

and dispensaries, and whose volume of business is primarily and principally in such articles."

It is understood, of course, that dealing in one or a few of the lines of articles mentioned

in the definition would not constitute a wholesale druggist; the functions and operations of a wholesale druggist certainly embrace all or the great majority of such lines.

BOOK NOTICES AND REVIEWS.

Scientific and Applied Pharmacognosy. By Henry Kraemer, Ph.B., Ph.M., Ph.D., Dean of the College of Pharmacy and Professor of Pharmacognosy in the University of Michigan College of Pharmacy; Member of the Executive Committee of Revision of the United States Pharmacopoeia. Second edition, revised and illustrated with over 300 plates. Octavo, xxviii + 741 pages. New York: John Wiley & Sons, Inc.

Owing to an increase in the size of the printed page, the second edition of this standard reference book is more compact than the previous volume. The use of heavy-faced type for the titles of the different items considered and for subtitles of paragraphs makes for greater convenience and is a decided improvement.

In the introductory chapter the author not only calls attention to the exceedingly broad field of pharmacognosy but lays stress on the qualifications necessary for an intelligent pursuit of this branch of pharmacy as a livelihood. A thorough knowledge of botany, chemistry, physics and crystallography is considered essential. No mention is made of the importance of even superficial training in *materia medica* and therapeutics in the identification of drug products and the essentials of bacteriology in the microexamination of food products. General principles and definitions regarding natural, commercial and botanical origins, habitat, titles, time of collection, valuation and methods of preparation and preservation are stated in this part of the book.

The body of the text is devoted to a consideration of the various official and non-official drugs and drug products together with brief notations regarding some of the more important foodstuffs. Engler and Prantl's natural arrangement of botanical orders has been followed throughout the work. A summary of the anatomical characters is given in connection with each family. This is followed by detailed descriptions of the individual plants of medicinal or economic importance in that family. The descriptions include details of macroscopic and microscopic structure, constituents, allied plants, possible adulterants

and literature regarding the item under consideration. In the last section of the book the topic of powdered drugs is very briefly considered and an analytical key for the identification of many powdered drugs and drug products is included. The official standards for spices set forth in Circular 136 (Standards of Purity for Food Products, U. S. Bureau of Chemistry) are stated in connection with the spice or condimental drugs, but these requirements are not always in conformity with the Pharmacopoeial and Formulary standards and attention should be called to the differences. The designation of official items might possibly increase the usefulness of the volume especially to those who are not entirely familiar with the drugs and products included in the Pharmacopoeia and Formulary.

The volume is a very compact and useful reference book for those possessing a knowledge of botany and vegetable histology and who are familiar with the technical procedures in microscopy.

C. W. B.

The Microanalysis of Powdered Vegetable Drugs. By Albert Schneider, M.D., Ph.D. (Columbia University), Professor of Pharmacognosy in the College of Pharmacy and Professor of Pharmacology in the College of Medicine, University of Nebraska, Lincoln. Second edition, with 237 illustrations. 548 pp. P. Blakiston's Son & Co. Price \$5.00 net.

The second edition, which has followed many years after the first, presents a very striking enlargement over the first edition.

Schneider's work is thorough, comprehensive and strictly up to date, and perhaps is the best so far presented in American literature. The introductory chapters embracing "The Microscope in Modern Pharmacy;" "General Suggestions on the Examination of Vegetable Powders;" "The Quality and Purity of Vegetable Drugs from the Standpoint of the Pure Drugs Act;" "Causes Modifying the Characteristics of Vegetable Powders;" "Powdering Vegetable Drugs;" "Adulteration or Sophistication of Vegetable Drugs;" "The Microscopical Examination of Powdered

Vegetable Drugs" are very readable and useful. The "keys" are comprehensive and appear to be very carefully prepared. The chapter on "Quantitative Microscopic Determination" is entirely new. Two hundred powders are figured, and the figures described. The figures are mostly in simple pen lines, but very clear and valuable in actual practice.

The book is of special value to the practical microscopist who meets with powdered vegetable drugs, and is a reference book that should be in every pharmaceutical library, but it is too comprehensive for any of the subjects offered in the two-year pharmaceutical course. Perhaps it could be used as a textbook in a four-year pharmaceutical course.

E. N. GATHERCOAL.

Pharmaceutical Bacteriology. By Albert Schneider, M.D., Ph.D., Professor of Pharmacognosy, College of Pharmacy, University of Nebraska, Lincoln. Second edition revised and enlarged with 97 illustrations. 441 pages. P. Blakiston's Son & Co. Price \$4.00.

The second edition of Schneider's *Pharmaceutical Bacteriology* is a decided enlargement of the first edition and also presents some improvements. The work is very comprehensive. Some of the rather glaring faults of the first edition have not been corrected; notably, the erratic arrangement of the chapters. As this work represents the only textbook so far published especially designed for bacteriology courses in the pharmacy curriculum, it is unfortunate that it is not more suitably arranged for such courses. If it is to be used as a textbook, a laboratory guide must also be supplied; for the chapter on bacteriological technic, placed near the center of the book, is not at all suitable as a laboratory guide for students beginning in bacteriology.

The preliminary chapters on history, origin of bacteria and other microorganisms, general morphology and physiology, are very extensive and well written, but contain a very large amount of material that cannot really be used in short pharmaceutical bacteriological courses. When one considers, too, that at least 100 pages are devoted to such subjects as: Symbiology, Zymology, Yeasts and Molds, and Adenology, one realizes what a vast amount of material, even though it be good material, is presented on topics that must

be of inferior rank in pharmaceutical bacteriology. The chapters on immunology, serology, disinfection and communicable diseases are extensive, complete and modern. Perhaps in a pharmaceutical bacteriological course of three or more semesters the work would be suitable as a textbook.

E. N. GATHERCOAL.

Pharmaceutical Botany. A Textbook for Students of Pharmacy and Science. By Heber W. Youngken, A.M., M.S., Ph.M., Ph.D., Professor of Botany and Pharmacognosy and Director of the Microscopical Laboratories in the Philadelphia College of Pharmacy. Third edition, revised and enlarged, with 238 illustrations and glossary of botanical terms. 479 pp. P. Blakiston's Son & Co. Price \$3.75 net.

The third edition of Professor Youngken's *Pharmaceutical Botany* follows the general lines of the second edition, with some notable enlargements and improvements. As has been stated in the review of the second edition, the text is especially designed for use in the botanical department of pharmaceutical courses.

The plan of the text is decidedly different from the usual textbook of botany, but includes sufficient morphology, histology, and taxonomy to prepare the student well for the study of pharmacognosy.

The illustrations in the text are excellent, though it is to be noted that the common practice is followed of "borrowing" many illustrations.

E. N. GATHERCOAL.

French-English Medical Dictionary. By Alfred Gordon, A.M., M.D. (Paris), Late Associate in Nervous and Mental Diseases, Jefferson Medical College; Fellow of the American College of Physicians; corresponding member of the Société Medico-Psychologique de Paris, France, etc. Published by P. Blakiston's Son & Co., Philadelphia. 164 pp. Price \$3.50 net.

The dictionary has been prepared by one who has been in touch with French medicine, and, therefore, the terms and definitions given conform to their application. Each French word is accompanied by a combination of letters in English, giving the pronunciation as accurately as possible, and there is also a separate key to pronunciation. The dictionary seems to be quite complete and,