

man. For the portion 1785 to 1830 the present Bibliography is based largely on "An Index to the Literature of Manganese, 1506-1874," published by Dr. Bolton in 1875. The present work is, however, confined to the analytical part of the subject and is, apparently, very complete for that field. W. A. N.

JAHRBUCH DES VEREINS DES SPIRITUS-FABRIKANTEN IN DEUTSCHLAND, DES VEREINS DER STÄRKE-INTERESSENTEN IN DEUTSCHLAND UND DER BRENNEREI-BERUFGENOSSENSCHAFT. Zweiter Jahrgang, 1902. 8vo. xvi + 471 pp. Berlin: Paul Parey. 1902.

This second volume of the Jahrbuch is edited by Dr. Delbruck and its high value to the fermentation and cereal products industries is thereby assured. And this volume certainly establishes the success of the undertaking to publish it.

The editor states in the preface that "the compass of the work has considerably extended this year, not because of prolixity on the part of reporters but because of the enormous increase in material to be treated, and in his oral report to the societies in their general meeting he says "the object of the yearbook is that the members may have the work of the year not in the detached parts of our Journal (*Zeitschrift für Spiritus-Industrie*) but in a complete volume at the close of the year. * * * * In connection with the *Kalendar* we publish, this presents a complete compendium of the developments of each new year."

Dr. Delbruck has not exaggerated. It is almost a handbook as well as a yearbook, for nearly every operation in the fermentation, starch and starch derivatives industries is discussed with some suggestion for improvement. From the culture of the potato and barley, the production of malt and yeast, the control of the fermentation and distillation processes, to the separation and utilization of the finished products and wastes, each step has had the attention of specialists appointed to study them and the report in each case is full of valuable information. In addition to the reports from the different sections into which the works of the societies is divided, we are offered most interesting stenographic reports of the general meetings. It would be impossible to recapitulate here what is set forth in the book. It is enough to say that it is filled from cover to cover with facts of the highest scientific and practical value.

Dr. Delbruck intimates that the most important development is that "our investigations have given a new interpretation to the views developed by Buchner, that in the life of yeast we must differentiate *protoplasma*—the seat of life—and *enzyme*—the working constituent (*Arbeitstoffe*)—of the organism. Their prosecution has now developed facts which will be of importance to the fermentation industries and particularly to physiology. The theme is the struggle of the enzyme in the yeast cell."

The book has a value therefore beyond the boundaries of the industries named and while it should be found in the working libraries of all progressive technologists it will be found useful as a source of valuable suggestion to biologists and physiologists in their work.

W. McMURTRIE.

A LABORATORY MANUAL OF PHYSICS FOR USE IN HIGH SCHOOLS. BY HENRY CREW, PH.D. AND ROBERT A. TATNALL. New York: The Macmillan Company. 1902. xii + 234 pp. Price, 90 cents, *net*.

The authors have certainly succeeded in producing a very commendable book. The experiments have been carefully selected with a view "to illustrate the first principles of physics as simply as possible," and the directions for their performance are so clear and to the point that much teaching energy is saved. Several new experiments are given as substitutes for the classical ones or to illustrate points hitherto somewhat neglected in elementary physics. The number of experiments is sufficient to admit of some latitude of choice, and by means of references the work in the laboratory is brought into close correlation with seven of the best text-books on elementary physics. There are three appendixes, the first being an interesting reprint from a paper by Robert Boyle on "A New Essay Instrument, etc.," published in 1675, the second giving advice as to the selection of a galvanometer, and the third containing various physical constants.

C. E. LINEBARGER.

PLATTNER'S MANUAL OF QUALITATIVE AND QUANTITATIVE ANALYSIS WITH THE BLOWPIPE. Translated by HENRY B. CORNWALL, E.M., Ph.D., assisted by JOHN H. CASWELL, A.M. Eighth edition revised after the sixth German edition, by PROF. FRIEDRICH KOLBECK. Illustrated with 87 wood cuts. New York: D. Van Nostrand Company. 8vo. Cloth. Price, \$4.00.

All students of blowpipe analysis will be pleased to have this latest edition of Plattner's classic work in their libraries, especially