

ject in the last quarter of a century. The original edition, which appeared in 1907, was only about one fifth of the size of the present volume. Even a comparison of the present tenth edition with the ninth edition, which appeared in 1926, reveals the enormous strides made by the research man in this important branch of medicine and biology. The ninth edition of the book has been largely rewritten and revised to bring it up-to-date with the advances in the science itself and the elaboration of its quantitative methods and technique. Some of the chapters have been entirely rewritten, as, for instance, that with which the book begins on physicochemical properties of solutions and those on metabolism and vitamins and others.

As one would expect, a great deal more information borrowed from the field of physical chemistry has been incorporated into this modern textbook on physiological chemistry than before. The subject of metabolism is now discussed in several chapters: one devoted to metabolism of proteins, carbohydrates and fats; another to inorganic metabolism, a subject which received scant attention in the old textbooks; and a third to the vitamins and deficiency diseases. In addition to these, there is a special chapter on the respiratory metabolism and neutrality regulation. Another contains a discussion of energy metabolism, and special attention has been given to blood and tissue analyses.

The present volume consists of thirty-five chapters and an appendix. This being a work on *practical* physiological chemistry, the actual informative reading matter is interspersed with practical experiments for the laboratory student. The use of different types serves to emphasize the important and practical parts of the book. An adequate but not too profuse list of references is incorporated in the work and conveniently printed in footnotes at the bottom of the pages.

The book opens with a discussion of the physicochemical properties of solutions, followed by a chapter devoted to carbohydrates. Succeeding these are three long chapters on proteins, their composition, chemical structure of amino-acids, etc., and their various properties, a special fourth chapter being devoted to nucleoproteins and nucleic acids. Chapters VII and VIII are devoted to fats and milk. These are followed by three chapters dealing with the chemistry of epithelial and connective tissues, muscular tissues and

nervous tissues, etc. Twenty-four pages are devoted to enzymes and their action in Chapter XII, and the whole subject of gastrointestinal digestion, absorption, putrefaction, detoxification, etc., is covered in Chapters XIII to XXI, inclusive, embracing about one hundred pages. Blood and lymph and tissue analyses are discussed in Chapters XXII and XXIII. Then follows an exhaustive treatment of metabolism from every conceivable angle, covering 234 pages. Five chapters are devoted to the study of urine, its physiology, pathological constituents, methods of analysis, etc. The appendix contains a list of reagents and solutions, a table of atomic weights and logarithmic tables.

The chapter on endocrine organs is perhaps not as satisfactory as those regarding most of the other topics treated in the book, only a superficial description being given. This may have been done purposely because of the shifting opinions on the subject at the present time.

The physical form of the book is all that could be desired, the print clear, the paper of excellent quality and the illustrations in nearly every instance distinct and well reproduced. Some of the colored plates are beautiful. The numerous tables and graphs scattered through the pages will be found of immense value by the student and other workers using the book for reference. One of the best features of the work is a clear and cogent exposition of the chemical relationships of the various compounds, the chemistry of which has been solved by modern investigators.

In the authors' opinion, the work presents one of the best written, most comprehensive and useful texts on biochemistry, not only in English but in any modern language. . . .
DAVID I. MACHT.

The Merchandising of Drug Products. By PAUL C. OLSEN, PH.D., Lecturer in the School of Business of Columbia University and the Philadelphia College of Pharmacy and Science. Member of the Directing Committee of the Druggists' Research Bureau, Appleton and Company, Publishers, New York, N. Y. Price \$2.50.

This book is the outcome of a study undertaken by the author for the American Association of Colleges of Pharmacy, to outline a course on merchandising to be required of all students in its accredited schools. Manufacturers and wholesalers of pharmaceutical products and

operators of chain and independent drug stores as well as students of pharmacy will find it a practical guide to scientific merchandising in the drug field.

The first half of the book deals with the merchandising problems of manufacturers and wholesaler dealers. Here the author goes into the classes of merchandise distributed through the drug trade, and the agencies used in their distribution. In the second half of the book the problems of retail druggists are dealt with.

The author's aim has been to analyze the outstanding causes of success and failure in the present-day merchandising of drug products. Constant development in the field of biology, pathology, psychology and economics vitally affect the merchandising of drug products and consideration must be given to these factors as important in busy study. Competition is becoming keener and is making the maintenance of net profits more difficult; gross profits must be considered, but along with these the expenses which are equally important for assuring net profit.

The chapters of Part I deal with profits and merchandising in various divisions and connections, classes of merchandise distributed through the drug trade and in that connection the merchandise handled in different classes of drug stores. The chapter deals with agencies, in the distribution of drug products, advertising through the press, etc. Price problems and policies are discussed from various angles, also the problems of packaging and promotion methods.

As stated, Part II deals with problems of retail distribution and in the various chapters devoted to this subject the methods of both the chain stores and of the independent stores are freely discussed, including the stock, advertising and salesmanship.

The book will serve a useful purpose in developing ideas for business conduct.

Annual Survey of American Chemistry, Volume V (1930), edited by CLARENCE J. WEST, Director of Research Information Service, National Research Council, published by The Chemical Catalog Company, of New York, for the National Research Council. As stated at the beginning, this survey is for the year 1930. The price of the book is \$5.00.

Reviews have heretofore been published in the JOURNAL and the value of the survey is quite generally known to the reader. The volume under consideration has nearly 100

more pages than the preceding volume. There are 40 chapters and the matter is presented by those who are authorities on the subjects assigned them.

The chapter on Solutions has been prepared by Victor K. LaMer; the one on Pharmaceuticals by Ernest H. Volweiler; the one on Biochemistry by D. Wright Wilson; on Vitamins by H. C. Sherman; and the one on Insecticides and Fungicides by R. C. Roark. The other chapters are of equal value although, perhaps, not of the same interest to pharmacists as those named.

The book has an Authors' Index of nearly twenty pages and the Index of Subjects of about half that number. The work has become generally known and has a distinct value in the libraries of schools and manufacturing establishments and as a reference for pharmacists.

DONATIONS.

The AMERICAN PHARMACEUTICAL ASSOCIATION is indebted to the following for books and pamphlets and these are gratefully acknowledged:

"Reminiscences of Early Chicago," by E. O. Gale, presented by Abram Gale of Chicago. Quotations were embodied in an article on Samuel Guthrie in the November JOURNAL.

"Answers to Questions Prescribed by Pharmaceutical State Boards;" "One Hundred Window Trims;" "Window Displays for Druggists;" "Essentials of Pharmacy"—donated by Mrs. Edward Swallow.

"Annual Report of the Smithsonian Institution;" twelve bulletins from the Proceedings of the United States National Museum—from the Smithsonian Institution.

DRUG AND PHARMACEUTICAL SUPPLY SALES.

While sales in the drug line have, along with sales in other divisions, been somewhat reduced, the special survey prepared by the Research Department of R. G. Dun & Co., reveals that drug and pharmaceutical supply sales are well maintained. The comment is that, because of the numerous essential items produced in the drug and pharmaceutical supply trade, output has been less disturbed by unsettled conditions than many other lines of activity.

The same report states that "the demand for supplies has been well maintained, but the decline in the sales of merchandise other than drugs has brought the total unit sales for the industry below the figures of 1930."