

BOOK NOTICES AND REVIEWS.

Applied Pharmacology. By A. J. CLARK. Published by P. Blakiston's Sons & Company, Philadelphia, 1932, x plus 590 pages. 4th Edition. 72 illustrations.

Foreign travel and study have definite value in scientific work in bringing changed views, other viewpoints and new visions of scientific possibilities. This book by Dr. Clark is as valuable a contact as a trip to Europe at the present time in evaluating continental opinions and developments in pharmacology. The American reader is struck by several differences in the concise and readable presentation of an enormous amount of useful and pertinent information. The general history of therapeutics and the necessity for biological standardization of drugs given in the introduction is followed by two chapters on the action and use of disinfectants, followed in turn by three chapters dealing with "Specific Therapeutics." A discussion of anthelmintics is then connected in a logical fashion. The next six chapters deal with the action of drugs upon the central and autonomic nervous system, and with local anesthetics. A thoroughly scientific discussion is given of the therapeutics of alcohol. It is regretted that a more adequate discussion of the higher members of the ethyl alcohol series was not presented. A very understandable presentation of the action of the sympathetic and parasympathetic nerves upon the chief organs of the body is a feature of one chapter.

Three chapters are then devoted to the pharmacology and physiology of the alimentary canal; emetics, sea-sickness, periodic activity, function of acids and alkalis, hyper- and hypo-chlorhydria, the gall bladder, intestinal activities, the effect of various types of purgatives, the action of astringents and opium and the treatment of diarrhea are all briefly discussed in about sixty pages.

The pharmacology of the heart and blood vessels is next presented, with suggestions regarding the differences in activity of glucosides of the digitalis group, and the nature of their action in various heart involvements as studied electrocardiographically. Succeeding chapters are devoted to the pharmacology of respiration, kidneys, liver, temperature regulation, the skin, endocrine glands, vitamins and inorganic metabolism. The last two chapters deal with the pharmacological action of X-rays and radium emanations, and with various immunity reactions. This last chapter also

touches on the production and activity of various vaccines and antitoxins, gives a brief discussion of non-specific vaccine therapy and touches on the mechanism of "Vaso-Motor Reactions" (a term suggested as a substitute for the term "anaphylactoid reaction").

The subject matter is presented to coordinate results obtained in experimental pharmacology in the laboratory with therapeutic observations in the clinic; a discussion of physiology and pathology connects the work in these fields. Modern work on the rôle of vitamin A in maintaining resistance against infection, and of the importance of the anterior pituitary gland in its action on growth and reproduction is presented. A rather unusual feature is the inclusion of the wholesale prices for various drugs and preparations which permits evaluation of relative costs.

It seems somewhat unfortunate that the rather limited bibliography following each chapter is devoted largely to work by European investigations and that, apparently, studies in the United States have not received a due share of attention. However, the references to general literature give an opportunity for further search by interested students and readers. The ever-growing literature of this field necessitates somewhat arbitrary selection of a bibliography for any current text and Dr. Clark has presented those references which gave recent general reviews of the subjection under discussion.

The student of quantitative pharmacology is somewhat disappointed in not finding methods of physiological standardization discussed or pointed out in detail. One feels a particular loss in not finding a discussion of the standardization of ergot upon the rabbit uterus, a method which was developed by Dr. Clark. It is hoped that a subsequent edition will touch on the quantitative phase of pharmacology to round out the very excellent presentation of qualitative pharmacology on normal and pathological men and animals.

The book is well edited, well printed and well bound. The detailed data given in 50 tables are clearly presented for quick reference. Very few typographic mistakes were found, which is a triumph in the publication of so technical a book.—JAMES C. MUNCH.

The Cost of Medicines. The Manufacture and Distribution of Drugs and Medicines in the United States and the Service of Pharmacy in