

• Off Press •

► THE FIRST book of a three-volume set for electrical engineers and students, the FUNDAMENTALS OF ELECTROMAGNETIC ENGINEERING, by Dr. W. P. King, is now off the press. It covers high frequency transmission lines, antennas, wave guides and wave propagation. It includes information given by the author in a pre-radar training course to Army officers. It is understandable for students with the proper background. (McGraw, \$6)

Science News Letter, September 1, 1945

► THE STRENGTH of the Soviet Union rests upon her resources of land and minerals, and upon the dynamic character of her people, according to the geographical book by George B. Cressey, entitled the BASIS OF SOVIET STRENGTH. It is a readable volume, with maps and illustrations, containing authoritative information on Russian raw materials, agriculture, industries, racial backgrounds and regional characteristics. (McGraw, \$3)

Science News Letter, September 1, 1945

● Just Off the Press ●

BUILDING CONSTRUCTION ESTIMATING—George H. Cooper—McGraw, 282 p., illus., \$3. A textbook for technical and vocational schools.

THE COLUMBUS CLOCK—Willis I. Milham—McClelland, 34 p., paper, illus., \$1.

ELECTRICAL COILS AND CONDUCTORS: Their Electrical Characteristics and Theory—Herbert Bristol Dwight—McGraw, 351 p., illus., \$5.

ELECTROMAGNETIC ENGINEERING: Vol. I. Fundamentals—Ronold W. P. King—McGraw, 580 p., illus., \$6. Radio Communication Series. Expanded from courses at the Cruft Memorial Laboratory.

EXTINCT AND VANISHING MAMMALS OF THE OLD WORLD—Francis Harper—Am. Committee for Internat. Wild Life Protection, 850 p., paper, illus., \$4. Special Publication No. 12. Cloth ed., \$5.

OLD PAPER SPECIMENS OF THREE CENTURIES—Dave Webb Private Press, 35 p., paper, \$2.50. Ltd. ed. Contains 35 specimens of handmade paper.

POPULATIONS OF THE OTHER AMERICAN REPUBLICS BY MAJOR CIVIL DIVISIONS AND BY CITIES OF 5,000 OR MORE INHABITANTS—Office of Inter-American Affairs, 58 p., paper, free. Handbook of Latin American population data.

THE ROCKEFELLER FOUNDATION ANNUAL REPORT, 1944—Rockefeller Foundation, 344 p., paper, illus., free.

THERMODYNAMIC PROPERTIES OF AIR INCLUDING POLYTROPIC FUNCTIONS—Joseph H. Keenan and Joseph Kaye—Wiley, 73 p., \$2.25.

WORKBOOK IN ELEMENTARY METEOROLOGY—Frederick L. Caudle—McGraw, 188 p., paper, illus., \$1.24.

THE YEARBOOK OF PSYCHOANALYSIS, Vol. 1—A. A. Brill and others—International Universities Press, 370 p., \$10.

Science News Letter, September 1, 1945

METALLURGY

Low-Temperature Process For Separating Magnesium

► HINT of possible postwar trends in light-weight motor car construction is contained in a patent issued to Henry Ford and two associates, E. E. Ensign of Ypsilanti and A. C. Quinn of Dearborn, Mich. The patent, No. 2,382,047, assigned to the Ford Motor Company, covers a low-pressure, low-temperature method for getting the light alloy metal, magnesium, out of its commoner ores.

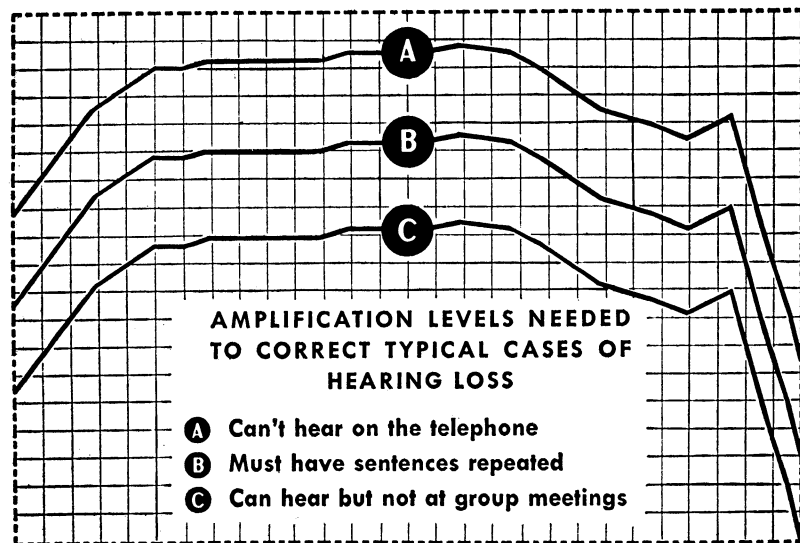
Starting material for the process is preferably dolomite or other carbonate of magnesium. Magnesium oxide may

also be used, but if it is, finely divided carbon must be added. The retort is heated up to a temperature between 2,000 and 2,500 degrees Fahrenheit, while air is pumped out until the pressure is only three millimeters of mercury—approximately only a thousandth of ordinary atmospheric pressure.

The carbon and oxygen are driven off in the forms of carbon monoxide, carbon dioxide and what the inventors call "R" carbon, while the magnesium is released as an uncombined element in vapor phase, which may be cooled to solid, crystalline form after being drawn into a different part of the apparatus.

Science News Letter, September 1, 1945

What Makes a Good Hearing Aid . . . No. 3 of a Series



AMPLIFICATION

● Any hearing aid worthy of the name should provide adequate amplification of sound to compensate for varying degrees of correctable hearing loss.

To illustrate—different levels of amplification that might be needed for three typical cases of hearing loss are charted above. For satisfactory hearing, "A" must set Volume Control higher than "B" . . . "B" higher than "C".

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criminator should be available to cut down annoying low frequency sounds. Intensity of sudden noises should be automatically limited by proper design of the amplifier circuit to prevent transmission of such electronic overloads to the receiver.

The volume control should be engineered for smooth and continuous gradations of amplification to individual needs. Ample reserve output should be available to meet special hearing situations.

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