

exposition will excel in interest and value anything of the kind heretofore attempted, not only by the intrinsic quality of the text and illustrations, but by their exposition of what up to now is the final word in efficient, standardized, repetitive production." If we discount the above statement sufficiently it gives a good idea of the book.

For the man who wants to know just how things are done at the Ford plant, it leaves nothing to be desired. Certainly the Ford shops hold no secrets, and in this case, are literally an open book. Much of the matter is of special interest; but on the whole, the work holds a deal of valuable description and suggestion for the manufacturer and engineer.

The text is marred to some extent by the introduction of matter more or less superfluous, and by a tendency to verbosity. As a case in point, we are admonished thus: "Let not the reader hasten to conclusions based on meagre information. All economists are agreed that the only reason why any one man works for another man is because the hired man does not know enough to be the director of his own labor. And, incontrovertibly, the employer being wiser than the employed, the wisdom of the employer should be applied to the benefit of the employed, to some extent at least."

Chapter I., entitled "The Genius of the Plant," is an essay in hero-worship, and a trifle overdone. The remainder of the book, with the exceptions noted, is timely and readable.

English and American Tool Builders. By Joseph Wickham Roe, Assistant Professor of Machine Design, Sheffield Scientific School, Yale University. Published by Yale University Press, New Haven, Conn. 315 pages, 57 illustrations, $6\frac{1}{2} \times 9\frac{1}{2}$ ins., cloth. Price, \$3.00 net.

The main purpose of this book is to emphasize the importance of the work and influence of the leading machine tool builders with a view to pointing out the important part they have always played and must continue to play in the development of the modern industrial arts. The book will be welcomed as a very valuable addition to the bibliography of the machine tool industry. Chapter I is devoted to a discussion of the influences of the early tool builders. Chapters 2, 3 and 4 deal with the work of Messrs. Wilkinson and Bramah, Benthams, Brunel and Henry Maudslay, respectively. Chapters 5 and 6 deal with the men who are connected with the invention of the planing machine, and Chapter 11 is devoted to the subject of the growth of the interchangeable system of manufacturing.

Poor's Manual of Public Utilities. Published by Poor's Manual Co., New York. 2,500 pages, $5\frac{3}{4} \times 8\frac{3}{4}$ ins., bound in cloth.

Complete and up-to-date financial statements, practically of every public utility company in the United States and Canada in which there is public interest, are presented in this manual, just issued. The book is one of the largest and most comprehensive works of its kind.

A new feature of the Manual is the "Margin of Safety" over interest or dividend requirements of individual stocks and bonds. This margin is a practical rating of securities based only on facts. It answers the first question before making an investment: "What is the risk involved?"

The Manual gives general information revised to June 15, 1916; income accounts and balance sheets are given as of December 31, 1915, and some as late as April 30, 1916. It is in every respect up to the high standard of other years.

The completeness of the Manual is well shown by the fact that it devotes 39 pages to the American Waterworks and Electric Co.; 34 pages to the United Gas and Electric System; 67 pages to the United Light and Railways System; etc.

Canadian Mining Manual, 1915. Edited by Reginald E. Hore, Editor of The Canadian Mining Journal, and published by the Mines Publishing Co., 263 Adelaide Street West, Toronto. 432 pages, illustrated, $7\frac{1}{4} \times 9\frac{1}{2}$ ins., cloth.

This well-known handbook of information concerning the minerals and mines of Canada has again made its appearance, and is filled with valuable data that is of special advantage and interest to those who have to do with the Canadian mining industry. A great deal of valuable statistical information is given concerning the mining interests, gleaned from government reports, company reports and other sources. It is well illustrated. A very useful list which the book contains is that of the mining companies, this being arranged according to the product.

PUBLICATIONS RECEIVED.

Highways Department, Nova Scotia.—Annual report of the Highways Division of the Department of Public Works and Mines of Nova Scotia. Hiram Donkin, C.E., chief engineer.

Forest Branch, B.C. Department of Lands.—The report of the Forest Branch of the Department of Lands, Province of British Columbia, for the year ending December 31, 1915. Includes discussion of market extension, forest records, land classification, forest reconnaissance, forest branch organization, forest protection, etc.

CATALOGUES RECEIVED.

Vulcan Soot Cleaners.—Ninety-page catalogue published by the Vulcan Soot Cleaner Co., Du Bois, Pa., specializing on cleaning apparatus for boilers, superheaters, economizers, etc.

Engineering in Foreign Fields.—A thirty-page publication issued by the J. G. White Companies, New York and London, showing photographs of bridges, tramways, railroads, power plants, etc., constructed in countries other than the United States.

Little David Pneumatic Tools.—A very interesting circular published by the Canadian Ingersoll-Rand Co., Limited, Sherbrooke, P.Q., illustrating their range of pneumatic tools and showing views of the many different classes of work upon which they can be used.

Meco Conveyers.—A new catalogue issued by the Mining Engineering Co., Limited, Moorefields, Sheffield, England. Illustrations show installations both underground and upon the surface.

Coal and Ash Gates.—New catalogue issued by C. W. Hunt Co., Inc., West New Brighton, N.Y., dealing with coal and ash gates or valves for controlling the flow of bulk materials. Well illustrated.

Duplex Exciter.—Booklet issued by the Terry Steam Turbine Co., Hartford, Conn., describing duplex exciter sets for large steam generating stations.

Graphite Lubrication.—Booklet giving facts about lubricators that are made for use of graphite alone or with oil. Issued by the Joseph Dixon Crucible Co., Jersey City, N.J.