

matic acids; XIX, esters and phenols; XX, synthetic organic nitrogen compounds; XXI, anilides and phenetidines; XXII, organic arsenic compounds; XXIII, proteins and digestives; XXIV, oils.

Part V, Chapters XXV, XXVI and XXVII deal with the inorganics. Here we find the colloidal preparations of silver, mercury, etc.; the scale salts of iron, etc. In Chapter XXI, we find methods for the examination of "head-ache powders;" mixtures of acetanilid, quinine and morphine; of codeine, acetanilid and sodium salicylate, etc.

The amount of valuable information supplied by this one volume is astounding. It is bound to be a wonderful "time-saver" for the analyst, teacher, physician, research worker and drug official. All will ever want to have it within reach.

Of course in such a large undertaking some errors and inconsistencies were bound to creep in. The author has adopted the pharmacopoeial "mils," but drops the "e" from all alkaloids. "Chlorid" and "chloride" appear side by side as do "hydrochloride" and "hydrochlorate." We have "petroleum ether," "light petroleum ether" and "petroleum spirit;" we find the halogens with and without the final "e." The author prefers "ethereal salts" to "esters." The author has dropped the "V. S." so familiar to users of the U. S. P., using simply N/10, but under his list of reagents, he adheres to the expression of concentration in terms of per centum. Is it not more definite to express these in terms of normality? The statement is made that "methyl alcohol has only a limited use in medicinal preparations. It is employed as the vehicle in some liniments and 'balsams.'" Unless the writer is mistaken, such use is prohibited by law. These inconsistencies will undoubtedly disappear in future editions, and do not make the book one bit less valuable.

The index is somewhat of a disappointment, *viz.*, paregoric is not found under "P," but when one looks up morphine, one finds the assay method for the former. Lysol and creolin are not mentioned in the index although they are spoken of under the cresols.

The press-work is excellent, formulas are clear and distinct. The graphic ones are a pleasure to the eye. An immense amount of careful proof-reading has been done. The topics are conveniently arranged.

Mr. Fuller's ambitious efforts entitle him

to congratulations and thanks from the many who will find his volume a necessary part of their every-day working library.

JEANNOT HOSTMANN.

A Treatise on Pharmacy. For Students and Pharmacists. By Charles Caspari, Jr., late Professor of Pharmacy in the Department of Pharmacy of the University of Maryland (Maryland College of Pharmacy, 1841 to 1904). Sixth edition, thoroughly revised by E. F. Kelly, Dean and Professor of Pharmacy in the Department of Pharmacy of the University of Maryland (Maryland College of Pharmacy, 1841 to 1904). Octavo, 954 pages, illustrated with 329 engravings; cloth, \$8.00. Lea and Febiger, Publishers, Philadelphia and New York, 1920.

The fifth edition of this work appeared in 1916 following the publication of the U. S. P. IX. Since that time Prof. E. F. Kelly has succeeded Prof. Charles Caspari, Jr., following the death of the latter, as Professor of Pharmacy in the Department of Pharmacy of the University of Maryland, and on account of long association with the author of "Treatise on Pharmacy," Professor Kelly has fittingly undertaken the revision of this well-known work now appearing as the sixth edition.

The purpose and plan of the "Treatise on Pharmacy" remains the same. A chapter on Light and a chapter on Sterilization have been added; the chapters in Part II rearranged and other deletions and additions made, all with the intent to make the "Treatise on Pharmacy" better fulfill the purpose of the author.

Part I treats of General Pharmacy and the new chapters on Light and Sterilization are timely and well placed. Chapter V. Light. A discussion of light in relation to pharmacy treats of the importance of colors as a part of official descriptions, the use of colors in colorimetric determinations and the effect of light upon bacteria, organic solutions and preparations. The use of the polariscope in the determination of optical rotation and the refractometer for refractive index are described and explained. Chapter XII. Sterilization. The subject matter has been largely taken from the U. S. P. and N. F. discussions on this subject with additional matter of practical value to the pharmacist.

In Part II on Practical Pharmacy the author has prepared lists of U. S. P. and N. F. galenical and extemporaneous preparations with Latin and English titles and concise statements as to

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.