

author expresses the hope that his book may lead to some such co-operation.

A fact of historical importance, and one which has generally been overlooked by the authors of text-books and reference works is prominently set forth here, with the necessary documentary proof. This is that the Englishman Hennell synthesized alcohol from ethylene at about the same time that Wöhler prepared urea from ammonium isocyanate. Although Berthelot has disputed Hennell's claim, the evidence cited seems to show quite clearly that Hennell prepared alcohol synthetically several years before Berthelot.

The subject-matter is arranged on the page in double columns, and after every compound are given (*a*) Natural Sources and (*b*) Synthetical Processes. The references to the literature are complete up to the close of 1902, and the Index is very extensive. A second volume will complete the work. It should prove a very valuable compilation for all organic and physiological chemists:

MARSTON T. BOGERT.

THE CHEMISTRY OF GAS MANUFACTURE. BY W. J. A. BUTTERFIELD. Third Edition. Vol. I. 1904. 257 pp. Illustrated. London: Griffin; Philadelphia: Lippincott. Price, \$2.50.

This is the best of the smaller works on the subject of gas manufacture. The first edition appeared as a single volume in 1896.

The present volume treats of Materials and Processes, while the second will discuss Gas Analysis, Photometry, Calorimetry, and the Uses of Gas. In the chapter on raw materials the author describes the various substances used, and also gives some good methods for their valuation.

Coal-gas and its purification come in for nearly one-half of the volume, following which is a short chapter on water-gas and another on oil-gas.

Experience in a country where carburetted water-gas is more generally distributed than it is in England would lead the author to modify the statement that "the danger of accidental poisoning from carburetted water-gas is virtually confined to the works where it is made."

The book is well printed, and while it was intended primarily for the gas works laboratory, it will be found a useful addition to the library of every chemist.

E. G. LOVE.