

GREAT
NORTHERN
RAILWAY
IN
CANADA

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and D. Finlayson, solicitor, Arichat, C.B.; S. Joyce, merchant, D'Escoise, C.B.; and J. W. Ousley, Windsor, N.S., for the purpose of constructing within three years a railway from the Straits of Canso to Louisburg, and for the purpose of building a bridge, tunnel, or ferry, over, under or at the Straits of Canso in connection with such railway. In the following year the Co. obtained power to construct a branch from its main line at Barraois, St. Louis, Richmond County, to Arichat, as well as other branches, subject to the approval of the Government. Nothing appears to have been done by the promoters of the original Co., the charter for which passed into the hands of R. J. Campbell and J. M. Guerin, who organized the present Company. Its offices are at 51 East 44th St., New York, and New York Life Building, Montreal. The Co. is actively preparing for construction. Its plans include a line from Port Hawkesbury, on the I.C.R., and Straits of Canso to Louisburg, on the east coast of Cape Breton, with a branch to Sydney. The Co. entered into a contract with the Commissioner of Public Works of Nova Scotia on Oct. 1, 1900, to build 30 miles, from Port Hawkesbury to St. Peters, Richmond County, in return for a subsidy of \$3,200 a mile. The Co. undertook to begin the work at once and to have the line completed, equipped and in operation by Dec. 31, 1902. The rolling stock to be provided by the Co. includes 3 locomotives, 2 first class passenger cars, 2 second class passenger cars, 2 baggage, mail and express cars, 35 platform cars, 25 box freight cars, and 1 snow plough. The contract was signed on behalf of the Co. by R. J. Campbell, President, and J. M. Guerin, of Montreal, Secretary.

R. W. Leonard, formerly Chief Engineer of the St. Lawrence and Adirondack Ry., and later of the C.P.R. engineering staff, has been appointed Chief Engineer and Manager of Construction, and surveys are being made under him. The line will be approximately 80 miles in length, passing through the southerly part of Richmond and Cape Breton Counties, and touching the towns of Hawkesbury, St. Peters, L'Ardor, Gabarouse and Louisburg. The Co. proposes to build 30 miles, seven of which have been located this year, from Port Hawkesbury to St. Peters. The most important engineering feature of this portion of the line will be the bridge over the tidal river Inhabitants and the swing bridge at St. Peter's canal.

It is understood that the construction will be done by the Manhattan Construction Co., whose Chief Engineer, Mr. VanAken, and a staff of assistants are at Port Hawkesbury. This Co., which was incorporated in 1899 in New York, has a capital of \$100,000, has among its shareholders E. VanEtten, 2nd Vice-President of the New York Central Ry., and W. Seward Webb, Chairman of the Rutland Ry., who has just been elected President of the C. R. Ry. Extension Co., Mr. Camp-

Foreston, some 26 miles. Part of the line is already subsidized. A reconnaissance survey was made for it last year by C. L. B. Miles, C.E., and J. S. Stewart and Mr. Balcom, C.E., have lately been over the route as far as Glassville. It is reported construction will be started at an early date.

Central Ontario.—A number of the stations are being equipped with enameled iron station name signs, two on each station, supplied by the Acton Burrows Co., Toronto.

Chateauguay & Northern Ry.—The contract for the grading of the railway to be constructed from Montreal to a junction with the Great Northern Ry. at Joliette, 37 miles, has been let to Smith & Abbott, of New York. This firm will also put up the masonry for the big bridge at Bout de l'Isle. Contracts have also been let for the superstructure of all the bridges. The aggregate amount of the contracts will be about \$1,000,000. J. P. Mullarkey, Montreal, is President of the Co., the control of which is said to have been secured in the interest of the Great Northern Ry. of Canada. (June, pg. 173.)

Coast-Kootenay Ry.—Nothing whatever apparently has been done by the British Columbia Government in the way of giving out a contract for the construction of the Coast-Kootenay railway for which tenders were asked in April. The Golden Era recently published what purported to be an interview with the Commissioner of Lands and Works, in which it was stated that a contract for the building of the road would be given to the C. P.R., but on his return to Victoria he repudiated the statement. (June, pg. 178.)

Crow's Nest Southern Ry.—Construction work will commence immediately on this line, which will run from the coal mines at Michel, B.C., to the International boundary, 65 miles. Here connection will be made with the Montana and Great Northern Ry., which has been incorporated in the U.S., to construct a line from the Great Northern (U.S.) at Jennings, to the International boundary, about 90 miles. The survey of the B.C. portion of the line has been completed, and construction will be pushed forward with vigor. Elias Rogers, managing director of the Crow's Nest Coal Co., and one of the directors of the C.N.S.R. says that the line will be opened by next winter. It will be built simply for the purpose of carrying coal and coke, under a B.C. charter, and an agreement has been entered into with the B.C. Government regarding charges.

Some differences arose between the C.P.R. and the Crow's Nest Pass Coal Co., and as a result the C.P.R. applied to the courts for an injunction to prevent the construction of the railway. These differences, says Mr. Rogers, have now been amicably settled, and in the future there will be such co-operation between the two companies as will tend to greatly facilitate business and to promote the rapid development of the mines, smelting and other industries of the west.

has been let, and it is stated that work commenced on July 20. (June, pg. 172.)

The Cuba Co.—The railway projects to which Sir Wm. Van Horne and his associates have set their hands, and in which millions of dollars are involved will, it is said, be completed about next April. There are 3,500 men at work and more will be employed as soon as they can get labor from Spain. The men get \$1 a day of American money, and are well satisfied. By the date mentioned there will be some 400 miles of rail laid, which will include the main line and some branches. Sir William, on returning to Montreal from Cuba recently, said that he had never put his hand to a project in which he had met with less obstruction or opposition. There had been no demands, no blackmail; on the contrary, the projectors had the hearty good will of the people. This was something to be able to say. There was one person who had written to the newspapers complaining that the prosecution of the enterprise was a violation of the Foraker amendment, but even that small measure of opposition had ceased, and the work was being prosecuted without a murmur from the people, who appreciated what it meant in the way of development.

R. G. Ward, manager of construction of this Co., Diego de Avila, Cuba, wants manufacturers and dealers in all kinds of railway supplies, apparatus, fittings, machinery, etc., likely to be used in the building and operating of railways, to send to him catalogues and descriptive matter of their different devices.

Edmonton, Yukon and Pacific Ry.—The contractor for the construction of this line from Strathcona to Edmonton, Alberta, M. McCrimmon, has begun work. The line starts from the Calgary & Edmonton Ry., half a mile south of its terminus at Strathcona station on the south side of the Saskatchewan River, and will be 4½ miles in length to the station in Edmonton, on the north side of the river, which will be situated 3,000 feet from the post office, just below H. H. Robertson's house. The construction between this point and the high level offers the greatest difficulties of the road, it being impossible to secure a 1% grade which will run on the south side. From Edmonton the line will bend south, running along the face of the cut bank south of the Hudson's Bay Co. 4 feet; then trending northward along the face of the hill, rising gradually with the lay of the country. The roadway is being cut out 100 ft. wide and grading has been commenced. The contract calls for the completion of the work by Sept. 1. Mr. Armstrong is engineer in charge. (June, pg. 173.)

Grand Forks to Republic.—A contract has been let to G. S. Deeks & Co. for the construction of a line from Grand Forks, B.C., to Republic, Wash., 42 miles, to be completed by Nov. 1. The Canadian section, 5 miles from Grand Forks to the International boundary at Carson City, will be constructed under

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C. F. Cox, New York; N. Kingsmill, Toronto.

Great Falls and Canada Railway.

Notice was issued May 30 for a special general meeting of this Co., to be held in London, Eng., July 4, for the purpose of considering and, if thought fit, passing a resolution, authorizing the sale by the Co. of its railway, equipment, and franchises, free from incumbrances, and also authorizing the sale of the bond, dated Nov. 1, 1899, made by the G. F. and C. R. Co., to the Alberta Ry. and Coal Co. for \$2,000,000, the indenture of mortgage, dated Nov. 1, 1889, made by the G. F. C. R. Co. to the Alberta Ry. and Coal Co. of the railway of the G. F. and C. R. Co. to secure the said bond, and also 19,995 shares in the common stock of the G. F. and C. R. Co.

Press despatches from Great Falls, Mont., say that the sale is to be made to the Great Northern Ry. Co., U.S.A., and that the purchase price is \$750,000, that the G. F. and C. R. will be made standard gauge and that the portion of it between Great Falls and Shelby Jct., will be used as a short cut from Great Falls to the main line of the G. N. R. None of these statements have been confirmed.

The G. F. and C. Ry. was built in 1890 from Sweet Grass, at the International boundary, where it connects with the Alberta Ry. and Coal Co.'s line, of which it is practically an extension, to Great Falls, Mont., 134.37 miles. It is 3 ft. gauge and laid with 35 lbs. steel, it connects with the Great Northern Ry., U.S. A., at Shelby Jct., and Great Falls. It was built under the management of E. T. Galt, of the Alberta Ry. and Coal Co. which operates a narrow gauge line from Coutts, on the International boundary, opposite Sweet Grass, to Lethbridge, Alta., 64.62 miles. This line was also built in 1890 as the Canadian portion

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THE RAILWAY AND SHIPPING WORK

Led- of the through line between Lethbridge and
 ander- Great Falls. The A. R. and C. Co's., origi-
 S. F. nal line, bought from the Northwestern Coal
 er, and and Navigation Co., was built by the latter
 d, De- Co. from Dunmore Jct., Assa. on the C.P.R.'s
 main line to Lethbridge 109.5 miles, and was
 sold to the C. P. R. Co. in 1897.

