

practically valueless and is inflicting progressively increasing damage on about half of what is left. To make money as fast as possible, we Americans are quite literally selling our farms down the river.

Nevertheless, Mr. Shepard is no mere Jeremiah, pessimistically prophesying unavoidable doom. There is yet time, he declares, and socially effective techniques for large-scale salvation of the land have already been invented. The two great nations with the largest areas of temperate-zone land, the U. S. A. and the U. S. S. R., approach the problem in different ways. On Russian collective farms, agronomic experts decide what needs to be done, and the farmers do as they are told. Americans farmers, with a long tradition of rather stiff-necked individualism, certainly would not be so biddable. With us, the democratically organized soil conservation district, hiring its professionally trained advisers, accomplishes the same end. If it becomes necessary to apply coercion to recalcitrant individuals, the moral as well as material weight of a majority vote is behind its actions. So far, this mechanism has been applied only to farm lands, but there is no reason why some modification of it should not be used on the even more difficult management problems of private forest lands.

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Graphite, a variety of carbon used as a lubricant, and in so-called "lead" pencils, crucibles and many industrial products, is found in most countries of the world, but much of it is not usable because of poor quality.

The *lima bean*, considered by many as the aristocrat of the bean family and the most delicious of all garden vegetables, is of South American origin but whether from Brazil or Peru is a matter of dispute.

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Books of the Week

ADVANCING FRONTS IN CHEMISTRY. Vol. 1, High Polymers—Sumner B. Twiss—*Reinhold*, 196 p., illus., \$4. A series of lectures sponsored by Wayne University under the direction of Neil E. Gordon, Chairman, Dept. of Chemistry.

THE ART OF CALCULATION—Harry Sticker—*Essential Books*, 256 p., \$2. Basic method of arithmetical calculation used by exports.

FOOD OR FAMINE, The Challenge of Erosion—Ward Shepard—*Macmillan*, 225 p., illus., \$3.

INTRODUCTION TO BIOLOGICAL LATIN AND GREEK—P. H. Yancey—Brooks, F. G., 24 p., paper, 20 cents. 2nd ed., revised. Bios Classroom series, no. 1.

MAN, MORALS AND SOCIETY: A Psycho-analytical Study—J. C. Flugel—*Int. Univ. Press*, 328 p., \$4.50.

ORIGINS FROM MYTHOLOGY OF BIOLOGICAL NAMES AND TERMS—P. H. Yancey—Brooks, F. G., 47 p., paper, 20 cents. Bios

Classroom series, no. 5.

REPTILES OF THE PACIFIC WORLD—Arthur Loveridge—*Macmillan*, 259 p., illus., \$3. The Pacific World series.

SCIENCE AND THE PLANNED STATE—John R. Baker—*Macmillan*, 120 p., \$1.75.

SIXTY MILLION JOBS—Henry A. Wallace—*Simon and Schuster*, 83 p., paper, illus., \$1. Cloth ed., \$2, published jointly by *Reynal and Hitchcock* and *Simon and Schuster*.

THE TECHNOLOGY OF PLASTICS AND RESINS—J. Philip Mason and Joseph F. Manning—*Van Nostrand*, 493 p., illus., \$6.50. Based upon a college course in the Chemistry of Plastics and Resins at Boston University.

WILLIS RODNEY WHITNEY: Pioneer of Industrial Research—John T. Broderick—*Fort Orange Press*, 324 p., illus., \$3. Foreword by Dr. Karl T. Compton.

Science News Letter, October 13, 1945

THE CHEMICAL ELEMENTS
Compiled by
PHILIP S. CHEN, Ph. D.
PROFESSOR OF CHEMISTRY, ATLANTIC UNION COLLEGE

WALL CHART
(Actual Size 38 x 50 inches)
CONTAINS THE FOLLOWING
UNBELIEVABLY VAST AMOUNT OF INFORMATION
CONCERNING EACH ELEMENT

Periodic table (based on atomic weights)
Periodic table (based on atomic numbers)
Group and family
Name in English, German, and French
Discovery
Date, discoverer, nationality
Symbol and atomic number
Arrangement of electrons in orbits
Logarithm of atomic weight
Isotopes and valence
Crystalline form and color
Specific gravity and density
Melting and boiling points
Specific heat

Heats of vaporization and fusion
Heat conductivity
Electrical resistivity
Coefficient of thermal expansion
Occurrence, preparation, and uses
The radioactive elements
Activity series
Distribution in earth crust, in ocean, in atmosphere, and in human body
Mechanical properties of principal metals
Map showing production in U. S. A.
Alchemistic symbols
Critical constants for gaseous elements
Flame and borax bead tests
Index to the elements

The chart is so self-explanatory that a key, which is usually necessary for other charts, is not necessary for its intelligent use. Numerical values are given for constants that are represented in other charts by signs and varying length of lines or columns

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