Steam Boilers and Combustion. By John Batey. Published by Scott, Greenwood and Son, London, Eng. First edition, 1915. 220 pages; 18 illustrations; 5 x 7 ins.; cloth. Price, $1.00 net.

This book is to be recommended to those whose education is limited to the common schools and who wish to obtain a working knowledge of steam boilers and the physical laws governing their operation.

The author, after describing the raw materials for steam making (coal and water) in the first three chapters, then devotes four chapters to different types of boilers. In chapter eight steam boiler practice is given. The author's opinion that good hand firing is more economical than stoker firing is not that of most steam engineers.

The remaining chapters of the book give information on combustion, the constituents of coal, their action with air under high temperatures, the measurement of the heat evolved, and the calculation of the quantity of steam formed. Some simple experiments are also given.

The book ends with the movement of gases through tubes. This covers chimney draft and its causes.

The Design of Drill Jigs. By A. N. Haddow. Published by Emmott & Co., Limited, London and Manchester, Eng. First edition, 1915. 96 pages, including 22 tables; illustrated; 5½ x 8½ ins.; cloth. Price, 75 cents net.

This little book is called by the author "a practical manual," and it well deserves the name. It is full of useful hints to the designer of jigs. Many of them are of quite a simple nature, such as would be readily thought of independently by anyone after his first mistakes in overlooking them, but this book will save even the first mistake and, incidentally, much annoyance.

The illustrations are good, being apparently taken from working drawings in most cases, though they are undimensioned—a matter of no importance since the designs are applicable to varied classes of work requiring different dimensions.

At the end of the book are several useful tables giving dimensions of Whitworth screw threads and of twist drills, also wire gauges, tables of tapers and angles, etc. A useful addition for this country would be details of the Seller's thread, but as these are readily available from other sources their omission is not a matter of great importance.

The book will be particularly useful to young engineers who have to design jigs and have not yet learned by experience what to avoid and what end it is specially desirable to gain. Even older heads may find some new ideas.

Waterworks Buyers' Guide and Reference Manual.—Published by McGraw Publishing Co., Inc., New York City. 1915 edition. 185 pages; 15 illustrations; size, 6 x 9 ins.; cloth.

The publishers state in the introduction to this book that its purpose is to furnish superintendents and engineers of waterworks not only with a classified directory of manufacturers of products for which they may be in the market, but also a manual which contains such working data, reference tables, diagrams, etc., as are most frequently needed by these men.

The whole book, with the exception of about 60 pages, is devoted to a classified directory of manufacturers and to advertisements of firms supplying waterworks material and machinery. The directory refers entirely to United States firms and not to any Canadian firms, and the same remark, of course, pertains to the advertisements.

Seventeen pages are devoted to rates, an alphabetical list of the cities and towns over 3,000 population in the United States and Canada being given. The following information for each city is tabulated: Population; rate charged per annum for water supply; rate charged for bath; rate charged for closet; maximum and minimum meter rate.

The remainder of the book, about 44 pages, is devoted to an illustrated reference manual, presenting the following tables: Density of water at various temperatures; pressure and equivalent head; head and equivalent pressure; loss of head in small pipes; equation of pipes of different diameters; values of C, Kutter's formula; discharge in gallons through various sizes of pipe; standard dimensions and weight of cast iron pipes; nozzle discharge; reach of fire streams; friction loss in fire hose; cost of laying cast iron pipe; efficiency and duty of pumps; cost of electric and steam pumping; relation of duty to coal per h.p.-hour; cost of construction and operation of filters; quantity of water passing over weirs; area of filters.

In addition to the above tables the manual includes a few pages of text regarding flow over weirs; flow of water through pipes; turned and bored pipe; cement-lined pipe; flexible joint pipe; fire service systems; standard specification for hydrants; water waste prevention; construction; pumps and pumping; filtration.

Several of the tables are from Turneaure & Russell, Hamilton & Smith's Hydraulics, Transactions of American Society of Civil Engineers, American Handbook for Electrical Engineers, Gillette's Cost Data, and other sources, but they are grouped together in very convenient arrangement for waterworks men.

The publishers offer a copy of this guide to every waterworks superintendent or engineer in return for information regarding his plant for publication in the McGraw Waterworks Directory.

Working Data for Irrigation Engineers. By E. A. Moritz, Assoc.M.Am.Soc.C.E., Engineer U.S. Reclamation Service. Published by John Wiley & Sons, New York; Canadian selling agents, Renouf Publishing Company, Montreal. First edition, 1915. 388 pages; 46 figures; 65 tables; 6 x 9 ins.; cloth. Price, $4.00 net. (Reviewed by Thos. H. Hogg, C.E., Assistant Hydraulic Engineer, Hydro-Electric Power Commission of Ontario.)

The author states in the preface that his object in presenting this volume "has been to produce a book that would result in the conservation of the time and mental energy of the user, as well as to present material not readily obtainable from other sources."

The book naturally falls into two parts, the first three chapters giving a brief discussion of the various features of irrigation engineering, and leading up to the use of the tables and diagrams which occupy the remaining four chapters. This introductory portion takes up the usual steps in the development of an irrigation project in the order of their sequence.

Chapter I. deals with examination and reconnoissance. Many references are made to U.S. water supply papers published by the Geological Survey. A good index of these papers is included, together with tables of annual precipitation.

Chapter II. is entitled "Investigations and Surveys." In it the author gives a concise but valuable resumé of what the locating engineer should keep in mind, and the