K. Van- The latest information available is for the
 ew, C. year ended June 30, 1899, as follows: Trains
 rk; N. run, mixed, 11,701 miles; passengers carried,
 9,872; carried one mile, 711,780; tons freight
 moved, 65,703; ton miles, 8,193,278; earn-
 ings, passengers, \$28,355; freight, \$102,175;
 other, \$8,744; total \$139,274; operating ex-
 penses, \$130,861; net earnings, \$8,413; pay-
 ments, interest, \$5; taxes, \$3,637, total
 \$3,642; surplus, \$4,771; deficit forward,
 \$16,741; net deficit, \$11,970.

special General balance sheet, June 30, 1899,—
 held in Capital stock, \$2,000,000; funded debt, \$2,-
 of con- 000,000; current liabilities, \$28,028; interest
 resolu- accrued, \$810,000; total \$4,838,028; contra,
 of its cost of road and equipment, \$4,061,077;
 ee from other property and assets, \$746,582; materials,
 he sale etc., \$9,163; cash and current assets, \$9,237;
 ade by profit and loss, \$11,969; total, \$4,838,028.

ta Ry. The officers at the date of the last return
 denture were—President, E. T. Galt, Lethbridge,
 ade by Alta.; Vice-President, T. E. Collins, Helena,
 ly, and Mont.; Sec. and Treas., J. E. Lethbridge,
 and C. Lethbridge; other directors, C. A. Magrath,
 nd also Lethbridge; J. Galt, Winnipeg. The gen-
 the G. eral offices are nominally at Great Falls,
 Mont., Mont., but the chief officials reside at Leth-
 bridge.

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 Canada

diated the statement. (June, pg. 178.)

Crow's Nest Southern Ry.—Construction work will commence immediately on this line, which will run from the coal mines at Michel, B.C., to the International boundary, 65 miles. Here connection will be made with the Montana and Great Northern Ry., which has been incorporated in the U.S., to construct a line from the Great Northern (U.S.) at Jennings, to the International boundary, about 90 miles. The survey of the B.C. portion of the line has been completed, and construction will be pushed forward with vigor. Elias Rogers, managing director of the Crow's Nest Coal Co., and one of the directors of the C.N.S.R. says that the line will be opened by next winter. It will be built simply for the purpose of carrying coal and coke, under a B.C. charter, and an agreement has been entered into with the B.C. Government regarding charges.

Some differences arose between the C.P.R. and the Crow's Nest Pass Coal Co., and as a result the C.P.R. applied to the courts for an injunction to prevent the construction of the railway. These differences, says Mr. Rogers, have now been amicably settled, and in the future there will be such co-operation between the two companies as will tend to greatly facilitate business and to promote the rapid development of the mines, smelting and other industries of the west.

The preference given to the Jennings route over the more feasible route from Kalispell, Mont., is because of the better facilities of handling the coal products of the Crow's Nest, nearly all the shipments being designed for the west. According to the articles of incorporation of the M. and G.N.R., three branch lines are contemplated: First, from Jennings in a northerly direction to the International boundary, and from a point about five miles south of the boundary and near Tobacco River southeasterly to a station on the Great Northern Ry. in the county of Flathead. Second, from Kalispell station on the G.N.R. southerly to Flathead Lake, thence southeasterly to a junction with the Northern Pacific Ry. at or near Jocko. Third, from, at or near Chester, on the G.N.R., northerly and northwesterly to near Sweet Grass Hills.

A contract for the construction of the line from Jennings to the Crow's Nest coal fields

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(June, pg. 173.)

Grand Forks to Republic.—A contract has been let to G. S. Deeks & Co. for the construction of a line from Grand Forks, B.C., to Republic, Wash., 42 miles, to be completed by Nov. 1. The Canadian section, 5 miles, from Grand Forks to the International boundary at Carson City, will be constructed under the charter of the Grand Forks & Kettle River Ry. Co., a company holding a provincial charter granted in 1899, and the section of the line in Washington is covered by a State charter granted to the Republic & Grand Forks Rd. The line will follow the Kettle River valley from Grand Forks to Curlew in Washington, crossing the International boundary at Carson City; from Curlew it will follow the Curlew Creek to San Poil River, thence to Republic.

Arrangements are being made for the construction of a smelter of 500 tons capacity at Grand Forks, and for the carrying of ore, from the Republic mines to it for two years. (See also Kettle River Valley Ry. pg. 230.)

Great Falls and Canada Ry.—The gauge of this line between Sweet Grass, at the International boundary, and Great Falls, Mont., 134.37 miles, is to be changed from 3 ft. to

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Kaslo and Slocan.—Col. N. W. Brayton, of Kaslo, B.C., announces that 12 miles of line from Crawford Bay will be built this fall. The Co. has a charter to build 76 miles from Crawford Bay, on Kootenay Lake, to Fort Steele.

The Kettle River Valley Ry. Co., which was incorporated at the last session of the Dominion Parliament, is being organized by the same persons who are constructing the Grand Forks-Republic line. Surveys will be made on the lines authorized by this act this year, but it is not expected that construction will be commenced before next spring. (May, pg. 155; this issue, pg. 227.)

The Kingston & Pembroke Ry. is said to be contemplating an extension of its line from Sharbot Lake, 40 miles, to Palmer's Rapids, to open up the townships of Olden, Palmerston, North and South Canoto, Clarendon, Miller, Denbeigh and Ashley, in the county of Peterborough. A route through this country was granted a Dominion bonus in favor of the Brockville, Westport & Sault Ste. Marie Ry., but it was not taken advantage of. (June, pg. 174.)

Kootenay Railway & Navigation Co.—The recently completed Bedington & Nelson Ry. extends from Kuskonook wharf, on Kootenay Lake, to the International boundary at Bedington, connecting with the Kootenai Valley Ry., running to Bonner's Ferry, Idaho, 25.56 miles, where it connects with the Great Northern Ry. (U.S.A.) The B. & N. Ry. has a total length of 15.49 miles, and has running powers over 8.49 miles of line owned by the B.C. Southern Ry., and operated by the C.P.R., as part of the Crow's Nest Pass line. The B.C. and U.S. sections of the line were constructed under local charters by the Kootenay Ry. & Navigation Co., which has been absorbed by the Great Northern Ry. (U.S.A.)

The maximum grade is 0.80 per 100, excepting a gain of 500 ft. of 1 per 100 on tangent. The sharpest curve up the maximum grade is 4 degrees. The distance on curves of various denominations is: Under 6 degrees, 3.58 miles; over 6 degrees, 4.19 miles; total on curvatures, 7.77 miles; total distance, 15.49 miles; total on tangent, 7.72 miles, or practically 50% of the line in B.C. on curvature. The sharpest curve used is 10 degrees, excepting 300 feet of an 11 degree. The roadbed in the cuttings has been constructed to a uniform width of 20 ft., and on all the embankments is in no case less than 14 feet, and for the most part exceeds that width. Ballast is dressed flat to rail surface of tie and extends 8 ins. beyond either end, from this sloping $1\frac{1}{2}$ to 1 to foundation level or sub-grade. Height of tie is generally 12 ins. above sub-grade. Rock cuts have been excavated to a depth of 6 ins. below foundation level. The general depth of ballast under tie is placed at 6 ins., but this has been greatly exceeded over the greater part of the line. "A good deal of ingenuity," says H. P. Bell, who inspected the line for the B. C. Government, in his report on the line, "has been exercised in regulating and protecting channels in rapid waters. Structure no. 1, counting south from Kuskonook, has been built with the lower sills placed upon raised pediments of stone, has a wide, rough, stone invert with an overflow below to stop the velocity of the water and a training wall upon the north side for some hundreds of feet in length, to prevent high water from finding its way into adjacent hollows on the up stream side of embankment. Altogether it is an effective, economical and ingenious piece of work."

The total length of bridging is 3,680 ft., of which 3,232 ft. is on piled trestles and 448 ft. is on framed trestles; all are 16 ft. centres, and the highest bridge is 36 ft.

The ties are of a high standard, the local

timber insuring this, and are 8 ft. in length, 6 in. thick, with a minimum face of 6 in. They are placed 2,640 to the mile. The rails are 60 lbs. to the yard, fastened by suspended joints of double angle bars with 4 bolts. Besides the 60 lbs. steel, the Co. has laid about 4,000 ft. on tangent in Goat River bottom, of second-hand rails weighing 56 lbs. per yard, fastened with $14\frac{1}{4}$ lb. angle bars and 4 bolts. The Co. proposes at once to put on pressed steel track braces accurately fitting the section of rail, and fastened to tie by three spikes. Three braces to each rail to be fixed to a 6 and 7 degree curve, and 4, 5, and 6 braces to each rail on an 8, 9, or 10 degree curve, respectively. Split or point switches, working through iron switch stands having high vanes are used on the main line and stub switches on sidings. The switches, Mr. Bell points out in his report, are an excellent article, of the European fast-travel pattern, the character of which has been proved by use over a long period of time. The switch rail is bent for 10 ft. to 12 ft. back from the point for half the width of its lead, the effect of which, when put in the planing machine is to make a pointed switch with a truly straight entrance from toe to heel upon the gauge side of the rail. The frogs, which are no. 9, on both main line and sidings, are well made and appear to answer all purposes.

The signal apparatus at the junction of the B. and N. with the Crow's Nest Pass line, was installed under instructions from the Dominion Department of Railways. It consists of a tower, in which is placed, besides the ordinary telegraph apparatus connected with both lines of railway, nine levers, which work three switches and seven signals. The signals are: 2 distant, 1,750 ft. from tower, and 2 home, 550 ft. from tower; there being placed one of each upon either line of railway approaching the point of junction. Fifty feet towards the tower from the home signal on both approach-

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ing lines is a derailing switch, in connection with which—by the same lever—is worked with similar result the junction switch. After passing the tower, and upon the joint rail there is placed, 47 ft. from the tower, a home signal with two vanes, and 1,247 ft. from the tower, a distant signal common to the trains of both railways.

The one terminal, within a traffic sense, is at Kuskonook, on the south end of Kootenay lake. Beside the station there is a three-stall round-house, and water tank of 50,000 gallons capacity, both supplied by gravitation under a pressure of 80 lbs. per square inch. Communication at this point with the Co.'s boats for Kaslo, Nelson and the Lardo country is by means of an inclined wharf on level of car floor. It is the intention, so soon as business demands, to construct a three-track car transfer at this point. The yard room at Kuskonook consists of 2,632 ft. of sidings, but this can easily be increased.

