

Topographical Surveys.—Annual report of the Topographical Surveys Branch, 1913-1914, of the Department of the Interior. This contains a report of the surveyor-general of the Dominion lands; the reports of surveyors, and various schedules and statements. It is illustrated with photographs, maps and profiles.

Dust Prevention and Road Preservation.—Bulletin No. 257 of the United States Department of Agriculture, Washington, D.C., is a contribution from the Office of Public Roads, of which Mr. L. W. Page is director. It summarizes progress reports of experiments in dust prevention and road preservation, 1914.

Products and By-products of Coal.—This bulletin, published by the Mines Branch of the Department of Mines, Ottawa, has been written by Edgar Stansfield, M.Sc., in collaboration with Dr. F. E. Carter, B.Sc., Dr. Ing., under instructions received from Mr. B. F. Haanel, chief of division of fuel and fuel testing.

Forestry and Irrigation.—The annual report of the Department of the Interior, Ottawa, (Vol. 2) for the fiscal year ended March 31st, 1914, contains an interesting report on irrigation by the superintendent of irrigation, and also a report on small water powers. The volume is well illustrated with charts and photographs.

Buying and Selling of Ores and Metallurgical Products.—By Charles H. Fulton. In this paper an attempt is made to outline clearly the underlying principles, the subject-matter being based on personal experience and investigation. This is technical paper No. 83, containing 44 pages, published by the Department of the Interior, Bureau of Mines, Washington, D.C.

Production of Explosives.—The production of explosives in the United States during 1914 with notes on coal mine accidents due to explosives, compiled by Albert H. Fay, is a subject of technical paper No. 107 of the Bureau of Mines, Department of the Interior, Washington. The total production of explosives in the United States in 1914 was 450,251,489 pounds.

Ontario Good Roads Association.—Proceedings of the 13th annual meeting of the Ontario Good Roads Association, being also the proceedings of the second Canadian and International Good Roads Congress and exhibition held at Convocation Hall, Toronto, March, 1915, appended to the annual report of the Provincial Engineer of Highways, Parliament Buildings, Toronto.

Explosions in Coal Mines.—Methods of preventing and limiting explosions in coal mines are discussed in technical paper 84, Bureau of Mines, Department of the Interior, Washington, by George S. Rice and L. M. Jones. Although advance in the knowledge of mine explosions, particularly coal dust explosions, has been slow, yet since investigations were begun in 1908 by the testing stations of various countries, progress has been steady, each station contributing to the general fund of knowledge.

State Management of Public Roads.—The development and trend of the state management of public roads, a report by Mr. J. E. Pennybacker, chief of road economics, office of public roads, Washington, D.C., has been reprinted in pamphlet form from the year book of the Department of Agriculture for 1914. The whole development of state road management in the neighboring republic has been towards a larger measure of participation by the state through increased appropriations and more comprehensive state supervision.

Oil Mixed Concrete.—In Bulletin No. 230 of the United States Department of Agriculture appears a con-

tribution by Logan W. Page, director of the Office of Public Roads, on the subject of Oil-Mixed Portland cement concrete. While experimenting in his office in an attempt to develop a non-absorbant, resilient and dustless road material, one capable of withstanding the severe shearing and raveling action of automobile traffic, the writer's investigations lead him into a very promising discovery. He found that when a heavy mineral residue oil was mixed with Portland cement paste, it entirely disappeared in the mixture and, furthermore, did not separate from the other ingredients after the cement had become hard.

CATALOGUES RECEIVED.

Centrifugal Pumps and Centrifugal Pumping Units.—Bulletin No. 1632 of Canadian Allis-Chalmers, Limited, Toronto, describing the different types of their centrifugal pumps, with illustrations of same.

Civil Engineering Instruments.—An illustrated catalogue of 223 pages, issued by W. and L. E. Gurley, Troy, N.Y., describing a complete line of instruments used in civil, mining and hydraulic engineering and land surveying.

Directory of Piston Ring Sizes.—A new catalogue published by the Burd High Compression Ring Co., Rockford, Ill., describing their piston rings for automobiles, motorcycles, cycle cars, trucks, tractors and engines. Price, 50c.

Chlorine Control Apparatus for Water and Sewage Purification.—A 36-page illustrated catalogue, published by the Wallace & Tiernan Company, Inc., New York, describing their automatic control and manual control chlorinators.

An Unusual Exhibit.—An illustrated pamphlet, issued by the Des Moines Steel Co., Pittsburgh, Pa., describing their exhibit at the Panama-Pacific International Exposition, San Francisco, and giving a list of elevated steel tanks and standpipes erected by them previous to 1915.

Lumina Solid Steel Windows, Doors and Partitions.—A 48-page, well-illustrated catalogue, issued by the Detroit Steel Products Co., Detroit, Mich., describing the utility of these constructional necessities, together with important installations made by this manufacturing firm in Canada.

GOVERNMENT BOUNTIES FOR ZINC.

Bounties on a sliding scale, not exceeding two cents per pound, will be granted by the Dominion government upon production in Canada from Canadian ores of zinc, containing not more than 2 per cent. impurities, when the standard price of zinc in London, England, falls below £33 per ton of 2,000 pounds, provided that bounties shall not be payable on zinc produced before the expiration of the war or after the 31st day of July, 1917, or on zinc contracted for the Shell Committee at a price of 8 cents or over per pound, total amount of bounty to be paid not to exceed \$400,000.

As a result of this action on the part of the Government the Canadian shell committee, on behalf of the Imperial War Office, has been able to contract for several thousand tons of zinc at very reasonable rates with a further reduced rate for further deliveries.

The object of the bounty is to insure the producers against too great a fall in price in the period between the end of the war and the 31st July, 1917. The bounty will give an impetus to the refinement of zinc in Canada and serve the purpose of ensuring a certain supply of brass to the shell committee.