others who are interested in the widely increasing use of oil as a fuel for locomotives.

Proceedings of the American Electric Railway Engineering Association, 1915.—Published by the Association, E. B. Burritt, secretary, 8 West 40th Street, New York. 623 pages, 6 x 9 ins., cloth, 166 illustrations.

These proceedings contain the complete report of the thirteenth annual convention of the Association, held in San Francisco last October. The committee reports include a widely diversified list of subjects. Among them are reports on many matters in which the results of investigations carried on as to the proper foundations for car tracks on paved streets are shown. Other reports are on Building and Structures; Lightning Protection; Power Distribution; Block Signals; Equipment; Power Generation, and Heavy Electric Traction. The last-named report is largely given over to a study of modern electric locomotives, and with it there are given 37 views and plans of American and foreign electric engines.

Dams and Weirs. By W. G. Bligh, Inspecting Engineer of Irrigation Works, Department of Interior, Canada. Published by American Technical Society, Chicago. 206 pages, 122 figures, 5¹/₂ x 8¹/₂ ins., cloth. Price, \$1.50. (Reviewed by Thos. H. Hogg, Hydraulic Engineer, Ontario Hydro-Electric Commission.

This little volume comprises an analytical and practical treatment of gravity dams and weirs, arch and buttress dams, submerged weirs, and barrages. Each different type of profile is given a careful analysis followed by typical examples which are studied in relation to the theory, showing the good and bad points of the design.

Perhaps one of the most valuable features of the book is the interesting comments on actual work, based on what the author's experience has shown to him to be practical and based on good practice.

This brief but authoritative treatise should be well received by those of the profession interested in the design of dams and weirs.

PUBLICATIONS RECEIVED.

Railway Statistics.—Returns of the Canadian Railway Companies for 1915.

Abstracts of Current Decisions on Mines and Mining. —Bulletin No. 113 of the United States Bureau of Mines.

Hydro-Electric Power Commission of Ontario.— Eighth annual report for year 1915. 466 pages, illustrated.

Report of the Minister of Public Works for the Province of Ontario, 1915. Illustrated report of work done during the year. 186 pages.

Manufacture of Gasoline and Benzine-Toluene from Petroleum and other Hydrocarbons.—Bulletin No. 114 of the United States Bureau of Mines.

Methods for the Determination of the Physical Properties of Road-Building Rock.—Bulletin No. 347 of the United States Department of Agriculture.

Texada Island, B.C.—Memoir No. 58, by R. G. McConnell, of the Geological Survey of Canada. Published by the Department of Mines. 112 pages, illustrated.

Relation of Mineral Composition and Rock Structure to the Physical Properties of Road Materials. Bulletin No. 348 of the United States Bureau of Agriculture.

The Electrical Resistances and Temperature Coefficients of Nickel-Copper-Chromium Alloys.—By Frederick M. Sebort. Published by the Rensselaer Polytechnic Institute.

Report of the Minister of Lands, Forests and Mines. —The report of operations of the Department of Lands, Forests and Mines of the Province of Ontario for 19¹⁵. 90 pages, illustrated.

Geology of Cranbrook Map-Area, British Columbia. —Memoir No. 76, by Stuart J. Schofield, of the Geological Survey of Canada. Published by the Department of Mines. 246 pages, illustrated.

Contributions to Canadian Biology, being a report of studies carried on at the biological stations of Canada during 1914-15. Supplement to the fifth annual report of the Department of Naval Service, Fisheries Branch. 172 pages, illustrated.

The Artesian Wells of Montreal.—Memoir No. 7², by C. L. Cumming, of the Geological Survey of Canada. A report of deep borings made and other investigations of the subterranean waters in the vicinity of Montreal. Published by the Department of Mines. 154 pages, illustrated.

CATALOGUES RECEIVED.

Permanent Concrete Roads.—A pamphlet describing and illustrating the various devices used for concrete paving. Published by the Trussed Concrete Steel Company of Canada.

The Nordberg High Compression Two-Cycle Oil Engine.—Bulletin describing the engine and its operation. Issued by the Nordberg Manufacturing Co., of Milwaukee, Wis., U.S.A.

Imperial Asphalt.—A 24-page and cover illustrated booklet, distributed free by the Imperial Oil Co., Limited, Toronto. It discusses various types of asphaltic roadways and streets, and gives directions for construction. A plan of the company's new refinery at Montreal and 15 other illustrations are included. Printed in four colors.

Concrete Roads.—A 38-page, illustrated booklet, distributed free by The Canada Cement Co., 782 Herald Building, Montreal. It discusses, in a most interesting manner, the need for good roads and the utility of concrete as a road material. There are thirty-seven illustrations, and the general appearance of the booklet is attractive. Specifications and construction pointers are included. A list of concrete lanes, streets and roads in Canada totals 2,259,081 sq. yds., of which 682,414 sq. yds. were laid in 1915, an increase of about 24 per cent. over 1914.

CANADIAN SOCIETY. OF CIVIL ENGINEERS.

At a meeting of the Society held on April 13th an informal talk on the difficulties experienced in building the Panama Canal was given by John Murphy, chairman of the Ottawa Branch. The talk was illustrated with slides.

Col. Snyder drew diagrams explaining in an interesting manner the preparation of military maps.