The present engines to be used on the road weigh, with light tender, 40 tons, leaving a weight on drivers of 26 tons; but a mogul freight engine, 35 tons on drivers, has been proposed. Cars of 60,000 lbs. capacity, of which the tare weight is about 30,000 lbs., are used. These weights will not likely be increased during the life of the present bridges.

Indsaw, Bobcaygeon and Pontypool Ry.

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given on pg. 259.

Great Northern Ry., U.S.—A line is under construction from Marcus, Wash., at the junction of the Columbia and Kettle rivers, on the line of the Spokane Falls and Northern Ry., a subsidiary of the G.N.R., and Midway, on the International boundary, 66 miles; with a branch to Republic, Wash., from Curlew, 20 miles. Of this line 15 miles, from Cascade to Carson, are in B.C., and are being constructed under the charter of the Victoria, Vancouver and Eastern Ry. (See pg. 275.) The G.N.R. desired to tap the Republic country, but although the distance between Marcus and Republic is less than 45 miles, the country is so difficult that about 70 miles of railway has to be constructed to reach it. The sections of the line under contract are from Marcus, Wash., to the International boundary at Cascade, B.C., 26 miles, connecting with the 15 miles being constructed in B.C. by the V.V. and E., to Carson; then commencing at the International boundary at Carson, and proceeding southerly to Curlew, then bending northwesterly to the International boundary at Midway, 25 miles; with a branch from Curlew to Republic, 20 miles. This gives altogether 61 miles of railway in Washington state, and 15 in B.C., making altogether 76 miles under construction. The grade on these sections of the line will not exceed six-tenths of 1%. The line from Marcus to Midway will form part of the route which the G.N.R. Co. contemplates constructing to Vancouver and Victoria, B.C. The line from the International boundary at Midway to Vancouver will be about 335 miles in length, will traverse the Okanagan and Similkameen districts, and will be constructed under the charter of the V.V. and E. Ry. The ferry connection between the mouth of the Fraser river and Sid-

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C.P.R. right of way. This span will probably be a cantilever one, and will be placed as low as possible. H. P. Bell, C.E., Victoria, will be the engineer in charge of the substructure; Mr. Hare, C.E., will be engineer for the superstructure, and M. J. Maher, C.E., will be the engineer in charge of construction.

The bridge is being built in conformity with sec. 16 of an act passed at the last session of the B.C. Legislature to authorize a loan of \$5,000,000 for the purpose of aiding the construction of railways and other public works. This section gives the Government authority to cause to be built a bridge across the Fraser river in the neighborhood of New Westminster at a cost not exceeding \$500,000, for the purposes of railway, vehicular and passenger traffic and after construction of the same to enter into agreements for the use of the bridge by any railway or other companies or firms, subject to such terms as may be fixed by the Government. It is believed that this bridge will be used by the Great Northern Ry., U.S., to reach Vancouver.

Grand Forks to Republic.—The surveys for the line between these points, now being built for the Grand Forks and Kettle River Ry., the B.C. Co., and the Republic and

Grand Forks Ry., the Washington, U.S., Co., were made by J. Manley, C.E., who is also in charge of construction which is being proceeded with. Contracts have been let on the U.S. section as follows: Beck and Hall, two miles near Curlew; J. A. Musson, two miles near Curlew; J. Lane, two miles between Lambert Creek and Curlew; two miles adjoining, J. Barrow. These are probably sub-contracts, as it is reported that G. S. Deeks & Co. have the contract for the whole line. This line from the International boundary at Carson practically parallels the line now under construction by the Great Northern Ry., U.S., described below. (Aug., pg. 227.)

Great Northern Ry. of Canada.—The cut-off proposed to be constructed from Garneau Jct. to St. Catherine's on the Quebec and Lake St. John Ry., 22 miles from Quebec, will shorten the distance into Quebec by the G.N.R. 15 miles, as compared with the present route by Riviere à Pierre. The cut-off will be 58 miles in length, and will pass through St. Stanislas, St. Casimer, St. Alban on to St. Catherine's. The grades will be 0.6%, compensated opposed to eastbound traffic, and 1% compensated opposed to westbound traffic, and the maximum curvature will be 4°. Contractors have gone over the ground with a view of tendering for the work, and bridge at

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Crow's Nest Southern Ry.—The proceedings instituted by the C.P.R. to stop construction, to which reference was made Aug., pg. 227, arose out of the proposal of the C.N.S.R. to build a spur up the Morrisey creek, for which surveys were made and plans filed at Victoria, June 19. The C.P.R. was also surveying for a line along the creek parallel to the C.N.S.R., and filed its plans at Ottawa, June 6, and at Nelson, June 24. Both companies commenced work, the C.N.S.R. on the north side of the creek, and the C.P.R. on the south side, but at a lower level. With the filing of the injunction the work was stopped by the C.N.S.R. The grounds upon which the C.P.R. wished to have the C.N.S.R. Co. enjoined from entering upon the lands of the B.C. Southern Ry. Co., or interfering with its right-of-way up Morrisey creek, rested largely upon the facts that the former Co. is a competitor, that it will connect its lines with an U.S. company, that its line is being constructed under a B.C. charter, and that according to the Railway Act a company crossing into a foreign country or an adjoining province, must secure the consent of the Dominion Government before starting construction. When the application to make the injunction permanent came up before the court in Victoria, the injunction was dissolved.

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The line under construction starts at the International boundary, where connection will be made with a line from Jennings, Montana, now being constructed by the Montana and Great Northern Ry., a company promoted by the Great Northern Ry., U.S., and extend to Michel, B.C., 65 miles. The route to be followed from the International boundary at Tobacco Plains northward to Elko, is through an excellent farming country, though there are numerous indications of the presence of minerals. The principal difficulties of the route will be near Elko, where in rising from the valley of the Kootenay to that of the Elk, a number of step-like terraces are encountered. There will not be much rock work, but a number of cemented gravel cuts will have to be made. Above Elko the line will probably run on the opposite side of the river to the C.P.R. Between Elko and Fernie the grade will traverse bottom land, closely following the course of the river through a heavily timbered tract. From Fernie the river will be followed, and the line will open up a well-timbered country, cedar predominating, with strong mineral indications, and large tracts of land suitable for farming. It is stated that the limit of present construction will be at Fernie, and that the extension to Michel will be proceeded with, probably next year.

The section of the line south of the International boundary is reported to be well under way, and that it will be opened for traffic by winter. The line is for coal and coke traffic only. (Aug., pg. 227.)

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this season as is necessary to enable the Great Northern Ry., U.S., to obtain access into Republic, Wash., from Marcus. This will be from the International boundary near Cascade, B.C., along the Kettle river to the International boundary at Carson, a distance of 15 miles. The contractor is P. Siems, who is also reported to have the contract for the portions of the line in Washington territory. The V.V. and E. has several survey parties out under the general charge of J. H. Kennedy, chief engineer, locating the line westerly from Midway, B.C., traversing the Okanagan and Similkameen districts. The distance from Midway to Vancouver is about 335 miles by the route proposed. It is not expected construction will be undertaken on this part of the line this year. Mackenzie, Mann & Co., and the Great Northern Ry., U.S., are jointly interested in the V.V. & E. R.

Negotiations are in progress for the amalgamation of the towns of Grand Forks and Columbia, B.C. The latter town suggests that both places consent to the location of the V.V. & E. depot at the dividing line, and that each town furnish the road free of cost whatever land it may need for station or other purposes, the passenger station to be located in one town, and the freight sheds in the other, subject to the decision of the railway.

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Grand Forks Ry., the Washington, U.S., Co., were made by J. Manley, C.E., who is also in charge of construction which is being proceeded with. Contracts have been let on the U.S. section as follows: Beck and Hall, two miles near Curlew; J. A. Musson, two miles near Curlew; J. Lane, two miles between Lambert Creek and Curlew; two miles adjoining, J. Barrow. These are probably sub-contracts, as it is reported that G. S. Deeks & Co. have the contract for the whole line. This line from the International boundary at Carson practically parallels the line now under construction by the Great Northern Ry., U.S., described below. (Aug., pg. 227.)

Great Northern Ry. of Canada.—The cut-off proposed to be constructed from Garneau Jct. to St. Catherines on the Quebec and Lake St. John Ry., 22 miles from Quebec, will shorten the distance into Quebec by the G.N.R. 15 miles, as compared with the present route by Riviere à Pierre. The cut-off will be 38 miles in length, and will pass through St. Stanislas, St. Casimer, St. Alban on to St. Catherines. The grades will be 0.6%, compensated opposed to eastbound traffic, and 1% compensated opposed to westbound traffic, and the maximum curvature will be 4°. Contractors have gone over the ground with a view of tendering for the work, and bridge companies have been asked to submit tenders for the superstructures of the bridges, but no contracts have been let.

At the western end of the line it is proposed to extend from Hawkesbury, via Caledonia Springs to South Indian, Ont., where a junction will be effected with the Canada Atlantic Ry., 23 miles from Ottawa. This extension will be 32 miles, the grades and curvature will be about the same as on the cut-off from Garneau Jct. to St. Catherines. A contract for this extension, we are informed, will be let shortly. (Aug., pg. 229.)

The Co. is preparing for a big fall business in grain and is laying three extra tracks into its Quebec elevator.

A complete description of the G.N.R. is given on pg. 259.

Great Northern Ry., U.S.—A line is under construction from Marcus, Wash., at the junction of the Columbia and Kettle rivers, on the line of the Spokane Falls and Northern Ry., a subsidiary of the G.N.R., and Midway, on the International boundary, 66 miles; with a branch to Republic, Wash., from Curlew, 20 miles. Of this line 15 miles, from Cascade to Carson, are in B.C., and are being constructed under the charter of the Victoria, Vancouver and Eastern Ry. (See pg. 275.) The G.N.R. desired to tap the Republic country, but although the distance between Marcus and Republic is less than 45 miles, the country is so difficult that about 70 miles of railway has to be constructed to reach it. The sections of the line under contract are from Marcus, Wash., to the International boundary at Cascade, B.C., 26 miles, connecting with the 15 miles being constructed in B.C. by the V.V. and E., to Carson; then commencing at the International boundary at Carson, and proceeding southerly to Curlew, then bending northwesterly to the International bound-

ney, Vancouver island, and the terminals in Victoria, are being constructed under the charter of the Victoria Terminal Ry. and Ferry Co. (Aug., pg. 233.)

