terred translators. The cost of adequate production might deter publishers. Most of those who need a book of this kind would prefer to use the original.

The publishers of the book have used a thin, tough, opaque paper and a close clear type, thus bringing into one volume of readable size matter which with other paper and type would fill two volumes. The diagrams and particularly the colored spectra plates are very fine. The price of the book is comparatively very low.

E. RENOUF

Sewage. By A. PRESCOTT FOLWELL. Sixth Edition. 8vo, pp. 506, cloth. New York, John Wiley & Sons. $3.00.

The first 358 pages of this new edition are devoted to detailed descriptions and directions for the design, construction and maintenance of sewers and their various appurtenances, as used for the removal of those wastes that are conveyed from the household by water-carriage in underground channels. The book is a comprehensive one in this respect, serving not only as a useful guide to the student in sanitary engineering, but also as a valuable reference book to the practical engineer and the sanitarian.

Specifications, forms of contract and procedures for putting such work under contract are given in a manner to engage the attention of the city official. Cost data are analyzed with much detail and should prove of interest to engineers and contractors.

Since the first edition of this book appeared eleven years ago, there have been a number of features which have arisen for discussion, and these have been judiciously embodied in the sixth edition. From the strictly engineering standpoint, they relate particularly to the use made of concrete.

The chapters on the ventilation and flushing of sewers are well prepared. They wisely advocate the construction and operation of sewers so as to keep as fresh as possible both the sewage itself and the air within the sewers. The importance of guarding against putrefaction in sewers and sewer-connections is becoming more and more appreciated, particularly by those who have to do with sewage purification. It is gratifying to note that the old idea of trapping the main house drains is not favored, but preference is given to ventilating the street sewers through the house connections with pipes extending to above the roofs, as is the custom on the continent of Europe. The discussion of this subject should prove of interest to sanitarians.

Pages 359–492 are devoted to the subject of sewage disposal and have been practically rewritten. All the principal aspects of sewage disposal by dilution and by treatment in works of artificial construction of various types are well outlined. The book is not intended to be an exhaustive treatise on sewage disposal, but it is a well-balanced review of the subject which will prove serviceable to students in sanitary science, as well as to health officers, city officials or others interested in the general subject.

The book has been brought well up to date, as is shown by the statements given with respect to the Emscher tanks for the clarification of sewage as recently practised in western Germany with a marked degree of success, showing much improvement over the so-called "septic tanks."

The point of view that prevails generally throughout the closing chapters of the book is a practical one. Experiences with sewage disposal on a large scale are used frequently in illustrating methods and processes.

Without doubt, the enlarged edition of this book should prove very useful in the class-room and in the library of those who are interested in the advancement of sanitary science. The book is well edited and indexed, and it contains 46 illustrations and 31 tables.

The arrangement of the book for class-room use will doubtless appeal to teachers, as it shows the results of Professor Folwell's successful experience for some years as head of the department of civil engineering of Lafayette College, prior to his taking the editorship of the *Municipal Journal and Engineer.*

GEO. W. FULLER