

# Books of the Week

**AIR TRAFFIC CONTROL**—Glen A. Gilbert—*Ziff-Davis*, 274 p., illus., \$5. A textual treatment of existing systems of air traffic control, one of the newest activities in the field of aviation, and a guide to assist in meeting future problems.

**BRAZIL: Orchid of the Tropics**—Mulford and Racine Foster—*Cattell*, 314 p., illus., \$3.50. A trip of exploration through Brazil in a search for air plants and jungle gardens.

**HANDBOOK OF METEOROLOGY**—edited by F. A. Berry, Jr., E. Bolla, and N. R. Beers—*McGraw-Hill*, 1068 p., illus., charts and tables, \$7.50. A text and reference book to cover the entire subject with information for the beginner and the expert.

**HANDBOOK OF NONFERROUS METALLURGY; Recovery of the metals**—Donald M. Liddell, editor—*McGraw-Hill*, 721 p., illus., \$7. Dependable facts on the metallurgy of each metal in detail for the practicing metallurgist.

**LESSONS IN ARC WELDING**—Lincoln Electric Company—*Lincoln Electric Company*, 176 p., illus., 50 cents. Second ed. 61 lessons in welding as taught at the company's welding school with questions and answers.

**THE MILKY WAY**—Bart J. Bok and Priscilla F. Bok—*Blakiston*, 224 p., \$2.50. Second ed., illus. One of eight books by members of the Harvard College Observatory staff presenting in semi-popular form advances made in the exploration of the Milky

Way with modern technique and equipment.

**ON TO WESTWARD: War in the Central Pacific**—Robert Sherrod—*Duell*, 333 p., maps, \$3. A personal record of the campaign between Tarawa and Okinawa.

**PRESCRIBING OCCUPATIONAL THERAPY**—William Rush Dunton, Jr.—*C. C. Thomas*, 151 p., \$2.50. Second ed. General principles and practical applications for patients of varying ages and needs.

**THE RING-NECKED PHEASANT AND ITS MANAGEMENT IN NORTH AMERICA**—William L. McAtee, editor—*American Wildlife Institute*, 320 p., illus., \$3.50. Historical and practical information for pheasant farmers about a fascinating game bird by several well-known authorities.

**ROCKS AND RIVERS OF AMERICA**—Ellis W. Shuler—*Cattell*, 300 p., illus., \$4. Everyday questions about the landscape by a widely traveled geologist in down-to-earth language.

**SOME EARLY MIOCENE CARNIVORES**—Elmer S. Riggs—*Field Museum*, 114 p., illus., \$1. A detailed description of important questions about the landscape by a specialist in the field.

*Science News Letter, December 1, 1945*

Most of the 664 thoroughbred *stalions* taken from France by the Nazis during the war, being easily identifiable, have now been located in Germany and are being returned.

## ELECTRONICS

### Life-Boats Equipped With Radar Device

➤ A TINY RADAR device known as the "corner reflector" that weighs slightly over a pound enables life-boats, carried on Army Air Forces overseas missions, to be as easily detected as a flashlight in a blackout, the Air Technical Service Command announced.

The small size of the corner reflector makes it standard equipment not only in multi-place rafts carried by bombers, but in single-place rafts carried in fighter aircraft as well. Life-raft packs carried on the backs of aviators along with their parachutes hold the collapsible corner reflector packed in its small carton.

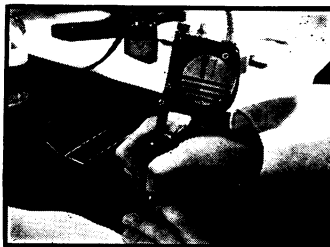
A cloth mesh, woven of monel metal fire, is the important feature of the reflector, which is attached to a mast extending from the raft.

This mesh reflects the radar waves transmitted by the searching aircraft. The radar scope within the plane picks up the reflected waves, thus revealing the exact position of the downed victims.

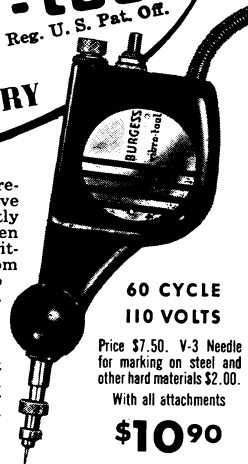
The famous "Gibson Girl" life-raft radio set used in multi-place boats is not replaced, but the single craft is too small to accommodate this SOS equipment. The smaller rafts rely upon the corner reflector as their only radio signal device.

The radar reflector was produced in large quantities for operational use during the war. It was used extensively in the Pacific because on the wide stretches of water the reflector could be easily detected.

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By Oscar L. Levin, M.D.  
and Howard T. Behrman, M.D.

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If you want healthy hair, lovely hair, then you need the expert advice in this book.

Two medical specialists have here pooled their knowledge to give you in plain language the up-to-date scientific facts now available about hair. They tell you what to do to save and beautify your hair, stimulate healthier hair growth, and deal with many problems, common and uncommon, as:  
**Dandruff—gray hair—thinning hair—care of the scalp—baldness—abnormal types of hair—excessive oiliness—brittle dryness—hair falling out—infection—parasites—hair hygiene, etc., etc.**

Medical science is better equipped today than ever before to prevent trouble above the hair line; or, should some difficulty already have arisen, to deal effectively with it.

"A worthwhile book full of important information."  
—Ohio State Medical Journal.