Halifax and Yarmouth.—R. J. Campbell, Vice-President of the Cape Breton Ry. Extension Co., is reported to have recently stated that he and his associates in the Dominion Securities Co. recently offered the Messrs. Brill and Fletcher, of Philadelphia, \$750,000 for this line from Yarmouth to Barrington.

Mackenzie, Mann & Co. have arranged with the Nova Scotia Government for the construction of the Halifax and Southwestern Ry., and it is likely that they will secure the H. & Y.R. See pg. 257. (Aug., pg. 229.)

Hillsborough Branch Ry. Co.—By an act passed at the last session of the New Brunswick Legislature it is provided that the failure to hold the annual meetings of this Co. as provided for by 39 Vic., chap. 57, sec. 8, did not invalidate the charter, and it is enacted that none of the acts or proceedings of the directors shall be in any way affected or impaired by reason of failure to hold the annual meeting.

The Salisbury and Harvey Ry. obtained a Dominion charter in 1900 authorizing it to construct certain branch railways in and around Hillsborough. (May, 1900, pg. 145.)

Intercolonial Ry.—An 18-stall roundhouse is being built at Sydney, and the yard is being re-arranged prior to the erection of new station buildings off Ferry St.

C. Schrieber, Deputy Minister of Railways on returning from his recent inspection, stated that out of the 96 miles of the Cape Breton line, 84 had been laid with new heavy rails.

The building of the ferry landings at Mulgrave and Point Tupper, for the car ferry recently launched at Newcastle-on-Tyne, Eng., is proceeding satisfactorily, according to statement made by the Deputy Minister of Railways on his return from a recent inspection of the line.

The line from the Straits of Canso, eastward to New Glasgow, General Manager Pottinger says, is to be relaid with new 80-lb steel rails. He also says that a double track is likely to be built from Halifax to Windsor Jct., where the Dominion Atlantic joins the I.C.R.; and that all the bridges along the line are to be strengthened so as to enable the management to run the heavy new engine right through to Montreal.

It has been reported that the headquarters for the Eastern Division would be removed from New Glasgow to Sydney, but General Manager Pottinger says that no such move contemplated, the present headquarters being more central.

Tenders have been received for the construction of a creosoted pile wharf at Pictou, N.S.

At Stellarton an 18-stall roundhouse is in course of construction.

Interprovincial Bridge.—It is reported that at the solicitation of the Mayor of Ottawa President Beemer has decided to name the bridge "Alexandra," and will invite the Duke of Cornwall and York to formally design it. (Aug., pg. 229.)

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this season as is necessary to enable the Great Northern Ry., U.S., to obtain access into Republic, Wash., from Marcus. This will be from the International boundary near Cascade, B.C., along the Kettle river to the International boundary at Carson, a distance of 15 miles. The contractor is P. Siems, who is also reported to have the contract for the portions of the line in Washington territory. The V.V. and E. has several survey parties out under the general charge of J. H. Kennedy, chief engineer, locating the line west-erly from Midway, B.C., traversing the Okanagan and Similkameen districts. The distance from Midway to Vancouver is about 335 miles by the route proposed. It is not expected construction will be undertaken on this part of the line this year. Mackenzie, Mann & Co., and the Great Northern Ry., U.S., are jointly interested in the V.V. & E. R.

Negotiations are in progress for the amalgamation of the towns of Grand Forks and Columbia, B.C. The latter town suggests that both places consent to the location of the V.V. & E. depot at the dividing line, and that each town furnish the road free of cost whatever land it may need for station or other purposes, the passenger station to be located in one town, and the freight sheds in the other, subject to the decision of the railway.

White Pass and Yukon Route.—Press reports recently stated that during the next two years this railway would be extended 200 miles from White Horse to Fort Selkirk, on the Yukon 200 miles above Dawson, thus ob-

viating the necessity of steamers passing through the Five Finger rapids, where steel cables have to be used to line them up and down. We are informed that the management does not at present contemplate any additional construction.

Crow's Nest Southern Ry.—The proceedings instituted by the C.P.R. to stop construction, to which reference was made August 227, arose out of the proposal of the C.N.S.R. to build a spur up the Morrissey creek, for which surveys were made and plans filed at Victoria, June 19. The C.P.R. was also surveying for a line along the creek parallel to the C.N.S.R., and filed its plans at Ottawa, June 6, and at Nelson, June 24. Both companies commenced work, the C.N.S.R. on the north side of the creek, and the C.P.R. on the south side, but at a lower level. With the filing of the injunction the work was stopped by the C.N.S.R. The grounds upon which the C.P.R. wished to have the C.N.S.R. Co. enjoined from entering upon the lands of the B.C. Southern Ry. Co., or interfering with its right-of-way up Morrissey creek, rested largely upon the facts that the former Co. is a competitor, that it will connect its lines with an U.S. company, that its line is being constructed under a B.C. charter, and that according to the Railway Act a company crossing into a foreign country or an adjoining province, must secure the consent of the Dominion Government before starting construction. When the application to make the injunction permanent came up before the court in Victoria, the injunction was dissolved.

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Temiscamingue Ry.—T. Southworth, Director of Colonization for the Ontario Government, writing to the press in regard to this projected line, states that a railway must be constructed before further settlement takes place; that the people of southern Ontario should see that it is connected as directly as possible with Toronto, and that it should start from North Bay.

W. B. Russell, C.E., reports that he has located 25 miles from North bay, which will carry the line over the height of land north of Lake Nipissing. From North bay the proposed route skirts easterly along Trout lake, and turns to the north in the valley of the North river. The heaviest grade on this section is 1.25 per 100 ft. and with the exception of one short 9° curve the maximum curvature is 8°. Mr. Russell expects to have completed a reconnaissance survey to the head of Lake Temiscamingue, 100 miles, by the end of the year.

Hon. F. R. Latchford, Minister of Public Works for Ontario, stated in a recent interview that in view of the great rush of settlement into the Temiscamingue region during the present year, the Government would commence the work of building a railway northward from North bay next spring. The result of the surveyors' work so far had been most satisfactory, an easy route having been secured, and an excellent country alongside being discovered. Mr. Latchford said his personal view was in favor of letting contracts as early as possible, so that the work of making railway connection for the remote region could be completed the sooner. He thought that the whole line might possibly be built in one year, but that remained to be seen. In any event, he thought Lake Temiscamingue could be reached, which would then open the way for a great tourist traffic. The whole line to the head of Lake Temiscamingue would be about 100 miles long, and when completed it would reach about a third of the way from North bay to James bay. Lake Abitibi will probably be the next objective point in continuing the line northward. (Sept., pg. 233.)

Thunder Bay, Nipigon and St. Joe Ry.—President D. F. Burke recently made a proposition that the towns of Port Arthur and Fort William should each take \$10,000 of stock in this co. No construction has been done this year. It is reported that negotiations are in progress between the promoters and Mackenzie, Mann & Co. by which this line will be utilized as the eastern extension of the Canadian Northern. (Sept., pg. 275.)

Tilsonburg, Lake Erie and Pacific Ry.—Recent press reports stated that J. Charlton, M.P., was promoting a railway from Port Rowan to Collingwood, and that active building operations had been commenced at the southern termination. The report evidently

There has been some talk of an extension from Ingersoll to Stratford and thence to Collingwood, but there is as yet nothing tangible in the scheme.

Grading was completed early in Nov., and a contract was given to Dart and Hamilton for the tracklaying and ballasting of the extension to Ingersoll. The tracklaying will include 4 miles of siding. It was expected to have this work completed before the end of the season. (Sept., pg. 275.)

At a recent meeting of the Railway Committee of the Privy Council at Ottawa it was agreed between the parties interested that the T.L.E. and P. Ry. should cross the G.T.R. line near the station of the former Co. in Tilsonburg, at right angles, on level crossing, and without grade, and that the former should run its line parallel to that of the Great Western and across the Canada Southern Ry. by an independent subway.

Toronto, Hamilton and Buffalo Ry.—It was recently reported from Woodstock, Ont., that an extension of this line from Brantford was in contemplation, but we are officially informed that the Co. has no present intention of further construction.

The Toronto, Lindsay and Pembroke Ry. has filed with the Ontario Public Works department plans and profiles of a section of its projected line from Bancroft, on the Irondele, Bancroft and Ottawa Ry., and the Central Ontario Ry., to Golden Lake, 60 miles. This section of the line is 8 1/3 miles in length, and shows the route from Bancroft through the townships of Faraday, Herschel and into Montangle. The maximum grade is 1.25 per 100 ft., and the greatest curvature is 68, while the average will be about 3°. (Aug., pg. 233.)

The Vancouver, Victoria and Eastern Ry. and Navigation Co. is the title given to the Canadian company chartered to construct, in connection with the Washington and Great Northern Ry., a subsidiary of the Great Northern Ry., U.S., a line from Marcus, Wash., on the Spokane Falls and Northern Ry., to Vancouver and Victoria, B.C. Of the main line 65 miles have been located and construction is in progress from Marcus, Wash., to Curlew, and from thence a branch of 20 miles is to be constructed to Republic, Wash. Of this length of line 15 miles, from Cascade to Carson, is in B.C., where the V.V. and E. is also constructing 25 miles of line from Carson to Phoenix, as well as spurs into Grand Forks, and to the Granby smelter. The sections from Curlew to Midway, already located, and from Midway to Molson, Wash., 45 miles west, on the summit of the divide between the Kettle and Okanagan rivers, also located, will not be gone on with this year. Preliminary surveys on the main line have been completed from the International boundary near Molson, westerly as far as Oroville, and a survey party is work-

as assistants. The surveys in the Okanagan country are in charge of R. H. McCoy, locating engineer, and J. H. Kennedy is Engineer in Chief with headquarters at Grand Forks, B.C., and having as assistants, L. M. Hale, S. Gagne and K. G. Hankinson.

