

pp., illustrated. It takes up the collection and analysis of samples and gives a full description of the apparatus and methods used in the various operations.

Tests on Concrete in Sea Water.—Progress report of an investigation made by the Aberthaw Construction Co., and H. L. Sherman, Boston, at the United States Navy Yard, Charlestown, Mass., to determine the effect, both mechanical and chemical, of the action of sea water and varying temperatures upon concrete piers of varying composition. Specimens made and immersed early in 1909 were recently examined. A 36 pp., illustrated booklet discloses the observations made.

Preparation of Metallic Cobalt by Reduction of the Oxide.—By H. T. Kalmus, B.Sc., B.H.D., published by the Mines Branch, Department of Mines, Canada, and covering research on cobalt and cobalt alloys conducted at Queen's University, Kingston, 36 pp., illustrated, describing preparatory treatment, methods and apparatus, and reduction with carbon, carbon monoxide, hydrogen and aluminium at various temperatures. The bulletin forms Part 1 of a series of 6 on the study of cobalt.

Trent Watershed Survey.—By C. D. Howe and J. H. White, with an introductory discussion by B. E. Fernow, Dean, Faculty of Forestry, University of Toronto. Published by the Committee on Forests, Commission of Conservation, Canada. 156 pp., illustrated, size 6 x 9 in.; cloth.

This is a report on the conditions in the Trent Watershed and recommendations for their improvement. It outlines the procedure of the survey, its results, etc. One section of the book is devoted to physiographic and forests conditions, including drainage, topography, geology, soils, etc., and a discussion of the financial losses due to forest fires. Another section is devoted to the mechanical and industrial conditions, covering farming, lumbering, tourist traffic and social conditions. The book is accompanied by five appendices.

Conservation of Coal in Canada.—By W. J. Dick, M.Sc., Mining Engineer, published by the Committee on Minerals, Commission of Conservation, Canada. 212 pp., 6 x 9 in., illustrated with photographs, maps and diagrams; cloth.

In his report Mr. Dick reviews a full investigation of the coal situation in Canada. Its dependence on the United States for its supply of anthracite coal is one of many points strongly brought out. The development of electric power in the lignite fields of Western Canada is recommended. The manufacture of coal briquettes in other countries is described in detail and the methods adopted to conditions in Canada are indicated. Comparisons are made between the beehive ovens and the by-product ovens for the coking of coal and the economies effected by the latter over the former are clearly presented. Descriptions are given of the principal coal mines in Canada.

The book will be found of great value, not only to those directly engaged in coal mining, but to all who are interested in the economic development of a country.

Good Roads Year Book, 1914.—J. E. Pennybacker, editor, published by the American Highway Association, Washington, D.C., 500 pp., illustrated, 6 x 9 in.; cloth; price \$1.

The 1914 Good Roads Year Book is very comprehensive in its collection of data for road men of the United States. It is issued annually by the Association as part of its campaign throughout the country for an adequate system of improved highways. A considerable portion of the volume is devoted to state aid and local road legislation, digests of various road, automobile and convict laws, etc. It contains a complete list of patents issued in 1913 pertaining to roads; a list of bulletins, circulars and documents published in the interests of road builders; a reference list of papers, addresses and magazine articles published in 1913 on the subject of roads. It 'synopsizes' the academic courses in highway engi-

neering of the various universities and colleges, and catalogues the various road associations. The work in different states, and the progress of road improvement are featured, while a chapter deals with the important events in the road movement during 1913.

CATALOGUES RECEIVED.

Welding and Cutting Plants.—A 16 pp. catalogue of equipment for acetylene welding issued by Waterhouse Welding Co., Boston, Mass.

Air Compressors.—A 48 pp. leaflet issued by the Canadian Ingersoll Land Co., Montreal, outlining some advantages in their Class "N" compressors.

Aneroids.—A small catalogue circulated by the Topley Co., Ottawa, descriptive of watch and pocket aneroid barometers of "Tycos" make.

Ironclad-Exide Battery.—A sketch of the development of this type of battery in a 24 pp. booklet issued by the Canadian General Electric Co., Toronto.

Cranes for Wharves and Docks.—A pamphlet illustrating typical uses of Demag Cranes, issued by the Deutsche Maschinenfabrik A-G Duisburg, Germany.

Duntley Electric Tools.—An 8 pp. bulletin of Chicago Pneumatic Tool Co., describing portable drills, grinders, spike drivers, etc., for street and interurban railway use.

Mining Tools.—Bulletins Nos. 152-3 and 4 of the Chicago Pneumatic Tool Co., Limited, illustrating their drills, sinkers and stoppers, together with the accessories for each.

Railway Motor Gears and Pinions.—20 pages descriptive of forged, solid and split cast-steel gears, pinions, etc. Circulated by the Canadian General Electric Co., Toronto.

Aston Fans.—A 24 pp. illustrated catalogue issued by Veritys, Limited, London, E.C., dealing with the Aston range of ceiling, desk, bracket, ship, railway and saloon fans and blowers.

Small Direct Current Generators.—Bulletin No. A-4188, descriptive of type CVC small, belted, direct current generators; illustrated, 12 pp., issued by Canadian General Electric Company, Toronto.

Montezuma Asphalt.—A beautifully illustrated booklet of 56 pages, issued by the Warner-Quinlan Asphalt Co., New York, describing the qualities and illustrating many streets and roads upon which Montezuma asphalt has been used.

"Steele" Buildings.—A bulletin issued by the William Steele and Sons Co., engineers and contractors, Philadelphia, illustrating a large group of industrial buildings in the design and construction of which that company has had to do.

Chain-Blocks.—A 4 pp. pamphlet illustrating and describing the Morris travelling spur gear chain-block of different types showing saving of headroom due to special design, issued by the Herbert Morris Crane and Hoist Company, Toronto.

Pneumatic Appliances.—An 80 pp. catalogue of air compressors, air hoists, air cranes, pneumatic and hydro-pneumatic elevators, trolleys and trolley systems, and sand blasts fully illustrated, issued by the Curtis Pneumatic Machinery Co., St. Louis, U.S.A., as catalogued No. 62.

Dudbridge Gas Engines.—These types of variable admission gas engines and of gas producing plants are described in a 28 pp. illustrated catalogue issued by Dudbridge Iron Works, Limited, Stroud, England. It shows diagrammatically the construction of the various types and parts, and contains tables of dimensions of capacities, speeds, weights, etc.