

graphical details, and by disregarding experiments and opinions which exerted little or no subsequent influence, he has been able to depict the progress of chemical thought for the last hundred years well within the compass of four hundred pages.

The book will be found useful for two different purposes. Its compactness, the clearness of its style, and the wise selection of important facts, well fit the book to the wants of the young student of chemistry who desires to attain some insight into the history of the doctrines and principles of his science. Even for the young student, the copious references to the sources of most of the more important statements will be of value. But these numerous foot notes (there are nearly 1400 references in them) make the volume also serve as a convenient and excellent guide to one who desires to examine more closely the history of some given matter.

Fourteen of these lectures were published in 1869. An edition was published in 1889 to which a fifteenth lecture was added, continuing the history to that date. The present fourth edition contains two more additional lectures, bringing the story down to the year 1906, while the earlier lectures have been carefully revised. The author accordingly, has not spared himself the increased labor of writing the history of matters which are still fluid and mobile and formative. While, as he well says, much in these chapters will need future correction, still, the judgment of a sober-minded, unprejudiced contemporary will have its value.

The chemist who has an intellectual interest in his science and its history cannot afford to be without this book. This is the more true because the work comes nearer to being independent of Kopp than do other brief histories of chemistry; and we all value our Kopp so highly that we would like to have two independent Koppes. EDWARD W. MORLEY.

THE PHYSIOLOGY OF ALIMENTATION. BY M. H. FISCHER. New York, John Wiley & Sons; London, Chapman & Hall, Ltd., 1907, pages VIII + 348, figs., 30. Price, \$2.00.

It has been the author's purpose to present an outline of the physiology of the digestive tract suitable for the use of students, particularly those who are interested in physiology as related to medicine, and this plan has been admirably carried out. The volume will prove useful also to a wider circle of readers, for it summarizes a large amount of data regarding mechanical phenomena of alimentation, the digestive juices and their constituents, the action of the digestive enzymes, the regulation of secretion of digestive juices, the bacteria of the alimentary tract, and the alimentary tract as an absorptive and an excretory system. Enough is given of the historical side of the questions considered to familiarize the student with the development of the work, but attention is devoted chiefly to setting forth the views which are most generally accepted regard-

ing digestion and assimilation of food and to summarizing the results of investigations on which these theories are based. The results of the author's own investigations are embodied, as well as a large amount of data from such recent work as that of Cannon, Starling, and Pawlow and his associates, to cite only a few. The index of authors and the detailed index of subjects, in addition to text references to authorities cited, are features which add greatly to the usefulness of the volume.

C. F. LANGWORTHY.

CLEAN WATER AND HOW TO GET IT. BY ALLEN HAZEN. Mem. Am. Soc. of C. E. John Wiley & Sons, New York, 1907. Price, \$1.50.

In the present day when men from various pursuits are called to serve their city or state in some political office, it is essential that they become familiar with the different departments with which they have to deal. Many technical books may have already been written on the subjects on which they wish to be informed, but books which treat of the practical principles and facts may be wanting. To fill such a need in the department of water supply this book on "Clean Water and How to Get It" was written. It is for beginners, but especially for those who have power to act in a way to bring about better conditions, for those, "who wishing to serve their cities well, can perhaps be aided in doing it by very simple statements as to some matters."

In the first five chapters Mr. Hazen discusses the different sources of supply, their characters and adaptability for use, illustrating his points very clearly by brief but adequate descriptions of specific city works. In a very simple way he explains what hardness, turbidity, and color are, to what due and how best they can be removed. In detail, he describes the mechanical, the slow sand, and intermittent filters, and shows why and how each is good and under what conditions each is best. Then that the book may be complete, he mentions the various parts of the water works, their size according to need for consumption, for manufacturing, for fire service, with a view too, to the pressure required. He deals also with the means of suppression of waste and fair charges, in connection with the cost of construction and maintenance.

The book on the whole is a comprehensive, practical view of the entire subject, giving a general idea as well as specific in some cases, of meeting almost any problem in connection with securing a new supply or improving an old one. It bristles with facts presented in excellent English. From reading it one would be able to see the necessary requirements, would be able to follow intelligently the methods proposed by an expert and understand why under particular conditions certain devices are best, in short, would be made more competent to fill his position as a man interested, in water works.

R. S. WESTON.