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On the mainland it is reported that grading is to be commenced on the 20 miles of line between the mouth of the Fraser river, where the permanent ferrieslips are to be built, and New Westminster.

Vancouver, Westminster and Yukon Ry.—J. Hendry, President, says much of the news appearing in the daily papers regarding this Co. and its project has been guesswork, and that all the definite information that can be given for publication is that parties of surveyors are in the field, and that considerable preliminary work has been accomplished.

The Vancouver and New Westminster city councils have been approached with a view to right of way being obtained, and committees have been appointed to confer with the directors.

The whole of the right of way between New Westminster and Vancouver has been acquired by the Great Northern Ry., U.S., interests as well as the Hastings mill property in Vancouver, which it is said will be used as terminal. It is the only water frontage of an consequence in Vancouver not owned by the C.P.R. A. J. McMillan, C.E., and R. H. Green, C.E., were in charge of the survey on this section, which will leave New Westminster by Penitentiary gulch, and along the gully by Burnaby lake, entering Vancouver near the sugar refinery.

Preliminary surveys have been complete for a northern extension of the line between Vancouver and Lillooet by E. B. Hernier, C.E., who reports having found a feasible route. The line will, it is expected, cross the inlet at the second narrows, skirt the shore passing Moodyville, Point Atkinson, and Britannia landing, and up the Squamish river going by Daisy lake, Green lake and Seati lake into Lillooet. T. S. Gore, C.E., is engaged in making a survey from Lillooet

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The Vancouver, Victoria and Eastern Ry. and Navigation Co. is the title given to the Canadian company chartered to construct, in connection with the Washington and Great Northern Ry., a subsidiary of the Great Northern Ry., U.S., a line from Marcus, Wash., on the Spokane Falls and Northern Ry., to Vancouver and Victoria, B.C. Of the main line 65 miles have been located and construction is in progress from Marcus, Wash., to Curlew, and from thence a branch of 20 miles is to be constructed to Republic, Wash. Of this length of line 15 miles, from Cascade to Carson, is in B.C., where the V.V. and E. is also constructing 25 miles of line from Carson to Phoenix, as well as spurs into Grand Forks, and to the Granby smelter. The sections from Curlew to Midway, already located, and from Midway to Molson, Wash., 45 miles west, on the summit of the divide between the Kettle and Okanagan rivers, also located, will not be gone on with this year. Preliminary surveys on the main line have been completed from the International boundary near Molson, westerly as far as Oroville, south of Keremeos, and a survey party is working towards Princeton. The maximum grade on the line between Marcus and Midway is 0.6%, with maximum curves of 8°. The branch line from Carson to Phoenix has a maximum grade of 3%, and the section between Midway and Princeton will have a maximum grade of 1%, and will be very heavy work. The most interesting feature of this section is, that although the distance between Midway and the Okanagan river is only 32 miles in a direct line, it requires about 100 miles of a 1% grade to overcome the summit, which is crossed at an elevation of 3,700 ft. above sea level.

The contractors on the U.S. side are Siems & Shields, while on the B.C. side J. W. Stewart has the contract for the grading, and Porter Bros. that for the bridging and ties. The division engineers in charge in B.C. are: A. E. Hill, with D. R. Thomas, W. I. Bassett and W. A. Duff, as assistants; and G. G. McCarty with J. W. McCreary and H. Hill

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1902. (Nov., pg. 335.)

Great Northern Ry. (U.S.)—The following extracts from the annual report for the year ended June 30 have reference to the construction of lines connecting with lines in Canada: "The Montana and Great Northern Ry. Co. is building from Jennings, Mont., northerly along the Kootenay river, about 51 miles, to the International boundary, where it will connect with a line being built by the Crow's Nest Southern Ry. Co. to the coal fields of the Crow's Nest Pass Coal Co. at Fernie, B.C. The length of the lines from Jennings to Fernie, including spurs, will be about 100 miles. Crow's Nest Pass coal and coke are of superior quality. The coal company's plant is being enlarged and the output increased. In addition to furnishing coal for company use and for commercial and domestic purposes in the Northwest, these mines are expected to supply the smelters at Great Falls, Butte, Anaconda, Northport and Everett, and will furnish a heavy and profitable traffic. Since the close of the fiscal year, the M. and G. N. R. Co. has purchased the line of the Great Falls and Canada Railway, extending from Great Falls, Mont., to Sweet Grass, on the International boundary, 134.37 miles. This line is now narrow gauge, and, until widened to standard gauge during the current fiscal year, it will be operated by the G. F. and C. Ry. Co. As a portion of a projected extension, the M. and G. N. Ry. Co. has built 10.32 miles of line from Kalispell, Mont., south to Flathead Lake. The Washington and Great Northern Ry. Co., in the State of Washington, and the Vancouver, Victoria and Eastern Ry. and Navigation Co., Ltd., in B.C., are now building lines of railway that will form a through line from Marcus, Wash., on the Spokane Falls and Nor-

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thern, to Republic, Wash., via Kettle River and Cascade, B.C., a total distance, including branches, of about 108 miles. This line will afford transportation to several large, rich and already well developed mining camps, and its opening for traffic will be followed by the development of many properties that have been waiting for rail transportation. It is expected that this line will add largely to the Co.'s traffic and revenue."

Halifax and South Western Ry.—Pre-

December 1901

by purchase the entire fleet of the Canadian Development Co., and have also built, at great expense, three large, light-draught and finely-finished boats, which are now employed in transporting passengers and freight between Whitehorse and Dawson. With our present facilities we are prepared to land 1,000 tons of freight, but as a matter of fact we are not handling one-tenth the business of which we are capable at a very small extra outlay for rolling stock, fuel and labor."

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other company.

Northern Pacific Ry.—Reports are current that the N.P. Ry. will again enter Manitoba, and that a charter for a line from Emerson, on the international boundary, through Rosenfeld to Portage la Prairie, has been bought on its behalf. J. Fisher, who acted as solicitor for the N.P. Ry. in Manitoba, says the purchasers of the charter are southern capitalists, but denies that he has any instructions from the N.P. Ry. in reference to the matter. The charter referred to is that of the Manitoba Central Ry. Co., incorporated last session and referred to on pg. 156 of our issue of May, 1901.

Northwest Territories.—Speaking of the

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Vancouver, Victoria and Eastern Ry. and Navigation Co.—Notice has been given that application will be made at the next session of the Dominion Parliament for an act to extend the time for the completion of this undertaking.

An arrangement has been effected with the owners of the Kettle Valley Lines, at Grand Forks, B.C., by which the V., V. and E. Ry. obtains the right of way for its line and terminals in that town, the price to be fixed by arbitration. This will practically mean the ceasing of hostilities between the two companies. At present there is an injunction standing against the V., V. and E. Ry. in the B.C. courts and one against the Kettle Valley Lines in the Washington courts at Republic.

The line between Cascade and Carson, B.C., 15 miles, is under construction, and it is expected that track will be laid in March. A spur 3 miles in length from Carson to Grand Forks, is also under construction. J. W. Stewart, Columbia, B.C., is the contractor. Surveys are being made for a branch from Columbia to Granby smelter, 3 miles, and for an extension of the line from Grand Forks to Okanagan river, 150 miles. (Jan., pg. 5.)

The Vancouver and Westminster Ry. Co. which was incorporated by the B.C. Legislature to construct a railway from the C.P.R., in Vancouver, to near Westminster on the C.P.R. Westminster branch, has given notice that application will be made at the next session of the Legislature for an extension of time within which the line may be built. The incorporators of the Co. are C.P.R. officials at Vancouver.

Victoria Terminal Railway and Ferry Co.—We were officially informed Jan. 11, that the extension of the Victoria and Sidney Ry. which has been acquired by the V.T. Ry. and F. Co., is 1½ miles in length to the market building, Victoria, the terminal station, and that it would be completed by Feb. 1. The grades are not heavy, averaging 2½%, and the curves run about 15 degrees. The ferry steamer has been completed and has a capacity of 12 cars. Grading on the mainland has already commenced, and surveyors are locating the line, which will be about 20 miles in length. It is expected to have it completed within 18 months. (Jan., pg. 5.)

The Windsor and Detroit Union Bridge Co. gives notice that application will be made at the next session of the Dominion Parliament for an act to extend the period within which it may commence and complete its undertaking for a period of five years from the time plans are approved by the Governor-in-Council, and the Secretary of War for the

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completed in Aug.

The Northern Pacific Ry. Co. secured two charters authorizing construction of a large mileage of railways in Manitoba. One of these, the Manitoba Central Ry., was obtained in 1901, and the other, the Manitoba, Midland and Western Ry., came before the Legislature at its recent session for renewal. This bill was defeated when it came before the Railway Committee. On behalf of the promoters of the bill it is claimed that the building of 900 miles of railway, for which no subsidies would be asked, has been prevented; while the Winnipeg Telegram, the Provincial Government newspaper, says: "The N. P. now has a charter under which it can build. If it wants to build it can do so, and its building will be welcomed by the Government and by everyone in the Province. If the N.P. wishes to build lines in this Province it will receive all the encouragement it needs. But there is absolutely no evidence to show that the N.P. has altered its intention expressed last year, to build no more lines in this Province." It was only after the company had declared that it would do nothing more in the way of railway construction or reduction of rates that the Government decided to take over the road. If the Co. has changed its mind within the year, it can proceed to build at once. It has a charter and will get all reasonable encouragement from the Government and the people. (Feb., pg. 59.) See also Manitoba, Midland and Western Ry.

Central Eastern Ry. Co. - Application

April 1902

teaguay and Northern Ry.

Great Northern Ry. (U.S.)—The surveys for the widening of the Great Falls and Canada Ry. from Great Falls, Mont., to a junction at the International boundary with the Alberta Ry. and Coal Co.'s line, to Lethbridge, Alta., 130 miles, have been completed and work was begun April 16.

The ballasting of the line of the Montana and Great Northern Ry. from Jennings, Mont., to a junction with the Crow's Nest Southern Ry. at Tobacco Plains on the International boundary is reported to have been completed.

