

composition, omitting the details of formula and directions for making. One of the outstanding features of this work of the greatest practical value are the special remarks following each list of the various classes of preparations, covering practical considerations and suggestions that will answer many troublesome questions concerning practical pharmacy.

Part III, Pharmaceutical Chemistry, is a pharmacist's discussion of the chemistry of inorganic and organic officinals, with easily understood rather than intricate theoretical explanations.

But few criticisms may be offered. Many errors found in the fifth revision, the result of haste, have been corrected. A few typographical errors are always found in books of this character. The student, however, might be confused by statements of solubilities at 15° C. in the discussion on saturated solutions when compared with the solubility statements of the U. S. P. IX, or by the use of the term mil with its parenthetical explanation (or Cc.).

Caspari's "Pharmacy" has long been accepted as one of the standard text and reference works on pharmacy, the author having well succeeded in making this book serve as a guide to the intelligent study of the U. S. P. and N. F. by the student and the practicing pharmacist.

C. A. DUNCAN.

*Introduction to General Chemistry.* An exposition of the Principles of Modern Chemistry by H. Copaux, Professor of Mineral Chemistry at the School of Industrial Physics and Chemistry of the City of Paris and translated by Henry Leffmann, A.M., M.D. P. Blakiston's Son & Co., of Philadelphia, publishers. Bound in cloth, 195 pages, 30 illustrations. Price, \$2.00.

The author states that it is his hope that the book "should aid students to form early in their studies correct notions of the fundamental principles of chemistry and inspire confidence in the force of chemical theories" and his work is indeed an honest attempt to succeed in this direction. In a clear and concise manner the book presents a large amount of information on the modern theoretical principles of chemistry without, however, devoting too much space to the ultra-modern and radical theories now being propounded. As the translator states, "The atom is still the unit of chemical action and the balance is still as in the laboratory of Lavoisier, the chemist's main reliance."

The book is divided into six chapters and an appendix. After an introductory chapter on The Idea of the Element, the various laws and theories are taken up in the other five. Thirty illustrations, consisting, however, mostly of graphs and curves, are provided and aid considerably in clearly presenting the material.

In addition to being a valuable text book for the student who is taking up the study of chemistry the book will make interesting reading for the practical chemist, since it is presented in readable form and requires no extended knowledge of higher mathematics for its digestion.

HUGO H. SCHAEFER.

*The Qualitative Analysis of Medicinal Preparations.* By Henry C. Fuller. Second Edition—Rewritten, 191 pp., index inc. John Wiley & Sons, Inc., New York City. Price, \$2.25.

This new edition of Fuller's work covering the qualitative examination of medicinal preparations will be welcomed by the many workers who have been using the first edition for the past eight years.

The general plan followed in the latter is retained with some elaboration tending to aid in the identification of substances removed by immiscible solvents. Procedures for the separation of alkaloids often found together in the same mixtures have been added as has been a scheme for the identification of the metals and inorganic acids. A method for the identification of volatile oils has been included in the chapter on liniments. The procedure for examining emulsions has been amplified and a section on "chewing gums" has been added.

This valuable little volume deserves a place next to its more ambitious "quantitative" cousin on the shelf of every drug analyst.

JEANNOT HOSTMANN.

#### NEW PUBLICATIONS.

*Carbohydrates and Alcohol.* Samuel Rideal. Price, 12s. 6d. net. London: Ballière Tindall & Cox.

*Chemical Engineering: A Textbook of Chemical Engineering.* Edward Hart. 211 pp. 200 illustrations. Price, \$4.00. Easton, Pa.: Chemical Publishing Co.

*Chemistry: Introduction to General Chemistry.* H. Copaux. Translated by Henry Leffmann. 195 pp. 30 illustrations. Price, \$2.00. Philadelphia: P. Blakiston's Son & Co.

*Drugs: Analysis of Drugs and Medicines.* Henry C. Fuller. 1072 pp. Illustrated. Price, \$10.00, net. New York: John Wiley & Sons.

