

for the mercury compounds were shown by Nernst to be incorrect. Thomsen therefore made a hasty redetermination of these quantities and uses in this book the results so obtained although the values of Nernst which have been corroborated fully by Varet are undoubtedly more accurate.

In the Danish edition of the book the experimental methods have been omitted. The English translator has, however, added a chapter on calorimetry which is abstracted from Thomsen's older work. The translation is entirely satisfactory, but whether the book itself is of such a character as to warrant its inclusion in Ramsay's excellent series of text books is an open question.

GILBERT N. LEWIS.

Jahrbuch des Vereins der Spiritus-Fabrikantes in Deutschland, des Vereins der Stärke-Interessenten in Deutschland und des Vereins Deutschen Kartoffeltrockner. ACHTER JAHRGANG. 1908. Ergänzungsband zur Zeitschrift für Spiritusindustrie. D. G. HEINZELMANN. Berlin: Paul Parey. Price, 28 M.

This report, like its predecessors, is intended, as its title indicates, as a supplement to the *Zeitschrift für Spiritusindustrie*, the official organ of the affiliated societies in Germany devoted to the production and utilization of starch and its derivatives. What is attempted in it is best set forth in a paragraph with the report of Mr. M. Student in the Jahresbericht upon the *Zeitschrift* and its work, in which he says "As a supplement to the *Zeitschrift für Spiritusindustrie* there is regularly published in Germany the *Jahrbuch des Vereins der Spiritusindustrie in Deutschland*, which contains a review of the activities of the leading society, of its various sections, as well as of the affiliated societies; stenographic reports of the general meetings of all the societies, annual reports upon the industries of dairying, distilling and starch manufacture, the annual report of the Zentrale für Spiritus Verwertung, and statistical material relating to all the branches of industry named. In addition to all this is a report of the results of experiments of the German Potato Culture Experiment Station and of experiments made at Hadmersleben to test the value of different varieties of potatoes.

"It is interesting to note that the work of the dairy industry has this year been included for the first time in the subjects treated in the Jahresbericht. The book is so broad in its scope and so thorough in its treatment that it must be both attractive and useful to every progressive agriculturist, dairyman, or manufacturer of any of the products named."

WM. MCMURTRIE.

Engine Room Chemistry. AUGUSTUS H. GILL, Associate Professor of Technical Analysis at Massachusetts Institute of Technology. Hill Publishing Co. 298 pages. Price, \$1.

This book will be especially welcome not only to technical chemists, but will be also useful to engineers in charge of boiler plants and engine rooms. Two chapters are devoted to description of chemical apparatus

suitable for carrying on the work later described in the book. Chapters three and four are devoted to fuels and their analyses. Under this head storage and spontaneous combustion of coal are considered. Methods of sampling and analysis are given. Various forms of calorimeters are described and methods of working them. A comparison is given of the two types of retort coke ovens, the Otto-Hoffman and Semet-Solvay Co. The economical consumption of coal under boilers is very carefully considered so that one in charge of a boiler plant can easily determine what percentage of the fuel put upon his grate is being transferred to the water in his boiler and how much passes up the stack. Chapter five is devoted to purification of water for boilers and the effect produced by impure waters. Various methods of removing the scale-forming substances are very fully given. What I have failed to notice in other books, there are some experiments illustrative of the corrosion and pitting of iron from the use of waters containing various impurities. Chapters six and seven are devoted to a consideration of lubricating oils, mineral, vegetable and animal oils. A brief description is also given of the method of producing mineral oils from crude petroleum. Saybolt's viscosimeter, which originated with a chemist of the Standard Oil Co., is fully described. This book should find a place on the shelves of all technical laboratories and the engineer will be able to get from it a very good understanding and appreciation of the elements he has to deal with in the boiler house and engine room.

J. D. PENNOCK.

Decoration of Metal, Wood, Glass, etc. BY H. C. STANDAGE, Consulting Chemist, New York. John Wiley & Sons, 1908. 228 pp. Price, \$2.00

This little volume is of the type of "receipt books" and as such it deals with a great variety of compiled matter, the value of which it is difficult to estimate. For a work of this kind it is uncommonly clear in its directions. In some of the subjects the compiler is evidently on unfamiliar ground, as, for instance, in giving for an enamel for copper cooking vessels, p. 68, a fused mixture of 12 oz. fluorspar, 12 oz. of unburnt gypsum and 1 oz. of borax. Such a composition would be poorly suited for the purpose, to say the least. On p. 64 red sulphate of iron is given as a constituent of a metal enamel. The use of this compound as well as of the iron filings suggested on the same page would lead to unfortunate experiments. In many of the enamels glass is quoted as a component. Owing to the varying composition of the different kinds of glass it is never used in practice. Objections might be raised also to some of the compositions advised for the decoration of china. The book as a whole appears to be a suggestive guide for the many manipulations with which the chemist has to deal in the laboratory and factory.

A. V. BLEININGER.