Ed.—*McGraw-Hill*, 728 p., illus., \$10.00. Volume 10 of Massachusetts Institute of Technology Radiation Laboratory Series.

THE PUBLIC HEALTH NURSE IN YOUR COMMUNITY—Public Health Service—*Govt. Printing Office*, 14 p., illus., paper, 10 cents. Tells how public health nurses help maintain good health in home, school, and work.

QUIROGA: A Mexican Municipio—Donald D. Brand—*Govt. Printing Office*, 242 p., illus., paper, \$1.75. Prepared in cooperation with the State Department, this study is the outgrowth of two research projects in southwestern Mexico begun by the Smithsonian Institution in 1939 and concluded by this publication. A detailed study of a Mexican community.

RADIOACTIVE TRACERS IN BIOLOGY: An Introduction to Tracer Methodology—Martin D. Kamen—*Academic Press*, 429 p., illus., \$7.50. Second edition of 1928 text brings various aspects of tracer techniques up to date.

RESEARCH FOR INDUSTRY—*Armour Research Foundation*, 52 p., illus., paper, free upon request to publisher. Annual review and report.

A REVISION OF FOSSIL SEQUOIA AND TAXODIUM IN WESTERN NORTH AMERICA BASED ON THE RECENT DISCOVERY OF METASEQUOIA—Ralph W. Chancy—*American Philosophical Society*, 91 p., illus., \$1.50.

SCIENCE NEWS, No. 18—J. L. Crammer, Ed.—*Penguin Books*, 144 p., illus., 35 cents. Latest in series of British papers.

SEMIMICRO QUALITATIVE ANALYSIS—William Lloyd Evans, Alfred Benjamin Garrett and Harry Hall Sisler—*Ginn*, 240 p., illus., paper, \$3.00. Revised textbook bringing up to date the author's earlier work on elementary qualitative analysis. Exercises and questions included.

TEN RIVERS IN AMERICA'S FUTURE—Water Resources Policy Commission—*Govt. Printing Office*, 801 p., \$6.00. Detailed and comprehensive studies of plans, potentialities and problems of development in 10 major river

basins. Volume two of the Commission's Report to the President.

THE WATER AND THE POWER: Development of the Five Great Rivers of the West—Albert N. Williams—*Duell*, 378 p., illus., \$4.50. River history, river economics, river politics that are vital issues today.

*Science News Letter*, March 10, 1951

#### RADIO

### Mobile Radio Probes To Aid Predictions

➤ A RADIO sending and receiving station on wheels has started probing the outer layers of the earth's atmosphere. The object is to improve long range radio communications.

The spot near Cincinnati chosen for the probing studies is half-way between the National Bureau of Standards' transmitting station at Sterling, Va., and a corresponding station operated by Washington University at St. Louis. It is directly under the predicted point in atmosphere where the radio beam between Sterling and St. Louis is bent back towards the earth.

Trailer trucks carry all the equipment needed to transmit, receive and record radio signals. Called the "St. Louis Equipment," the operation will enable scientists to explore for the first time the electrically charged upper atmosphere at the midway point.

From 50 to 200 miles above the earth's surface there are a series of electrically conducting layers known as the ionosphere. Radio waves of certain frequencies are reflected back to earth by the charged air. They are thus received many miles from their source.

Sunspots and the seasons among other factors affect the ionosphere, often making necessary a change in radio station frequencies for best reception. From studies at this and other midpoint locations, enough should be learned about the propagation of radio waves in the ionosphere to map their paths accurately and improve communications.

*Science News Letter*, March 10, 1951

#### INVENTION

### Soil Fumigant Applied In New Capsule Form

➤ AN IMPROVED method of putting pest-killing chemicals into the soil is provided by the use of an insecticide capsule on which patent 2,543,580 was issued to Wallace G. Kay, Grosse Pointe Park, Mich. The capsule coating is slowly dissolved by the moisture in the soil, releasing vapor from the chemicals to kill particularly nematodes and wireworms but also insects and their larvae.

The capsules are dropped in holes made by a stick, and then covered with soil. The fumigant is released only after an interval of time, so that poisonous fumes that come

to the surface can do no injury to the user. With certain fumigants applied below the surface without the capsule, users sometimes are required to wear gas masks.

*Science News Letter*, March 10, 1951

#### PHOTOGRAPHY

### Three Dimension Photos Soon To Be Available

➤ COMMERCIAL photographers will soon be able to make three-dimensional pictures with an adaptation of the military trivision system announced by its inventor, Douglas F. Winnek. In an earlier invention of his, single X-ray pictures are obtained that show length, breadth and depth.

A new lens, suitable for use in standard illustration or portrait cameras, is employed. The inventor states that it can "look" around the scene to capture all dimensions. The image is recorded upon the ordinary film or plate. A lenticular, or lens-like, plastic screen, which remains in the film or plate holder, resolves the image into a trivision negative. With present equipment, the photographer can make as many prints as desired.

*Science News Letter*, March 10, 1951

Nearly every large passenger liner wherever it may be in the world can now be reached by *telephone*.

Good *soil management* means the efficient production of quality crops along with continued improvement in soil productivity.

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