

engineers in compiling specifications, all of which has had the supervision of some of the best men in the profession. It will also contain technical information regarding materials and builders' specialties furnished by manufacturers and dealers, giving detail drawings, dimensions, approximate weights, etc. It will contain no mere display advertising, but such as will conform to the scope and purpose of the work, which is to be essentially a book of reference for architects and engineers.

"Specification Data" is, as its name implies, a systematic compilation of data required by architects in writing specifications. No man would depend upon his memory for all that he requires in compiling specifications for an extensive building, therefore such a work as "Specification Data" is almost indispensable to the profession, and over one hundred of the principal architects of the Dominion have already expressed their satisfaction at the prospect of having a copy furnished them.

The idea underlying this work is that of combining this indispensable information of a professional character with all available data as to various materials and building specialties in the market, and the names of manufacturers and dealers from whom such materials may be obtained. The names and addresses of Canadian manufacturers and dealers in building supplies of any importance, will be found in the directory portion of our book, whether they are advertisers or not.

Portland Cement.—By A. C. Davis, F.C.S., Assoc. Inst. C.E. Published by Woodford, Fawcett & Company, office, Stone Trades Journal, 36-38 Southampton Street, Strand, W.C.

The second edition of this work has been revised and enlarged to such an extent that it may be considered as practically a new work. From the pen of so well-known and experienced a cement manufacturer as Mr. Davis something in the nature of a standard work upon the science and practice of cement manufacture might be looked for, and a perusal of the volume, which runs to some 500 pages, certainly seems to confirm the anticipation.

As the title denotes, the author confines the work to a consideration of the manufacture, testing and uses of Portland cement, and does not, as is usually the case in existing British and American works on this subject, treat of calcareous cements generally—nor of the technicalities of the manufacture in particular.

While the cement manufacturer will naturally appreciate the exhaustive manner in which the process of manufacture is explained, and the various methods of burning, grinding and testing are dealt with, the engineer, architect and consumer generally will find much that is of interest in the sections relating to the testing and uses of Portland cement and the qualities necessary to ensure the permanent efficiency of concrete.

The book is copiously and carefully indexed, and contains details of the British and principal foreign standard specifications. It is a massive work, beautifully printed on excellent paper in the best style, while the numerous illustrations are splendidly executed, and form an elaborate and helpful addition to the letterpress, the preparation and compilation of which bears magnificent tribute to the ability and industry of the author.

Hydro-Electric Development and Engineering.—By Frank Koester. Published by D. Van Nostrand Co., New York; 454 pages, 500 illustrations. Price, \$5 net.

The book contains a comprehensive review of the more recent developments in the design of hydro-electric plants, discussing all phases of the work from the investigation and engineering of a proposition to its final construction. The

value of the book is enhanced by the international nature of its data, which represents the most advanced American and European practice. The book is divided into parts and chapters, of which just one deals with the complete development of the power plant, discussing the investigation of the proposition, the laws of Hydraulics, Dams, Headraces and Penstocks, with chapters on the general design and selection of turbines, generators and switching equipment. The power plant arrangement is ably treated, with illustrations from latest construction.

Part II. deals with the design and construction of high-tension transmission lines, substations and protective apparatus, discussing the most recent features in the design of this equipment.

Part III. contains a comprehensive description of eight typical hydro-electric plants of modern design, of which one is in Canada, one in the United States, one in Mexico, and five are in different parts of Europe. The work is profusely illustrated, is well written, and contains a large amount of information, with several new features of design which are of value, and should prove of use to those interested in the design of hydro-electric plants.—F. A. G.

Heavy Electrical Engineering.—By H. M. Hobart. Published by Archibald Constable Co., Limited, London, and Copp, Clark Co., Limited, Toronto. 338 pages, 188 illustrations, 101 tables. Price, \$4.80 net.

The word "heavy" in the title distinguishes the book from other works on electrical engineering. The routine descriptive material and the elementary generalities regarding electricity and magnetism have been omitted, their place being taken by an introductory chapter discussing the units used throughout the book, the relation of heat to temperature and the transformation of energy. The author continues by fully discussing the overall efficiency of generating stations and the relation between coal consumption and the outgoing electrical energy. This is followed by a discussion on the correct combining of component pieces of apparatus, as steam-raising plant, piston engines, steam turbines, condensing plant, and electric generating plant, for efficient service in aggregates denoted as generating stations, the design of which is taken up in detail. High-tension power transmission lines, both overhead and underground, are discussed in detail, and a chapter is devoted to the high-tension, continuous current system, which is pointed out as forced idea, and unreasonable for transmission of large amounts of power and high voltages. Considerable space is devoted to electric traction calculations, traction motors, and the electrification of railways, the engineering features of which are fully discussed. Although design details are omitted, the whole book is arranged for the use of the designing engineer, and contains a large amount of data presented in the form of curves, tables and diagrams, which are fully discussed in the text. The work is crowded with illustrations and practical examples, based evidently upon the author's experience and data obtained from a large number of generating stations. The treatment throughout is interesting, and should prove of use to designing and constructing engineers.—F. A. G.

PUBLICATIONS RECEIVED.

Westinghouse Diary for 1910.—The Canadian Westinghouse Co., of Hamilton, Ont., are distributing handsome leather-bound, vest pocket size diaries for 1910. Besides much technical and general information of great value, there are maps and calendars which those obtaining copies will often appreciate.