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Engineers—And what they are doing

FREDERICTON, N.B.

Perfect efficiency in filtration has been achieved at the city water-works of Fredericton, N.B., according to the latest report of the city analyst.

PREVENTION OF SMOKE.

The Provincial Legislature of New Brunswick has passed an act for the prevention of smoke and noises in cities and towns. It gives authority to cities or towns to make by-laws regulating or prohibiting the ringing of bells, blowing of whistles and emission of smoke. The maximum penalty is \$100.

FORMATION OF ASPHALT.

A theory of the formation of beds of asphalt has been worked out by R. M. Bird and W. S. Calcott, of the Philosophical Society of the University of Virginia. Their experiments indicate that the asphalt results from the extation of mineral oil through the action of catalytic agents, and they find that this explains the Peruvian deposits, in which layers of vanadium sulphide and oxide alternate with asphalt. In this case, the vanadium sulphide is the carrier of oxygen to the oil. Ground water solutions of vanadates, it is assumed, are brought into contact with oil containing hydrogen sulphide, and the vanadium sulphide thus produced may be carried along by the oil and deposited with it. The laboratory experiments have proven that in such accumulations the presence of the vanadium compound would rapidly change the oil by means of oxygen drawn from the atmosphere.

EARNINGS OF CUBAN TELEPHONE CO.

The gross income of the Cuban Telephone Co., of Havana, Cuba, from rentals and miscellaneous sources aggregated over \$1,200,000 during 1914. After deducting all costs of operation, taxes and general expenses, and providing ample depreciation reserves, the net balance of operating income amounted to over \$559,000. The company paid during the year two quarterly dividends on preferred stock, amounting to \$62,500.

Nearly \$700,000 of the accumulated net cash surplus has been used for the purpose of carrying on construction work. The general financial stringency has made impracticable the further placing of securities, hence the action of the directors in not declaring the dividends which have been earned.

WINNIPEG'S RESERVOIR.

Winnipeg's 18,000,000 gallon reservoir, constructed two years ago at a cost of over \$230,000, has been giving a little trouble owing to leaks in the foundation, is now in good condition again. The structure is built of reinforced concrete and is 570 ft. long, 480 ft. wide, with a depth for water of 18 ft.

STREET CLEANING IN VICTORIA, B.C.

Cleaning with hand brooms has been found cheaper in Victoria than sweeping with horse brooms. In 1913 the cost of cleaning with horse brooms and disposal of sweepings was 33.9 cents per thousand square yards, with hand brooms 26.9 cents, and with brooms and pick-up cans 21.5 cents. In 1914 the cost with hand brooms and pick-up carts and cans was 16.5 cents. These costs do not include rental or overhead charges.

TO MAP OUT DEPOSITS OF ROAD MATERIAL.

Recognizing the importance of the movement in favor of good roads throughout Canada, the Geological Survey will have several parties in the field this summer engaged in mapping deposits of materials suitable for the surfacing of roads. One party will operate in the district adjoining the Rideau River and lakes, between Ottawa and the St. Lawrence River. The party will be under the direction of Dr. L. Reinecke, of the Geological Survey staff, who will have as assistants F. H. McCullough and K. A. Clarke, of Toronto. The district to be explored is not well supplied with gravels or other materials for the construction of good roads, and it will be of especial value to have those that occur there examined and mapped.