

mastery of the subject and based on the very extensive personal experience of Dr. Wiley. All opinions and conclusions drawn "respecting adulterations, misbranding, nutritive value, and wholesomeness are the individual expressions of the author and are not to be considered in any other manner." A necessary, although perhaps not required explanation, on account of the official position that Dr. Wiley holds.

The reviewer cannot agree with the author "that the inartistic treatment of a subject of this kind, is not one which is calculated to excite any sympathetic interest or appeal to the natural desire for literary and artistic expression." The literary style is such that both scientist and layman are liable to try to finish the manual from "cover to cover" at one reading. The artistic make up is excellent throughout, as to type, tables and illustrations and the book is exceptionally free from errors or imperfections. The Table of Contents, Index and List of Illustrations (11 colored plates and 86 others) are complete and splendidly arranged.

The reviewer has no hesitation in stating that this latest manual from the pen of Dr. Harvey W. Wiley is one of the best scientific and popular additions to food literature, and that it can be recommended without qualification, not alone to the specialist interested in the manufacture, distribution or control of food products, but also to the physician, sanitarian, legislator and to every consumer of food products.

EDWARD GUEDEMAN.

GLUE AND GELATINE. THE PRACTICAL TREATISE ON METHODS OF TESTING AND USE. BY R. LIVINGSTON FERNBACH. pp. IX + 208. Price \$3.00. D. Van Nostrand & Co.

This book presents to us the most practical treatise from the chemical technological point of view that has as yet been published.

The author takes up the nature, properties and sources of various kinds of commercial glues and their manufacture. He next examines them from a physical point of view and gives the tests and classification thus derived. He then examines them in a chemical way and it must be admitted that when a conservative author only gives us moisture, ash, acidity, alkalinity, acids and fats as the well established chemical methods of valuation, which have little value as a qualitative factor, then it must be acknowledged that the subject is difficult.

Mr. Fernbach starts his third chapter: "It must be reaffirmed at the outset that analysis supplies no data as to the strength of the product." The methods offered for the approximate assay of constituent elements and the estimation of glue content, can hardly be called chemical methods, but they are the best we have.

In his chapter on adulteration, he has followed Allen very closely from a chemical standpoint, bearing in mind the necessity of having his method clear and concise on each subject. The whole value of this work to chem-

ists who have glue analyses to make, is the position the author takes that the physical tests must determine the value of the glues and there can be no question but that the author proves his thesis.

Much credit is given the standards of physical tests, known as "Cooper grades," which depend greatly on the viscosity and jelly strength—by the latter is meant the resistance to pressure of a given glue when compared with other glues of known character.

His book should be in the hands of all chemists who have glue work to do and comes nearer to being a hand-book of the subject than anything yet printed, giving as it does all the chemical and physical tests of value and entering also largely into the commercial side of the subject.

JOHN H. YOCUM.

"THE PEABODY ATLAS."—SHIPPING MINES AND COAL RAILROADS OF THE CENTRAL COMMERCIAL DISTRICT OF THE UNITED STATES. Accompanied by Chemical, Geological and Engineering Data. By A. BEAMENT. Price \$5.00. 149 pp., size 16¼ x 18 in. Peabody Coal Co., Chicago. 1906.

This is an exceedingly valuable compilation of coal information and represents a vast amount of labor as well as great expense. Three general maps of the United States are given with especial designations of coal fields. Twenty-five sectional maps 14"x16" give counties, railways, and mines in detail, the latter numbered for ready reference to the lists of coal, localities, coal operators and coal railroads arranged alphabetically under each head. The statistical and geological data are concise and well arranged. Not the least valuable feature is a well illustrated description of the author's theories concerning the combustion of coal under the heading of "Smokeless Furnaces and Smoke Suppression." Few writers are so well qualified to discuss this and related topics where fuel of the bituminous type is involved.

S. W. PARR.

WATER SOFTENING AND TREATMENT. WILLIAM H. BOOTH. 8vo., pp. XVI + 308. Price, \$2.50. D. Van Nostrand & Co., New York, 1906.

The literature in English upon boiler waters is meagre. Real contributions, therefore, to our information on this topic are welcome. Thirty pages are devoted to a discussion of the mineral constituents and reactions of possible reagents. The author is evidently an engineer rather than a chemist, and most of the chemical data are "said to be" as given in the text. This second hand characteristic of the descriptive matter probably accounts for the lack of discrimination in the topics introduced. Magnesium hydrate, for example, may be interesting, but hardly practical, while no mention is made of phosphates as reagents. The discussion of analytical methods covers six pages and is devoted solely to a description of the use of soap solutions. A more pretentious discussion along these lines is contained in Appendix No. 1, covering sixteen pages. This