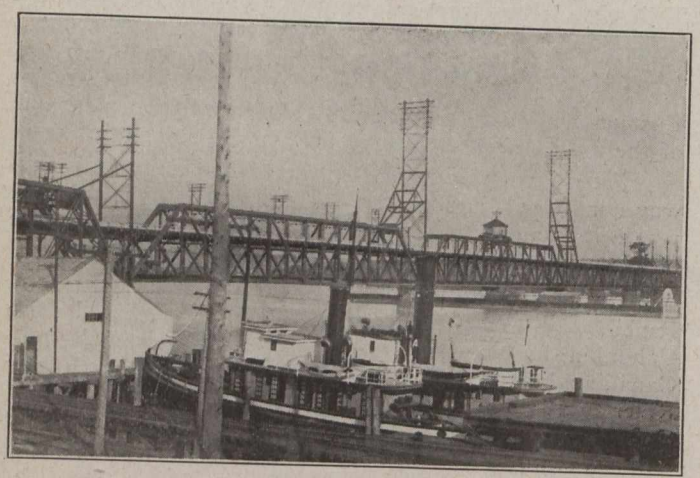
of the 20.15 miles mentioned all eastbound grades are .40 of 1% or less. The maximum curve in British Columbia is 6 degrees.

At Prince George, where connection will be made with the Pacific Great Eastern Railway, another transcontinental road will be admitted into Vancouver.

**Great Northern Railway.**—The Great Northern Railway Company, incorporated in the United States, controls in the province of British Columbia all the lines constructed under charter guaranteed by the Provincial Legislature to the Vancouver, Victoria and Eastern Railway and Navigation Company; the Crow's Nest Southern Railway; the Victoria and Sidney Railway; the Victoria Terminal Railway & Ferry Company, and the New Westminster Southern Railway; the Red Mountain Railway which is a branch of the Spokane Falls & Northern Railway from a point south of the boundary line to Rossland in British Columbia; the Fort Shephard and Nelson Lake Railway from the boundary line to Nelson, B.C.; the Vancouver, Westminster & Yukon Railway, approximately 420 miles in length. The terminus in this province is Vancouver. With the exception of the Victoria and Sidney Railway, all the lines mentioned above lie between the Canadian Pacific Railway and the international boundary line. This railway system brings the northern portion of the province into close touch with the United States.



**Bridge Over the Fraser River at New Westminster, Built by the British Columbia Government.**

The most easterly point of the Great Northern Railway Company in British Columbia is Michel on the Crow's Nest Southern Pass. From Michel the line proceeds down the Elk River, passing Fernie and paralleling the Crow's Nest line of the Canadian Pacific Railway to Elko, where the latter line crosses under the one now under reference. From Elko this road proceeds in a southwesterly direction to Kootenay River and crosses into the United States at a place called Gateway. Thence, after meandering through the States of Idaho and Washington it returns to Canada: (1) At Waneta on the east side of the Columbia River at the boundary line; (2) at Paterson on the east side of the Columbia River; (3) at Laurier. From Laurier it runs on the north side of the boundary line through British Columbia, passing Grand Forks, with the branches to Granby and Phœnix, leaving the province again at Carson, returning to the north side of the boundary line at Midway and leaving it again about Bridesville, returning to the north of the boundary line at Chopaka on the Similkameen River, thence following up the Similkameen River to Princeton and on to Otter Summit. From Otter Summit the V. V. & E. Railway and Navigation Company (Great Northern Railway Company) has running rights over the Kettle Valley Railway to Hope on the Fraser River, then having the same rights over the Canadian Northern Pacific Railway to Sumas, and thence through the southern part of New Westminster district to the bridge over the Fraser River at New Westminster, and then on to Vancouver.

The bridge over the Fraser River was built by the province of British Columbia and was operated for traffic in the year 1904. It gives access to Vancouver for three transcontinental railways, namely, the Great Northern Railway, the Northern Pacific Railway, and the Canadian Northern Pacific Railway.

**British Columbia Electric Railway.**—The British Columbia Electric Railway Company has also running rights over this bridge. This company was incorporated in 1897, and immediately took over the operation of electric tramways and light and power services in the cities of Victoria, Vancouver and New Westminster, and the adjoining territory. The present mileage of single track, including city and suburban lines, is 281 miles, in details as follows:

| | |
|---|---|
| Vancouver Island ..... | 51 miles |
| Mainland ..... | 230 " |
| | 281 " |

The above-mentioned bridge is a steel structure resting on solid masonry piers consisting of the following spans:

1 through fixed span of 225′
1 " " " " 380′
1 " swing " " 380′
5 " fixed spans of 159′ each.

The approaches to the spread span on the north side:

**East Railway Approach:**

1 deck-plate girder skew span 90′
2 through plate girder skew spans of 53.5′ each
1 deck-plate girder skew span 41′

**West Railway Approach:**

1 deck-plate girder skew span 71.5′
1 through plate girder skew span of 43′
1 " " " " " " 38′
1 deck " " " " " 32′

The highway floor is on the upper chords of the bridge. On the north side the approach consists of three deck plate girder spans of 57.5 ft. each.

Steel bents are used to support all railway spans that cross railway tracks of the Canadian Pacific Railway and the Great Northern Railway; and also the three highway spans at the north end of the structure. The clear roadway for both the railway and highway is 16 ft.

The approach on the south side is by means of a wooden trestle crossing over the Great Northern Railway line, and makes all necessary connections.

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In our issue of January 20th there appeared an article on the Welland Ship Canal, in which it was stated that certain excavation work had been done by "an 85-Ton Marion-Osgood Shovel." As the corporate name of Marion-Osgood Company was some time ago changed to The Osgood Company, this should have read "an 85-Ton Osgood Shovel."