

single individual, for the reason there is no man living who could have first-hand knowledge of all the subjects that are attempted to be covered in this book. The work in the manual of the American Railway Engineering Association, while some stuff gets through that is not first-class, is the result of experts in their various lines and is up-to-date."

Steam Turbines. By James Ambrose Moyer, S.B., A.M. Published by John Wiley & Sons, Inc., New York; Canadian selling agents, Renouf Publishing Co., Montreal. Third edition, 1917. 468 pages, 225 figures, 6 x 9 ins., cloth. Price, \$4 net. (Reviewed by R. N. Austin, Turbine Equipment Co., Limited, Toronto.)

Most engineers and students interested in steam turbines have in their possession the first and second editions of Moyer's "Steam Turbines" and those who have not already done so should obtain the third edition of this author's work, as such unprecedented progress has been made in this branch of engineering development that several chapters in the previous edition (1914) do not adequately represent modern practice, and the author has found it necessary to completely re-write several of them. He has also revised and extended most of the others.

These remarks apply in particular to chapter IX. on Low Pressure Turbines, which is now very complete. Also those relating to Extractor and Mixed Pressure Machines. Chapter VII. relating to Commercial Makes has also been re-written, and embodies improvements which have been made during the last few days by all the leading makers.

The chapter on Reaction Turbines deals very thoroughly with the combined impulse and reaction type, which is now being built in America and Europe with very successful results.

Nozzle and blade design, mechanical losses, governing, Marine Turbines and testing are fully covered, and there are also interesting chapters on Steam Turbine economies, Gas Turbines, and Electric Generators for Turbines.

A very useful Entropy-Heat Chart is contained in a folder in the cover of the book.

Engineering for Masonry Dams. By William Pitcher Creager, C.E., M.Am.Soc.C.E. Published by John Wiley & Sons, Inc., New York; Canadian selling agents, Renouf Publishing Co., Montreal. First edition, 1917. 250 pages, illustrated, 6 x 9 ins., cloth. Price, \$2.50 net. (Reviewed by George R. Heckle, M.Can.Soc.C.E., general manager, Ambursen Hydraulic Construction Co., Montreal.)

This excellent book on the design of masonry dams starts on a chapter on "Investigations for Surveys," dealing with the choice of location and investigation of the foundation conditions, and in eleven succeeding chapters the author covers very completely the various methods and assumptions usually employed in conservative practice in the design of various types of masonry dams.

The largest part of the book is devoted to the design of solid concrete dams of the gravity type on a rock foundation, including both bulkhead and spillway sections. Matters of ice pressure, expansion joints and static wave action are all dealt with.

The design of hollow dams of the "Ambursen" type is particularly well covered in one chapter, and there is also a chapter on the design of masonry arch dams.

It is possibly to be regretted that under the broad title of "Engineering for Masonry Dams" the author has not devoted more space to the subject of cost, and especially economy in choice of type of dam for a given location. From a standpoint of design the book is a distinct addition to present literature on the subject.

Handbook of Clearing and Grubbing Methods and Cost.

By H. P. Gillette, M.Am.Soc.C.E. Published by the Clark Book Co., Inc., New York, 1917. 232 pages, 67 illustrations, 5 x 7 1/4 ins., leatherette. Price, \$2.50 net. (Reviewed by H. M. Anderson, McAuslan & Anderson, Engineers and Surveyors, North Bay.)

The author, in the above book, has contributed to the engineering fraternity a very concise and readable reference of tried methods, which deal with a class of work which is one of the most important parts of the contracting field as pertaining to works carried forward in bush or semi-bush country.

The work of land-clearing is well-nigh a transcontinental problem to Canada. Whether from the standpoint of farming, road, railroad or hydraulic construction, the removal of trees and stumps, save in a portion of our south middle-west, forms a very formidable and costly part of all constructive work.

One would, therefore, quite naturally expect that there would at least be plenty, if not an abundance, of booked information on so important a subject. Such is, however, not the case; and, by careful compilation of numerous departmental issued bulletins, and from observations carried out under his own supervision, Mr. Gillette has produced a very valuable reference pertaining to this subject.

Some of the methods detailed are, in many cases, new to the eastern section of Canada, and in one or two cases are novel, I believe, to the large fir forests of British Columbia. The work should fill a long-felt want along the lines it references, and should find a place in the libraries of those engineers who have occasion to carry forward works which include land preparation.

Mechanical Equipment of Buildings. Volume II. By L. A. Harding, B.S.M.E., and A. C. Willard, S.B. Published by John Wiley & Sons, Inc., New York; Canadian selling agents, Renouf Publishing Co., Montreal. First edition, 1917. 766 pages, illustrated, 7 x 9 1/4 ins., flexible binding. Price, \$5 net. (Reviewed by H. H. Angus, B.A.Sc., Toronto.)

This is the second of a series of three volumes by the above writers. All three volumes deal with the mechanical equipment of buildings, and, as pointed out in the review of Volume I., the work is by far the most complete so far undertaken along this line. The first volume dealt with heating and ventilation of buildings; the second deals with power plants and refrigeration, while the third volume will deal with elevators, lighting systems, sprinklers and plumbing. The work forms a reference book for engineers, and all available sources of information relating to this field of engineering have been drawn upon, so that the work is on a comprehensive scale.

The present volume is devoted to power plants and refrigeration, but some of the matter published in the first volume has been included in this book also in order to make the work complete in itself. The book is well supplied with illustrations, and the use of the various