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An even greater asset of the reflector was that it offered security from enemy listening stations since it did not transmit a signal. It has no moving parts, is sturdy, and requires few repairs.

*Science News Letter, December 1, 1945*

**AERONAUTICS**

**First Twin-Fuselage Military Aircraft**

► A NEW TYPE airplane, the world's first twin-fuselage military aircraft, is under contract, it is revealed by the Army Air Technical Service Command. The unique plane, a marked departure from the conventional single-fuselage craft, will have two fuselages joined by the wing and the horizontal stabilizer. It supplants the P-51 Mustang, and will be known as the P-82 Twin Mustang.

The Twin Mustang, it is expected, will have a speed of over 475 miles an hour, will operate efficiently up to 45,000 feet, and will climb at a rate over 5,000 feet per minute. With a 2,200 horsepower engine in each fuselage, the plane utilizes two opposite-rotating, full feathering four-bladed propellers. It will have two pilots, one in each fuselage, the one on the left being the "main" pilot who will ordinarily operate the controls.

*Science News Letter, December 1, 1945*

**PHYSICS**

**Prof. D. W. Kerst Gets Comstock Prize**

► FOR HIS development of the betatron, world's most powerful X-ray producing machine, Prof. Donald W. Kerst of the University of Illinois has been awarded the Cyrus B. Comstock prize of the National Academy of Sciences. The award was presented by President F. B. Jewett of the National Academy

at a joint meeting of the Academy and the American Philosophical Society.

Prof. Kerst was selected for the honor in 1943, but wartime secrecy on all work involving nuclear physics prevented the announcement until now. His betatron is valuable to science both in the enormous energies it produces and in the precise control of them. During the war, Prof. Kerst was on the staff of the secret atomic bomb laboratory at Los Alamos, N. M.

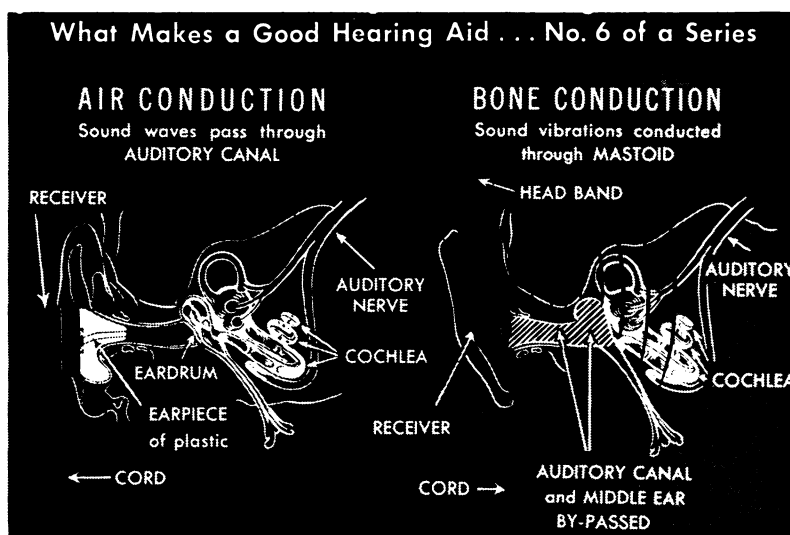
*Science News Letter, December 1, 1945*

India is reported to have vast *chromite* reserves.

The extinct *dodo*, long a symbol of stupidity, was a member of the pigeon family.

About 40% of the fresh *vegetables* used in the United States, and half the canned vegetables, are raised in home gardens.

*Hexachlorocyclohexane*, a newly announced British insecticide, is also called 666 because its molecule contains six atoms each of carbon, hydrogen and chlorine; it is new as an insecticide but is an old compound first made by Faraday in 1825.



**RECEIVERS**

● The microphone picks up sound waves and converts them into corresponding electrical impulses for amplification in the electronic hearing aid. It is the function of the receiver to convert this stepped-up energy into a form which can be conducted to the hearing mechanism. Depending upon the type of hearing impairment, this may be accomplished in two ways:

**1. Air conduction . . . through the auditory canal . . . to the inner ear.** A receiver for this application converts the amplified impulses into sound waves in the auditory canal via the usual hearing mechanism. It is a miniature version of a fine telephone receiver—with similar vibrating diaphragm, magnet and coil encased in a tiny and inconspicuous plastic housing. An earpiece, which fits into the contour of the ear, holds the air conduction receiver in place. (An individually molded earpiece offers the user advantages of comfort and reduction in possible leakage of sound.)

**2. Bone conduction . . . through the mastoid . . . direct to cochlea and auditory nerve.** The receiver

intended for this purpose converts the amplified impulses into mechanical vibrations which are transferred to the bone structure in the mastoid area. These vibrations are transmitted through the bones of the skull, by-passing an inoperative middle ear. Instead of an internal diaphragm, the whole case of a bone conduction receiver vibrates. A headband holds a bone conduction receiver firmly against the particular spot on the mastoid that gives the best hearing results to the individual user.

Subsequent advertisements in this series will discuss criteria for the selection of receivers that will give the best performance for varying degrees and types of hearing loss.

*A selection of one of three types of air conduction receivers and one bone conduction receiver is available with the new Western Electric Model 63 Hearing Aid. All Western Electric receivers are manufactured to design and material standards of Bell Telephone Laboratories.*

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