

COAST TO COAST.

Toronto, Ont.—The Niagara park commission is completing arrangements for the granting of a concession to a Spanish company for the installing of an aerial tramway over the whirlpool. The tramway will be about a third of a mile long and will cross from one Canadian shore to the other, greatly lessening the distance which is now covered by the International Railway which runs around the whirlpool. The immensity of the undertaking may be appreciated when it is considered that the pool must be spanned by a single cable with no support beyond the towers and anchors at each end, and that at the same time this cable must be sufficiently strong to carry the cars and passengers.

Toronto, Ont.—John Gott, chief electrical engineer of the Commercial Cable Company, has invented a device by which the Morse dot and dash signals can be used on long submarine cables, and by which a message was sent recently from Toronto to London, Eng., direct without relaying; that is, the message was sent by the ordinary land line Morse key and read on a Morse sounder. Lord Kelvin invented the first instrument to decipher signals, and it was called the Thomson reflecting galvanometer, or what is commonly known as the "mirror." The great objection to the "mirror" was that no permanent record of the message was sent, the reader calling off the message to an assistant as it was reflected. Sir William Thomson then invented the siphon recorder, which overcame the difficulty of not providing a record. In the siphon recorder a light coil of wire is suspended in the field of a powerful magnet, and the movements of the coil in response to the current through the cable are recorded on a narrow paper tape passed in front of a fine glass siphon attached by silk fibres to the suspended coil and dipping into an ink-well. The end of the siphon traces in ink a line on the tape, and this line goes up and down in response to the movements of the coil from side to side in response to a change in the polarity of the current. When a point of the line rises up above a fixed point it means a dot and a valley is a dash. Only practice can enable a man to read accurately and quickly a message by the siphon record. The technical details of the Gott invention are not being told at present, but the same voltage as at present used is required, and it is said that very little new machinery is needed. One feature of the Gott system is a delicate instrument which magnifies the faint note of the far-travelling dot and dash, and increases the volume of sound into a loud click. It is quite probable in the opinion of electricians that by Mr. Gott's invention it will be possible to transmit through automatic repeaters telegraph signals around the world, and the time will be less than one second.

Victoria, B.C.—A publication of the Pacific Highway Association of North America records the creation in Oregon of a State Highway Department, whose engineer will be at the service of all county courts that may desire advice and assistance from him. A strong point is made that all money raised by bonds for road purposes must be spent along permanent lines. Statistics are given showing amounts of money expended on roads in Oregon for the last four years and the number of miles of \$5,000 per mile road could have been built for the same amount. The cost of the Pacific Highway through Cowlitz county is shown at \$8,542.73 for grading and bridging per mile. The concluding paragraph of the bulletin runs: "The problems for the Pacific Highway Association to solve during the next two years are many. Among the most important is the erection of the Pacific Highway sign from Redding, California, to San Diego. In

Oregon and Washington the problem is to encourage the local authorities to put the Pacific Highway in as good condition as possible before the Panama Exposition in 1915. The construction of the highway in California will be taken care of by the state. During the next two years, one, and probably two, hard surfaced roads will be completed throughout that state from north to south. In British Columbia the highway will be completed by the provincial government by 1915. This year British Columbia will spend approximately \$6,000,000 on roads.

Saskatoon, Sask.—The subject of an interprovincial highway across Canada is on the programme of the Union of Canadian Municipalities for its next convention at Saskatoon. In order that the enterprise may be brought with united force to the attention of the Dominion and provincial governments, municipal councils are now being asked to adopt the following form of resolution: "Resolved, that this council is strongly in favor of the making by, or in conjunction with, the governments concerned, an interprovincial highway, of good standard construction, across Canada. This council request the Union of Canadian Municipalities to secure united action for the purpose."

Victoria, B.C.—Following the custom of previous years, the health authorities of this city soon will start another campaign against insanitary structures and the conditions which make them a menace to the public from the viewpoint of health and fire. For some time past the sanitary inspector has been making a tour of the city with a view of listing all those premises which, in his opinion, should be demolished, and at an early session of the city council authority to start condemnation proceedings against such buildings will be sought. There are at present on the list approximately fifty buildings and sheds which come within the list of dangerous premises. A great number of these are stables in the outlying sections, the condition of which cannot be improved to meet the by-law requirements in the way of sewer connection and other sanitary arrangements. Within the past two years the policy of the city in ordering the destruction of sheds has been followed. In Chinatown the campaign was especially energetic, with the result that a great number of insanitary wooden outhouses, verandahs, fences, etc., were destroyed, and in consequence the sanitary conditions in that section materially improved. The medical health officer, Dr. G. A. B. Hall, Sanitary Inspector Lancaster, and Fire Chief Davis are the officials who are chiefly concerned in this work, and their joint report will soon be forthcoming.

Calgary, Alta.—Mr. R. A. Ross, at present acting general manager of the Toronto Hydro-Electric, in his recent report to the city on the power question, made the following recommendations: "For future extensions thereafter, if there is no change in the art in the next few years, steam turbines with gas-fired boilers will be our recommendation, in spite of the greater economy of the gas engine. Should the development of the gas engine or gas turbine or some other improvement render it possible to utilize other sources of power than that recommended there will be no difficulty in introducing it later when it is ripe. Our recommendations are as above in spite of the fact that the gas engine, from a power standpoint, is the cheapest. In combination with hydro power steam from gas-fired boilers is cheaper than hydro and gas engine up to 20,000 kilowatts. The natural gas engine is hampered as follows: The great capital investment being 100 per cent. more than for steam equipment. The whole service will depend upon the integrity of a pipe line 172 miles long. The large gas engine is not in such a stage of development as yet as will insure its success in your plant, and the use of smaller units would increase the capital and operating costs considerably over those indicated