

The authors assume that the reader knows little of mathematics, and the book is chiefly intended for the operating engineer and electrician. Those engineers and electricians who have never had the advantage of a college education will not find it written above their heads. It is also of value to those who have had a mathematical training on account of the practical way in which the subjects are treated. Apparently, it has been the aim of the authors to write it in simple, elementary and clear language, and to confine it to subjects of especial value to all practical workmen. The subjects treated cover a wide scope, but no subject treated requires knowledge of any preceding subject or any previous knowledge of mathematics. A person fully understanding all the subjects treated will pretty well have all the mathematics that is required to make him a first-class operating engineer or electrical worker. Practical questions with answers worked out are given. There is no list of contents to the book, merely an alphabetical index of the subjects treated.

PUBLICATIONS RECEIVED.

Bureau of Mines.—Twenty-first annual report for the year 1912. Printed by the Legislative Assembly of Ontario. 300 pages; five sheet maps accompanying the report; 17 sketch maps and plans; 130 illustrations. Contents: Statistical Review; Mining Accidents; Gold Fields of Lake-of-the-Woods, Manitou and Dryden; Porcupine Gold Area; Water Powers in the Porcupine Gold Area; Swastika Gold Area; Cripple Creek Gold Area; West Shining Tree Gold Area; Notes on McArthur Township; Geology of the Detroit River.

Barge Canal Bulletin.—January, 1913. Published by the Department of the State Engineer of State of New York. 40 pages. Contents: Progress of Contract Work; Progress of Plans being Prepared; Plans before Canal Board; Contracts Advertised; Bids Opened; Award of Contracts; Annual Report of State Engineer and Surveyor, first part.

Report of the Department of Trade and Commerce. For the year ending March 31st, 1912. Contains miscellaneous information on bounties, lumber, and staple products, revenue and expenditure of Department of Trade and Commerce, statistical record of the progress of Canada, tonnage table, etc. Department of Trade and Commerce, Ottawa.

Application for the Revision of the Toronto Building By-law.—A memorial presented to the Mayor, Board of Control, and City Architect of Toronto by a general committee of citizens representing various technical and business organizations of the city of Toronto. C. R. Young, 318 Continental Life Building, Toronto.

Bulletin of the Imperial Institute.—A Quarterly Record of Progress in Tropical Agriculture and Industries and the Commercial Utilization of the Natural Resources of the Colonies and India. Edited by the Director and prepared by the Scientific and Technical Staff of the Imperial Institute and by other contributors.

Engineering Problems Connected with Biological Sewage Disposal.—By T. Aird Murray. Part of a Symposium on Biological Sewage Disposal, Canadian Public Health Association, Annual Meeting, November 21st to 23rd, 1911. The Canadian Engineer, 62 Church Street, Toronto.

Roofs and Their Coverings. By Clough Williams-Ellis. Being the paper on Welsh slates. Re-printed by permission from "The Architect and Contract Reporter." Published by Spottiswoode and Co., Ltd., London, Colchester and Eton. Price, six cents.

Public Service Commission. Report of the Commissioners, Vol. 1, 1912. Comprises report on government dredg-

ing, report on the Department of Public Printing of Stationery, and special report on Temiskaming dam contract, Sorel shipyard and dismissal of R. E. Cook.

Weekly Report, Department of Trade and Commerce, Ottawa.—Bulletin No. 473, February 17th, 1913. Pages 183 to 205. Contents: Australia, Trinidad, Great Britain, Panama Canal, Canadian Produce Prices in England, British Agricultural Produce Imports, Grain Statistics, Trade Inquiries.

Methods of To-day on (1) Swimming Bath Water Purification, (2) "Overground" Conveniences, (3) "Vacuum" Exhausters, (4) Dry Closets, (5) Fly-proof Privies.—By James S. Dunn, Sanitary Department, Town Hall, Kimberley, S.A.

Water Supply of San Francisco. Report by H. M. Chittenden. A well illustrated cloth-bound book, 11½ x 9 in.; 44 pages. Secretary, Department of the Interior, Washington, D.C. This is a very beautifully gotten up report.

Hydro-Electric Power Commission. Third and Fourth Annual Report of the Province of Ontario for the year ended October 31st, 1911. The Hydro-Electric Power Commission of Ontario, Continental Life Building, Toronto.

Coal Mine Accidents in the United States. Monthly statement, January to August, 1912, and Statistics for 1910-11. Compiled by Fredk. W. Horton. Bureau of Mines, Department of the Interior, Washington, D.C.

Influence of Icebergs on Land on the Temperature of the Sea. By H. T. Barnes, B.Sc. Being supplement of the 45th Annual Report of the Department of Marine and Fisheries for the year 1911-12, Ottawa.

Cement Process of Excluding Water from Wells, as practised in California.—By Ralph Arnold and V. R. Garfias. Bureau of Mines, Department of the Interior, Technical Paper No. 32, Washington, D.C.

Engineering Experiment Station.—Bulletin No. 29, the Iowa State College of Agriculture and Mechanic Arts, on Cost of Producing Power in Iowa with Iowa Coals. By H. W. Wagner, Ames, Iowa.

Practical Kinks, Recipes and Tables. Collected by Joseph G. Branch. Published by the Joseph G. Branch Publishing Co., 608 Dearborn St., Chicago, Ill. Cloth; 5½ x 7½ in.; 143 pages. Price, \$1.

Railway Statistics of the Dominion of Canada for the year ending June 30th, 1912. (From sworn returns furnished by the several railroad companies.) Department of Railways and Canals, Ottawa.

Questions With Answers on Pumps and Pumping Machinery. By W. H. Wakeman. Published by the Joseph G. Branch Publishing Co., Chicago, Ill. Cloth; 5½ x 7½ in.; 190 pages. Price, \$1.50.

Alternating Currents Simplified. By E. E. Burns. Published by The Joseph G. Branch Publishing Co., 608 South Dearborn St., Chicago, Ill. Cloth; 5½ x 7 in.; 199 pages. Price, \$1.50.

Treatise on Scientific Methods of Concrete Construction, Using Lock Steel Form.—By the Hotchkiss Lock Metal Form Company. Sixteen pages, with an attached sheet of about twenty cuts.

The Resources of Tennessee.—Magazine devoted to the description, conservation and development of the resources of Tennessee. Published by the State Geological Survey, Nashville, Tenn.

The Production of Copper, Gold, Lead, Nickel, Silver, Zinc and other Metals in Canada During the Year 1911. By C. T. Cartwright, B.Sc. Mines Branch, Department of Mines, Ottawa.