Tracks has been laid on the Washington and Great Northern Ry., the U. S. section of the Vancouver, Victoria and Eastern Ry., from Marcus, Wash., to the International boundary at Cascade, B.C., and ballasting was expected to be completed in May. On the section from the boundary, 5 miles south of Grand Forks, B.C., to Republic, Wash., the Co. has had some difficulties with the Republic and Grand Forks Ry. Co., respecting the right of way. Certain points in the dispute were disposed of by the purchase of land, but others are still before the Washington courts for settlement.

The G. N. Ry. is reported to have constructed a ferry slip at Brownsville, B.C. (April, pg. 124.) See also Alberta Ry. and Coal Co., Crow's Nest Southern Ry.; Kettle Valley lines, and Vancouver, Victoria and Eastern Ry.

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tion therewith.

Crow's Nest Southern Ry.—Tracklaying on the line from Gateway, on the International boundary, to Morrisey creek, B.C., was commenced towards the end of June, and is in a forward state. Press reports state that the bridge across the Kootenay river at Elko has been completed and the track laid over it, but the President of the Co. in Toronto has not received any report confirming this statement. The line is expected to be completed through to Fernie, 52 miles from the boundary, by the end of the summer. There is nothing in the press reports, we are informed, that the Co. will extend its lines into the St. Mary's river and the Windermere districts. (June, pg. 189.)

The Cuba Co.'s railway between Santiago

August 1902

190.)

Great Northern Ry. (U.S.)—The work of standardizing the gauge of the Great Falls and Canada Ry., from Great Falls, Mont., to the International boundary at Sweet Grass, has been in progress for some time, and we are officially informed that it is expected to be completed by Oct. 1. The distance between the two points is 134 miles, and with the exception of about 30 miles of revisions the old roadbed of the line will be widened to admit of laying standard gauge track. There will be a good deal of bridging to be done, the structures over the Teton, Marias and Muddy rivers being each about 1,000 ft. Contracts for the bridges are not reported let, but Siems and Shields have the contract for the grading.

The line of the Montana and Great Northern Ry. from Jennings to the International boundary at Tobacco Plains, where a junction is effected with the Crow's Nest Southern Ry., is completed.

We were advised that the line from Marcus to Republic, Wash., which includes a section from Cascade to Carson, E.C., via Grand Forks, was expected to be completed by July 1. (June, pg. 191.)

See also Alberta Ry. and Coal Co., Crow's Nest Southern Ry., and Vancouver, Victoria and Eastern Ry.

The Halifax Electric Tramway Co. has completed the erection of a large pier on the

August 1902

Ry.	Victoria and Eastern Ry. and Navigation Co.	THAT
ipont	Vancouver, Victoria and Eastern Ry.	Th
d this	and Navigation Co. —The section of this	Co.
on to	Co.'s line, which forms a link in the Washing-	latur
anted	ton and Great Northern Ry.'s line (a subsidi-	One!
ermit	ary of the Great Northern Ry., U.S.A.), from	Tha
York	Marcus to Republic, Wash., about 15 miles,	point
cars	including a branch into Grand Forks, B.C., has	tral
s and	been completed and is being operated by the	that
occa-	Spokane Falls and Northern Ry., another	year
ations	subsidiary of the G.N.R. The B.C. portion	will
ge st.	of the line is between Laurier near Cascade,	Ry.
ly ad-	and Carson, on the boundary.	ford
re this	Plans for a section of the line between	Inv
te the	Midway and the Similkameen river, about	269
Que.,	100 miles, have been filed at Ottawa. The	
f Lon-	surveys were made under the direction of J.	T
e line,	H. Kennedy, Chief Engineer, last year. Mr.	Ry.
Robe-	Kennedy has completed a reconnaissance	B.C.
stated	survey for the remainder of the line into Van-	Min
uld be	couver, working in company with A. M. Lup-	by
	fer, Locating Engineer, Great Northern Ry.,	all
	U.S.A. The distance between Carson and	the
	Vancouver is about 370 miles, and location sur-	

November 1902

Nov., 1902.]

THE RAILWAY AND SHIPPING WORLD.

for the first 60 miles of line, which have to be completed by Dec. 31, 1903; the whole contract has to be completed by Dec. 31, 1904. The cuttings on the line are to be 20 ft. wide, and the embankments 16 ft. wide. The maximum grade southward, and against the expected heavier traffic, is 1%, and northward, 14%, with a maximum curvature of 6°. The line will be laid with 80-lb. rails. The building of stations and the construction of a telegraph line will be let in separate contracts.

Construction has been started about three miles out of North Bay, the question as to the point of junction, whether with the C.P.R. at North Bay, or with the C.P.R. and G.T.R. at Nipissing Jct., not having been determined. The following subcontracts have been let by A. R. Macdonell: first six miles, J. Donovan, Belleville; next four miles, — Murdoch; mileage 15 to 18, Westerdall & McDonald; mileage 18 to 21, J. Sherwood; mileage 21 to 23, Grant & Devine. It has been decided to lay the line with 80-lb. steel rails, which are to be procured, if possible, in Canada. Tenders are asked for 175,000 ties for the line.

At a recent meeting of the commissioners, B. W. Folger was authorized to interview the officials of the G.T.R. and the C.P.R. in regard to the terminal facilities and the inter-

Trans-St. Mary Traction Co.—A contract is reported to have been let to the Falk Co., of Milwaukee, for the construction and equipment of 8 miles of electric railway at Sault Ste. Marie, Mich. Tenders have been invited for the construction of two car barns, each, 65 by 150 ft., masonry side walls, and steel trusses, the latter to be furnished by the Co., which is controlled by the Clergue interests, which also control the International Transit Co., on the Ontario side of the river.

The United Gold Fields of B.C. (Ltd.), a British corporation, was incorporated at the last session of the Dominion Parliament to construct a railway from Frank, on the C.P.R. Crow's Nest Ry., to Grassy Mountain, about 7 miles. It is reported that the line is practically completed. J. J. Fleutot, Frank, Alta., is the resident representative of the Co. (June, pg. 197.)

Vancouver and Coast-Kootenay Ry.—An agreement has been signed with McLean Bros. for the construction of a railway from Vancouver to Midway, B.C. At the last session of the B.C. Legislature an act was passed authorizing the Government to grant \$4,500 a mile in aid of the construction of a railway from Vancouver easterly via New Westminster and the Fraser river bridge, now being constructed, thence south of the Fraser

veys have been completed for a large portion of the distance. We are advised that construction will likely be commenced at both ends as soon as a thorough exploration of the route is made. (June, pg. 198. See also Great Northern Ry., U.S., and Vancouver and Coast-Kootenay Ry.)

Vancouver, Westminster, Northern and Yukon Ry.—Surveys are being made for construction between Vancouver and New Westminster, B.C., and it is reported that a contract has been let. J. Hendry, President, recently stated that construction would be commenced at an early date, and the line would be ready by the time the Fraser river bridge was completed. (Aug., pg. 268.) See also Victoria Terminal Ry. and Ferry Co.

Victoria Terminal Ry. and Ferry Co.—The charter of this Co., owning the Victoria and Sidney Ry., the new terminal station in Victoria, operating a ferry to the mainland, and having power to construct a line to Vancouver, has been acquired in the interests of the Great Northern Rd., U.S. It is stated that the V.T. Ry. and F. Co. will be amalgamated with the Vancouver, Westminster, Northern and Yukon Ry., and that the whole of the lines will be completed and operated under the auspices of the C.N.R. (Aug., pg. 268.)

November 1902

50 miles of feed wire has been strung. (Aug., pg. 269.)

Vancouver, Victoria and Eastern Ry.— The construction of the spur line from Grand Forks to Phoenix, B.C., has not been commenced, and it is not expected that anything will be done on it this year. (July, pg. 241.)

Vancouver, Westminster, Northern and Yukon Ry.— Work is being proceeded with on the line which the company is constructing into Vancouver from New Westminster, B.C. The company has been having some difficulties with the city of Vancouver respecting the right of way, and with the C.P.R. respecting the crossing of its tracks at Sapperton. These matters were before the courts, the Railway Committee of the Privy Council, and the Cabinet. The latter body was asked by the C.P.R. to revoke the permission for the V. W. N. and Y. Ry. to cross its tracks at

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(Oct., 1903.)

THE RAILWAY AND SHIPPING W

roads leading from there to Niagara Falls. The idea and ambition of those who are seeking incorporation for this purpose is to build

Sapperton, but the cabinet declined to interfere. (Sept., pg. 307.)

See Great Northern Ry., U.S.

October 1903

The Minister of Public Works is being asked to approve of site of and plan for a lumber mill and other works to be erected in front of Waterfront Block I, Prince Rupert Harbor, B.C. (Feb., pg. 51.)

Grand Trunk Ry.—We are officially advised that plans for the proposed freight sheds at Mimico, Ont., are before the Board of Railway Commissioners. (Mar., pg. 50.)

Great Northern Ry.—F. L. Townley, architect in charge of the erection of the terminal station and other buildings on False Creek, Vancouver, B.C., is reported to have stated that 90% of the work on the station proper was completed, and it was expected to have it completed by Mar. 30. Work has been started on the locomotive house and other buildings. A car yard is being laid out about a quarter of a mile east of the passenger station. It will contain 4 tracks, each 1,500 ft. long, and will be piped for steam, compressed air, water and air brake testing lines, and provision will also be made for battery charging. (Mar., pg. 101.)

Winnipeg Water District.—It

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in a recent interview that every effort will be made to complete the station by June, 1917, the date specified in the Board of Railway Commissioners' order. In a recent interview A. H. Hogeland, Chief Engineer, is reported to have said construction work is under way on the extension of the Abbottsford line which will afford connections at Sumas Landing with the Canadian Northern Pacific Ry. and the other link at Hope. It is expected this piece of line will be ready for operation in July.

