

On the Liberation of Formaldehyde Gas.—After the article by myself and Mr. West, which appeared in the September number of the Journal, was in press, a paper by Daniel Base appeared (August number of this Journal, page 964) on “Formaldehyde Disinfection and Determination of the Yield of Formaldehyde in Various Methods of Liberating the Gas for the Disinfection of Rooms,” in which the process of liberating formaldehyde by means of potassium permanganate has been studied. The results obtained by Base are somewhat different from those given above. The authors of this paper have tried apparatus practically the same as that described by Base, but discarded it as unsatisfactory on account of the large amount of formaldehyde left in the residue, as is indicated by Base’s analyses. In fact, unsatisfactory results were obtained in all of the numerous experiments where permanganate alone, either crystal or powdered, was used. The best results with pure permanganate were obtained by the use of a calorimeter bomb as a generator. The permanganate in powdered form was placed in the bomb and by means of an electric appliance the formaldehyde was allowed to drop on the permanganate. The increase in the amount of formaldehyde liberated was undoubtedly due to the heating of the bomb, thus driving off more of the formaldehyde than in an ordinary glass generator. A slight increase in the amount of formaldehyde was likewise obtained by bringing the formaldehyde solution in contact with the permanganate in the bomb under diminished pressure. The percentage of formaldehyde liberated in each case, however, was considerably lower than the percentage obtained by mixing the permanganate with sand.

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NEW BOOKS.

LES INDUSTRIES DE LA CONSERVATION DES ALIMENTS. PAR X. ROCQUES.
Paris: Libraire Gauthier-Villars. 1906. xi + 506 pages, 114 figures,
15 fr.

This book is of special interest to those who wish to follow the commercial processes of preparing all forms of preserved and canned foods for the market. The author treats of these processes in a clear and comprehensive manner, using well-selected illustrations wherever necessary.

A brief historical sketch is first given, showing the progress of food preservation processes since the 17th century, calling special

attention to the epoch-making discovery in 1804 by Appert of the efficacy of canning, and to the studies of Liebig, Masson, Pasteur and others.

Then follows a general discussion of the causes and effects of decomposition in foods, with a theoretical resumé of the phenomena of putrefaction. Considerable attention is given to preservation by heat and to a practical treatment of the canning industry, the general technique of canning various fruits and vegetables as well as of fish, meats, meat products and milk being given in detail.

Preservation by cold is treated in a separate chapter dealing with the question of cold storage as applied especially to meat, fruits, fish, eggs and dairy products. Preservation by desiccation follows, with commercial methods for the drying of the various foods to which the process is applicable.

The chapter on food preservation by antiseptics is of paramount interest, on account of the increased use in recent years of chemical preservatives in foods. While discussing the relative efficiency of the various commonly used antiseptics, the author unqualifiedly and justly condemns the use of these substances in food, with the possible exception of sulphurous acid in wine, the use of which, under certain restrictions in the wine industry, has in his opinion been justified to some extent by long practice.

The final chapter on the preservation of eggs is fairly complete and timely.

It is to be regretted that the usefulness of the book is restricted by the lack of an alphabetical index. ALBERT E. LEACH.

THE ELEMENTS OF CHEMICAL ENGINEERING. By J. A. GROSSMAN, with a preface by SIR WM. RAMSAY. London: Chas. Griffin & Co. Philadelphia: J. B. Lippincott & Co. viii + 152 pp. Price, \$1.50.

So far as it goes this is a good book but it certainly does not contain sufficient to convert the average graduate in chemistry into an engineer. The book describes and figures the technical equivalents of the beaker, flask, condenser, fractioning tube, air-bath, blowpipe, crucible, funnel, mortar and measuring vessel. There are chapters on the steam boiler and other sources of power; on the application of heat; on the materials used; on technical research and the designing of plant.

The first thing a chemical engineer must do is to design, lay out and build his building. Little will be found here to help him.