

subjects are given: James H. Beal has written the *Introduction*; A. R. L. Dohme tells of the *Dawn of Pharmacy*; E. F. Kelly of the *Source of Drugs*; Heber W. Youngken discusses *Drugs from the Vegetable Kingdom*; William J. Husa writes on *Drugs from Mineral Sources*; John F. Anderson tells of Bacteria-Made Drugs and Vitamins; Roger Adams and Oliver Kamm tell of *Drugs Made by Man*; Ernest H. Volwiler writes on related lines of the former; James C. Munch tells *How Drugs Are Made Uniform*; Robert L. Swain writes of *Drugs, the Law and Public Health*; W. Bruce Philip has prepared a chapter on *The Corner Drug Store* and John C. Krantz, Jr., presents *The Outlook of Pharmacy in the Era of Science*.

The volume contains twenty-six illustrations—portraits of laboratory procedures, of some of those who contributed to the story of pharmacy, to its history, and pictures illustrating the story of drugs. The completion of the book, it seems to us, marks an important event for pharmacy.

Structure Symbols of Organic Compounds.
By INGO W. D. HACKH. First edition, viii + 139 pages. P. Blakiston's Son & Co., Inc., Philadelphia. Price \$2.50.

This book gives a complete description of the system of structure symbols or chemical shorthand which the author has successfully used for several years with many types of students. The author states that more organic chemistry can be covered with the average class in a given time with the aid of this notation, which is adaptable to both the older and newer concepts of structure.

In the first chapter, the fundamental concepts of atomic and molecular structure are briefly and clearly stated. The second chapter includes a description of the structure symbols. In this system the chemical symbols H, C, O and N are eliminated, these elements being indicated by lines. For example, a point where two lines cross represents an atom of carbon, and a point where a line terminates represents an atom of hydrogen. Double and triple bonds are appropriately indicated. In electronic structural formulas electrons are indicated by dots. In the third chapter, the structural formulas of about 1000 organic compounds are shown in the author's notation. The author does not include a critical review of structure symbols in general, but readers wishing information of this nature will be

particularly interested in the bibliography at the end of the second chapter.

It appears that much time and effort would be saved by the general use of a system of chemical shorthand. A notation of this kind might be considered as an extension of the use of the benzene ring. No one would think of discarding the benzene ring. Likewise it seems fair to assume that one familiar with the notation described in this book would not give it up after becoming accustomed to its use.

Examples are given of the application of the notation in research in the prediction of substitution reactions. While the book is intended primarily for students and teachers, it is of interest likewise to the research man or any one interested in a concise notation for organic compounds.—WILLIAM J. HUSA.

An Introduction to Practical Bacteriology.
By T. J. MACKIE, M.D. and J. E. McCARTNEY, M.D. Publishers, Wm. Wood & Co., New York. Price \$3.50.

This is the third edition of this book on Bacteriology and should be in the library of everyone who has any routine bacteriological work to do. It is arranged in twenty-three chapters, each written in a very understandable way by two authors who are well known in their field.

The authors have succeeded well in writing a book that contains the more important things in bacteriology without unduly increasing the number of pages. They are to be commended upon the fact that they use Bergey's Classification throughout, and have not neglected any branch of bacteriology, including also a section on "Bacteriological Examination of Water and Milk and the Testing of Antiseptics;" another chapter is devoted to "Tropical Organisms" and various pathogenic streptothrices and mycoses have been given due consideration. The section on the "Malaria Plasmodia" is especially well written and "Filterable Viruses" take up a chapter; bacteriophage is not neglected. Each organism is taken up following a definite method of presentation, which makes it useful as a ready reference, and a folded chart of biochemical reactions of various bacilli is convenient for routine work.

There are a few criticisms that might be offered, such as suggesting an enlargement of the chapter on "The Physiology of Bacteria." The chapter on "Immunity" would be better