The G.N.R. is at present operating northward from Spokane into British Columbia as far as Princeton. The extension of service to the coast will be effected by the joint section between Coquihalla Summit and Hope, built by the Kettle Valley Ry., a C.P.R. division over which it will have running rights. The branch from Spokane runs north to Marcus and thence to Grand Forks, Midway, Oroville, Keremeos, Princeton and Coalmont. The extension of the line to the coast over the Hope Mountains will bring the Boundary, Similkameen and other districts of the interior into much closer communications with Vancouver.

High River and Hudson Bay Ry.—The Alberta Legislature has extended the time within which the company may build its projected railway east and west from

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Meetings, Etc.

At the annual
Ont., June 7, the
directors for the
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E. Brown, C. M.
W. H. Newman,
K. Vanderbilt, W.
E. A. Wicks.

The Massachu-
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amount paid over
Ont., May 30, as
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Net earnings for
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Ry.—The annual
Toronto, June 13.
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berlin, President;
President; Frank

Railway Development, Projected Lines, Surveys, Constr

Alberta & Great Waterways Ry.—We
are officially advised that track has been
laid to mileage 203 on the railway, which
starts from a junction with the Edmon-
ton, Dunvegan & British Columbia Ry.,
at Carbondale, Alta., mileage 14.4 out of
Edmonton. (Mar., pg. 106.)

Blomidon Ry.—The Nova Scotia Legis-
lature has extended the time for the con-
struction of this projected railway, which
is to be operated by steam, electricity or
any other motive power, from Canning,
on the Dominion Atlantic Ry. Cornwallis
branch, to Cape Blomidon, with branches
to Cape Split, and from Canning to Wolf-
ville. (Oct, 1911, pg. 935.)

Dominion Government Ry. to Hudson
Bay.—The Dominion Parliament at its
recent session appropriated \$3,000,000 to
carry on construction work on the rail-
way, and on the terminals at Port Nelson,
Man.

Construction is reported to have been
restarted all along the line for the season,
and it is fully expected that track will be
laid by the end of the season to the Kettle
Rapids, mileage 382 from Pas, Man.

Tenders are under consideration for the
supply of hardware supplies for the Port
Nelson terminals, and for the supply of
hardware supplies for the Port Nelson
terminals, and for the supply of provi-
sions for the construction staff there.
(June, pg. 219.)

terminus at Spirit River, to the B. C.
Block, passing through the Pouce Coupe
Prairie district. A sub-contract was
reported let to W. T. Craig, Winnipeg,
for the first six miles, June 2; and other
sub-contracts were being arranged with
G. Webster, J. Timothy, F. V. Riley and
A. McGregor.

The finishing up of the line to Spirit
River, including station and other build-
ings, etc., will be completed, and the bal-
lasting and finishing up of the branch
from Spirit River to Grande Prairie, will
also be done this season.

It is reported that funds for the carry-
ing on of the season's operations were
secured by the deposit of \$2,420,000 of
4½% bonds, guaranteed by the Province
of Alberta, with Chicago and Cincinnati
bankers, on terms netting the lenders
5½%. (May, pg. 183.)

Great Northern Ry.—The company's
officers have informed the Vancouver
City Council that the contract for the
building of the station at False Creek
flats, let to Grant Smith and McDonnell
Co., is on a percentage basis; that all
employees are citizens of Vancouver; that
they are being paid the current rates of
wages, and that as far as possible all
materials will be purchased in British
Columbia. (June, pg. 222.)

Grand Trunk Pacific Ry.—A press re-
port states that a grading outfit left

JULY 1916

[JULY, 1916.]

ten miles, Lynch and miles, Poupore Bros.; Westfield, Kennedy & pg. 183.)

Recent Meetings, Etc.

N. Ry.—At the annual meeting, June 7, the elected directors for the year are: J. E. Brown, C. M. W. K. Vanderbilt, W. and E. A. Wicks.

N. Ry.—The Massachusetts has authorized the subsidiary, to acquire Southern New England

—The amount paid over elph, Ont., May 30, as perations of the Guelph previous quarter, was e of about \$1,600 over in 1915. The amount is about 5% on the is.

N. Ry.—Net earnings for aggregate from July 1, \$24,346.

N. Ry.—The annual board for the current hamberlin, President; /ice President; Frank Treasurer; and J. E.

N. Ry.—The agent has confirmed an between the company, ntral Rd., the Canada New York Central Rd., e Trust Co., dated Feb. traffic arrangements for riding for the guarantee ortgage bonds to be is-

N. Ry.—The Transportation Club's agurated what they call Educational Ry, under

Railway Development, Projected Lines, Surveys, Constr

Alberta & Great Waterways Ry.—We are officially advised that track has been laid to mileage 203 on the railway, which starts from a junction with the Edmonton, Dunvegan & British Columbia Ry., at Carbondale, Alta., mileage 14.4 out of Edmonton. (Mar., pg. 106.)

Blomidon Ry.—The Nova Scotia Legislature has extended the time for the construction of this projected railway, which is to be operated by steam, electricity or any other motive power, from Canning, on the Dominion Atlantic Ry. Cornwallis branch, to Cape Blomidon, with branches to Cape Split, and from Canning to Wolfville. (Oct., 1911, pg. 935.)

Dominion Government Ry.—to Hudson Bay.—The Dominion Parliament at its recent session appropriated \$3,000,000 to carry on construction work on the railway, and on the terminals at Port Nelson, Man.

Construction is reported to have been restarted all along the line for the season, and it is fully expected that track will be laid by the end of the season to the Kettle Rapids, mileage 332 from Pas, Man.

Tenders are under consideration for the supply of hardware supplies for the Port Nelson terminals, and for the supply of hardware supplies for the Port Nelson terminals, and for the supply of provisions for the construction staff there. (June, pg. 219.)

Grand Trunk Ry.—Acting Superintendent McMillan attended a special meeting of the Lindsay, Ont., Town Council, June 8, to confer with that body as to the creation of a new locomotive house and machine shop there. The plans for this work were prepared some considerable time ago, but the outbreak of the war in 1914, caused a delay in taking action. Mr. McMillan is reported to have said that it was expected the work would be started at a very early date. It was proposed to put up a 20 stall locomotive house, built in circular style, so that it could be extended when circumstances warranted it. The biggest type of locomotives in use

terminus at Spirit River, to the B. C. Block, passing through the Pouce Coupes Prairie district. A sub-contract was reported let to W. T. Craig, Winnipeg, for the first six miles, June 2; and other sub-contracts were being arranged with G. Webster, J. Timothy, F. V. Riley and A. McGregor.

The finishing up of the line to Spirit River, including station and other buildings, etc., will be completed, and the ballasting and finishing up of the branch from Spirit River to Grande Prairie, will also be done this season.

It is reported that funds for the carrying on of the season's operations were secured by the deposit of \$2,420,000 of 4½% bonds, guaranteed by the Province of Alberta, with Chicago and Cincinnati bankers, on terms netting the lenders 5½%. (May, pg. 183.)

Great Northern Ry.—The company's officers have informed the Vancouver City Council that the contract for the building of the station at False Creek flats, let to Grant Smith and McDonnell Co., is on a percentage basis; that all employees are citizens of Vancouver; that they are being paid the current rates of wages, and that as far as possible all materials will be purchased in British Columbia. (June, pg. 222.)

Grand Trunk Pacific Ry.—A press report states that a grading outfit left Moose Jaw, May 27, for Gilroy, the end of track on the Regina-Moose Jaw-Gilroy line, to start grading for the extension of the line to the Saskatchewan River at Riverhurst, Sask.

The G.T.P.R. has deposited with the Minister of Public Works at Ottawa, a description of the site and plans of a warehouse at Prince Rupert, B.C., in front of water block G., approval of which is required under the Navigable Waters Protection Act. (May, pg. 182.)

High River, Saskatchewan & Hudson Bay Ry.—The Dominion Parliament has extended the time for building this projected railway from any point in Tps. 25

July 1916

vator at Moose Jaw by Dec. 31, 1915.

Great Northern Ry. Lines in Canada.—A bridge has been erected at a reported cost of \$60,000 on the Vancouver, Victoria and Eastern Ry. branch to the Granby smelter.

Preparatory work on the site of the new station at False Creek, Vancouver, was started Nov. 25 when test piles were driven at various spots. (Dec., 1915, pg. 469.)

Greater Winnipeg Water District.—The

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bridge. It is an L-shaped structure, the main building being 230 x 61 ft., and the bottom of the L being a one story building in which will be located the baggage room, mail room, express office, trainman's room, etc. East of this again will be the boiler house, which will supply heat to the whole building. The main building faces Main St., and the centre part, 100 x 60 ft., will form the general waiting room and will be the full height of the building. Each of the wings, 65 x 50 ft., will be two stories high. The ground floor will be devoted to the necessary public purposes of a terminal station, and the upper floors will be offices for the G. N. R. and the Northern Pacific Ry., which will use the building jointly. The building will be of reinforced concrete faced with pressed brick, and with terra cotta trim. The main waiting room will lead out to a covered concourse the whole length of the building, giving access to 11 sets of tracks. (Nov., pg. 44.)

Intercolonial Ry.—We are officially ad-

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tion at Port Colborne, Ont. (Oct. pg. 400.)

Great Northern Ry. Lines in Canada.—

The Vancouver, Victoria and Eastern Ry and Navigation Co. has been authorized by the Board of Railway Commissioners to open for traffic the section of its line from a connection with the Kettle Valley line at Hope, B.C., to a connection with the Canadian Northern Pacific Ry.,

the Angus pine plant near Seattle, Wash.

re Great Northern Ry.—The Vancouver
his City Council issued a permit, May 28,
R. for the foundation work, at the new G.
to N.R. station at False Creek, at an esti-
ne, mated cost of \$30,000. The contractors
nd are Grant Smith and Co. and McDonnell
g. Ltd., and the work is being done under
the supervision of the company's archi-
tect, F. L. Townley. A. H. Hogeland,
ew Chief Engineer, is reported to have said
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Great Northern Ry. Lines in Canada.