*Enzymes: The Chemistry of Enzyme Actions.* K. George Falk. (American Chemical Society Monographs.) 140 pp. Price, \$2.50. New York: The Chemical Catalog Co., Inc.

*Medicinals: The Qualitative Analysis of Medicinal Preparations.* H. C. Fuller. 2d edition, rewritten. 191 pp. Price, \$2.25. New York: John Wiley & Sons, Inc.

*What Are Vitamines?—And Why?* By Benjamin Harrow, Ph.D. New York: E. P. Dutton & Co.

#### PUBLICATIONS RECEIVED.

*Michigan—An Important Source of Raw Vegetable Products.* By Henry Kraemer. A report to the Michigan Academy of Science

from College of Pharmacy, University of Michigan.

*Report on Medicinal Plants.* By Arno Viehoever (Bureau of Chemistry, Washington, D. C.). Reprint from *Journal of the Association of Official Agricultural Chemists*, Vol. IV, No. 1, August 1920.

The report is divided into four parts:

I. A method for the determination of volatile oil in mustard seed and substitutes.

II. Methods for the hydrolysis of linamarin and the subsequent determination of hydrocyanic acid.

III. The effect of abnormal conditions on trade in crude drugs.

IV. The value of weight of unit volumes in the analysis of crude drugs and spices.

*Report of the Committee on Drug Market.* Reprint from Proceedings of Pennsylvania Pharmaceutical Association, 1920 meeting; compliments Geo. E. Éwe.

#### METHYL ALCOHOL VERSUS "WOOD" ALCOHOL.\*

The untoward consequences to human life which have followed the intake of fluids containing methyl alcohol in the last few years, and particularly since the prohibition laws went into effect, ought to leave an indelible impression of the danger of methyl alcohol to man. The more remote effects of this substance, notably the peculiar danger of ensuing blindness which differentiates methyl alcohol from the closely related ethyl alcohol or grain spirits, represent a subtle menace which is rarely suspected until the damage produced is beyond repair. The relative toxicity of the two alcohols is not adequately expressed by their immediate or acute effects; they differ in their behavior in metabolism, in the comparative readiness with which they can be disposed of in the organism, as well as in the permanent damages which they may initiate when the dosage is adequate. The comparison is not favorable to methyl alcohol. Nevertheless, in the repeated attempts made to justify the introduction of methyl alcohol for the less readily obtainable and now specifically prohibited ethyl alcohol, the dangers of the substitution are sometimes minimized by those to whom the change represents a trade advantage. It is claimed, for example, that the unfortunate properties of "wood alcohol" are

attributable to "impurities" of some kind or another, and that pure or refined methyl alcohol is devoid of the larger dangers. In view of this insidious propaganda it is important to note the latest evidence which Sollmann,<sup>1</sup> of Western Reserve University, has contributed. He substantiates the contention that both purified methyl alcohol and "wood" alcohol are markedly more toxic than ethyl alcohol. In bringing out the deleterious effects of chronic alcoholism, Sollmann's new experiments on growing animals emphasize the greater dangers of methyl than of ethyl alcohol; but above all they demonstrate that the alleged "impurities" of ordinary wood alcohol play only a minor part in chronic intoxication. The methyl alcohol, which is the essential ingredient, is likewise the dominant toxic agent. Those who attempt surreptitiously or otherwise to foist the highly dangerous methylated spirits in any guise or under any pretext on the public can no longer hide behind the shield of the asserted "purity" of the alcohol used. We should warn the public to beware of the dangers of methyl alcohol, whether it is labeled pure or impure—or perchance whether or not it is labeled at all.

\* Editorial, *Journal American Medical Association*, January 1, 1921, p. 42.

<sup>1</sup> Torald Sollmann, "Studies of Chronic Alcohol Intoxication on Albino Rats, II, Alcohols (Ethyl, Methyl and 'Wood') and Acetone," *J. Pharmacol. & Exper. Therap.*, 16, 291, Nov. 1920.