

zation of a manufacturing establishment, and the responsibilities that should be borne by each man, from the president down to the shop foreman. The author advocates a general system for all routine work by which every order is given in writing and repeated in the same way as it passes through each department. The various forms and cards used in carrying this out are illustrated and described. The question of cost-keeping and the division of the fixed charges is discussed, and the merits of the various systems in use pointed out and compared. Following the general consideration of organization and management is a discussion of the system of carrying on the work in the draughting-room, pattern shop, and storage-room. For the latter a simple and efficient system of issuing tools to the shop is proposed. The remaining chapter is devoted to such parts of the organization as reading-rooms, dining-rooms, etc., for the employees. The formation of mutual aid associations for benefit in cases of accident and illness is brought up in this chapter. In conclusion, we would say that this book is one that could be read by anyone connected with a manufacturing establishment, and being quite general is free from technical expressions. It would be very useful both to the man in the shop and to the clerk in the office. Both could read it intelligently, and the former would learn something of the business in general, while the latter would get a good idea of the practical side of the work on which he is engaged. For the experienced manager or superintendent there is nothing to be learned by reading a book of this kind, as they will have picked up all the general information about shop management during the years of training that fitted them for their responsible positions. R. E. C.

The Design of Typical Steel Railway Bridges.—An elementary course for engineering students and draughtsmen. By W. Chase Thomson, M. Can. Soc. C.E., assistant engineer, Dominion Bridge Co., Montreal. New York: The Engineering News Publishing Co.; London, England: Archibald & Co. Cloth; size, $6\frac{1}{4} \times 9\frac{1}{4}$; pp. 178; 21 plates and text illustrations. Price \$2.

Mr. Thomson's new book is a sequel to his former work, "Bridge and Structural Design," and like it is an eminently useful volume for those wishing to familiarize themselves with the problems arising in a bridge office. The division into chapters and the use of much clearer illustrations have effected a considerable improvement over the former work. The matter presented consists principally of detailed designs of six typical steel railway bridges, closing with a theoretical discussion of the latticing of compression members. But little theory has been developed in the text, the necessary equations being assumed and references made to standard works on theory. Loopholes affording opportunity for much adverse criticism do not readily present themselves. On page 21 the statemnet that when the flanges of plate girders are composed of two angles with cover plates, the effective depth is approximately equal to "the depth back to back of angles," might well be modified to read, "the depth of web plate," thus making it an even number of inches. The author has done this on page 6 in deriving an expression for the section modulus of a plate girder. Some liberty is taken with conventional conceptions by styling the sum of the squares of the distances of the rivets in a plate girder web splice from the neutral axis of the girder the "moment of inertia of the rivets." In the detail of the 100-foot deck Warren girder span no provision is made for equalizing the pressure on the rollers, although the best practice requires the use of a pin or disc bearing for all spans over 75 or 80 feet in length. Though one disposed to do so might offer further criticism, no other book has presented complete designs in such a concise and helpful way for those for whom this work is intended.

C. R. Y.

PUBLICATIONS REVIEWED.

Peat and Lignite.—A report by E. Nystrom, M.E., of the Department of Mines, Canada. Mr. Nystrom went to Europe and investigated the peat and lignite industries there. The report deals with the peat beds, processes of

preparing, machinery used in preparing peat for fuel. Size, 6×9 , pp. 245. Illustrated.

T and N.O. Railway Report.—The sixth annual Report of Temiskaming and Northern Ontario Railway Commission, containing financial statements, report of superintendent, chief engineer, general roadmaster, etc. Size, 6×9 , pp. 213. Illustrated.

Report of Minister of Public Works, Ontario.—The report for 1907 gives in some detail the various public works carried on by the Provincial Government, their necessity and cost. Hon. J. O. Reaume, Minister of Public Works, Toronto, Ont. Size, 6×9 , pp. 126.

Report of Minister of Mines, British Columbia.—Annual Report of the Minister of Mines of British Columbia for the year ending 31st December, 1907, being an account of mining operations for gold, coal, etc., in the Province. William Fleet Robertson, Provincial Mineralogist. (British Columbia, Bureau of Mines.) Pp. 237, plates, maps, 1907. Victoria: Government Printing Office, 1908.

Report of the Superintendent of Highways.—Report of A. J. McPherson, Superintendent of Highways for the Province of Saskatchewan for 1907. Besides a description of work accomplished during the year it also contains a manual for road overseers. Size, 6×9 , pp. 45. Illustrated.

Nova Scotia Mining Society Report.—Volume XI., being the transactions of the Society during 1906-7. Gives a list of officers and members. It also contains eight papers on subjects of interest to mining engineers. Edited by H. Piers, and may be secured at the rooms of the Society, Halifax, N.S.

International Waterways Commission.—A supplement of the report of 1907, dealing with the work of the Canadian section of this Commission. The Chicago Drainage Canal and Power Dams on the St. Lawrence are especially referred to. Size, 6×9 , pp. 36.

CATALOGUES AND CIRCULARS.

Dynamo Brushes.—The Cutler-Hammer Manufacturing Co., of Milwaukee, has just issued a 16-page pamphlet descriptive of their "Wirt Type" dynamo brush, designed for use with low tension, direct-current motors and generators, alternating current generators, plating dynamos, exciters, etc.

Ventilating Fans.—The Massachusetts Fan Co., Watertown, Mass., has just issued an exceedingly attractive booklet, entitled "Davidson Ventilating Fans." The illustrations show both pulley fans and many types of electric fans driven by standard motors of various makes. These are applicable for economical movement of large volumes of air at moderate pressures.

Blaw Collapsible Forms.—We are in receipt of a 58-page catalogue describing the Blaw system of steel centering, for which Messrs. the Stinson-Reeb Builders' Supply, 188 William Street, Montreal, are the Canadian sales agents. The Blaw system is in use in all parts of the United States in the construction of conduits of all shapes and sizes, of concrete and brick sewers, drains, manholes, water supply conduits, railroad and road culverts, subway roofings, tunnel linings, mine shaft linings, electric wire and cable conduits, arches and similar work. Those interested in similar construction work will find these catalogues helpful and interesting. It contains a large number of full-page illustrations of work under construction and other news of interest. Size, 6×9 .

Boilers.—The Jenckes Machine Co., of Sherbrooke, Que., have ready for distribution a new boiler catalogue. The catalogue describes the various styles of boilers, and also gives tables of weights and dimensions useful to those planning for boiler instalation.

Concrete Construction.—The Aberthaw Construction Co., 8 Beacon Street, Boston, Mass., have issued a 30-page booklet descriptive of the uses reinforced concrete may be put to in construction work. Dwellings, factories, bridges, standpipes, and chimneys built by this Company are illustrated.