Winnipeg Entrance.—L. C. Gilman, Assistant to the President G.N.R., and T. Cooper, Assistant to the President Northern Pacific Rd., attended a joint meeting of the Board of Works and the Railway Committee of the Winnipeg City Council, Mar. 8, to discuss the plan, prepared by the companies, for the entry into the city. The plans produced showed a line coming into the city from the west and passing from McPhillips St., on a line between Ross and Pacific Avenues, west of Paulin St., together with numerous shunting tracks and a freight station. The plans include the closing of Ellen St. for the width of the yards and also the closing of Leonard St. It is proposed to make a subway at Nena, between Ross and Pacific, by lowering the street 5 ft. and raising the track 10 ft. Objections were made by citizens on the ground that the company's charter contemplated an entrance from the south-east, and not from the west, and it was urged that the proper route should have been between Henry and Higgins Sts., where the streets had blind ends. The meeting was adjourned to enable the companies' representatives to submit their proposals in writing.

As a result of the adjourned meeting of the committee held Mar. 18, it was unanimously decided not to accede to the request to construct freight and shunting yards in the block bounded by Ross and Pacific Avenues and Isabel and Nena Streets. The plan as outlined by L. C. Gilman provides for a subway at Nena Street sunk 6 ft. below the level of the street and an elevation of 10 ft. above the street level for the tracks, these tracks to stop at Isabel St. From Isabel to Paulin Street a spur track would be constructed. Shunting along this track would only be done at night over a level crossing at Isabel Street, where gates would probably be placed. The application to the committee was made in the name of the Midland Ry. of Manitoba.

Brandon, Saskatchewan and Hudson Bay Ry.—The Dominion Parliament is being asked to extend the time within which the company may construct its authorized lines.

Penticton Ry.—Application is being made to the British Columbia Legislature to incorporate a company with this title to construct a railway from Penticton, to the lower end of Okanagan Lake, and southerly from that lake to the International boundary, where connection will be made with a spur northerly from Oroville, Wash. The provisional directors are:—A. H. MacNeill, solicitor for the Great Northern Ry., Vancouver, B.C., and J. H. Kennedy, Chief Engineer, Vancouver, Victoria and Eastern Ry., Grand Forks, B.C. Oroville is a station at the International boundary between B.C. and Washington, on the V.V. and E. Ry.

Ry. \$4,000, and Vancouver Harbor Commission \$10,000. The council is dissatisfied with the latter two promises and authorized the City Solicitor and the City Engineer to see the harbor and Great Northern officials with a view to securing larger contributions. (Sept., pg. 468.)

Vancouver to English River—We are

for carriages and foot passengers.

Great Northern (U.S.A.)—The extension of the terminal facilities of this Co.'s subsidiary, the Red Mountain Ry. at Rossland, B.C., has been commenced and will be completed this summer at a cost of \$100,000. An additional track, paralleling the present one from Washington St. to the Black Bear ore bunkers, will be laid; the freight shed will be enlarged, and an improved passenger depot will be built. Additional yard room will be provided by filling up a swamp between St. Paul and Washington Streets.

Edmonton, Yukon and Pacific Ry.—The extension of the old Edmonton District Ry. has

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the shops on a larger scale. The buildings, however, will not be gone on with this year. (July, pg. 235.)

Great Northern Ry. (U.S.) An agent of the G.N.R. is negotiating for the purchase of land near the Vancouver, B.C., city hall in order to build a large six story hotel.

In connection with the building of railways in B.C., there are a great many rumors in circulation, most of which have a political significance, seeing that a provincial election is in progress. The Premier recently had an interview with J. D. Farrell, who represents President J. J. Hill at Seattle, Wash., and on his return to Vancouver, B.C., said in an interview: "The Great Northern has much in store for British Columbia, and will afford transportation without being bonused. Mr. Hill will proceed under the charters of the Vancouver, Westminster and Yukon Ry., the Kootenay Central Ry., and the Kootenay, Cariboo and Pacific Ry., to give two connections with the Grand Trunk Pacific Ry. in the north, one from Vancouver and the other from southeast Kootenay. He also said that the line from Vancouver through Cariboo will have a branch through the Yellow Head Pass to Edmonton, so that the Great Northern may tap the great wheat fields of the Northwest." Senator Templeman, in an interview at Ottawa, stated: "While B.C. is the largest gold-producing province in the Dominion, it is at the same time prolific of gold bricks, in the shape of railway projects, on the eve of an election. The fertility of resource possessed by the average Provincial Premier when it becomes necessary for him to provide one of these gold bricks is unfailing. A gold brick of this kind has been handed out at every general election, and at not a few by-elections, during the last ten years. Two or three elections were fought in Victoria on the British Pacific Ry. project, a railway that was to run from Bute Inlet to Yellow Head Pass, and which was ultimately, it was claimed, to make Victoria the terminus of another transcontinental line. At the last by-election in Victoria, the branch of the Canadian Northern over practically the same route was the great drawing card. In the cases mentioned, the companies were already granted subsidies from the Province, which gave the color of genuineness to the schemes. But now the Great Northern has no contract of any kind with the Province, and will not make one. Mr. Hill publicly stated at Grand Forks, B.C., that he would build the road to the coast without a subsidy. All he wanted was a good grade. It is quite true Mr. McBride has not stated that he has made a contract with Mr. Hill, or with anyone representing Mr. Hill."

See also Vancouver, Westminster, Yukon

Great Northern Ry., U.S.A.—The annual report, recently issued, mentions the following among the subsidiary lines built during the past year:—Montana and Great Northern, Jennings to Gateway, Mont. (on the International boundary), 50.98 miles, opened for operation July 10, 1902; Crow's Nest Southern, Gateway to Morrissey Jct., B.C., 44.26 miles, with a spur from Morrissey Jct., to Morrissey, B.C., 4.21 miles, opened for operation on Sept. 15, 1902; Washington and Great Northern, Marcus to Boundary, Wash., 27.66 miles, and from the International boundary to Republic, Wash., 31.92 miles, opened for operation on Aug. 17, 1902; Vancouver, Victoria and Eastern Ry. and Navigation Co., from International boundary line at Rideau, B.C., to the boundary line near Carson, B.C., 14.46 miles, opened for operation on Aug. 17, 1902; a spur from the main line to Grand Forks, B.C., 1.89 miles, is under construction. The work of changing from narrow to standard the gauge of the Great Falls and Canada Ry. (now owned by the Montana and Great Northern Railway Company) from Great Falls to Sweet Grass, Mont., 134.37 miles, has been completed.

A short piece of line has been constructed connecting the lines of the G. N. Ry. at St. Vincent, Minn., with the Canadian Northern Ry. at Emerson, Man., and a traffic agreement has been entered into with the C. N. Ry. It is reported that connection will be made with the C. N. Ry. at other points on the Manitoulin border. (Nov., 1902, pg. 383.)

See also Alberta Ry. and Coal Co.; Canadian Northern Ry.

Great Northern Railway Terminals in Vancouver.

The accompanying illustrations show the passenger and freight stations which have been completed recently in Vancouver, B.C., by the Vancouver, Victoria and Eastern Ry., a subsidiary of the Great Northern Ry., and which are being used jointly by the company last mentioned and by the Northern Pacific Ry.

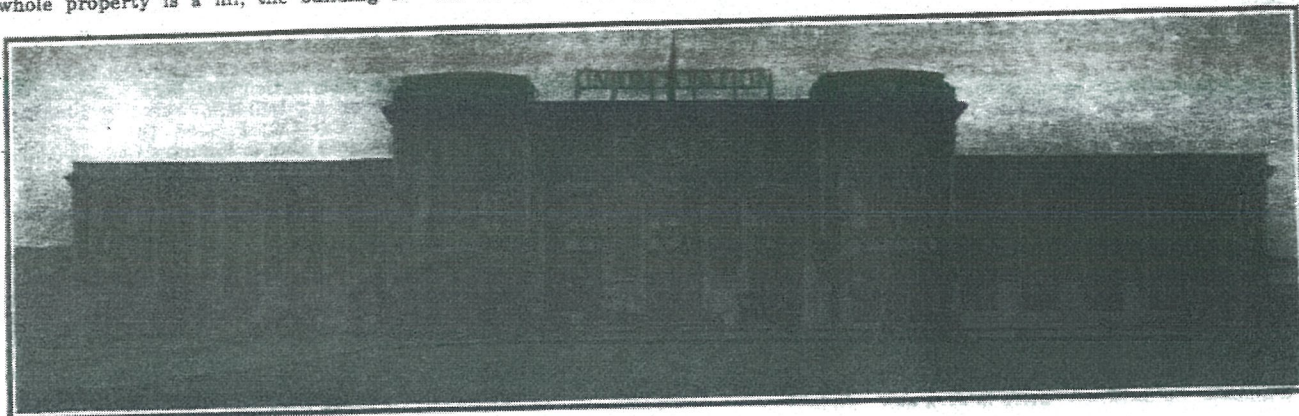
The Passenger Station, which is L shaped, the main front facing west, is about 375 ft. east of Main St. As the whole property is a fill, the building is

the plastering of the end walls for placing oil paintings showing the Glacier and Yellowstone National Parks. The lighting fixtures are of special design, and are executed in plaster. Alcoves off the main waiting room are fitted with seats and tables for the public. The ticket office is in the centre of the east wall, opposite the two main entrances. There are two principal entrances to the main waiting room from the west, directly opposite to which are

men's room, lavatory, mail room, Great Northern and Northern Express. The leg of the L is about 228 ft. long by 42 ft.

The ground in front of the passenger station is to be laid out in an attractive manner. The station will be reached by two driveways from Main St., and the remaining portion, not taken up by drives and walks, will be laid out with lawn and trees.

A hundred and fifty feet east of the baggage room wing, and in a direct line



Union Passenger Station, Great Northern and Northern Pacific Railways, Vancouver, B.C.

supported on a pile foundation, cluster piles being driven and cut off below the line of perpetual saturation. Upon these, concrete piers were poured, which support reinforced concrete beams, which in turn carry the exterior walls, columns and floors. The skeleton of the building is reinforced concrete, hollow tile, and concrete floors and roof. The exterior has a granite base, carrying up and around all exterior doors terracotta surbase, and red brick above, with terracotta trimmings and cornice.

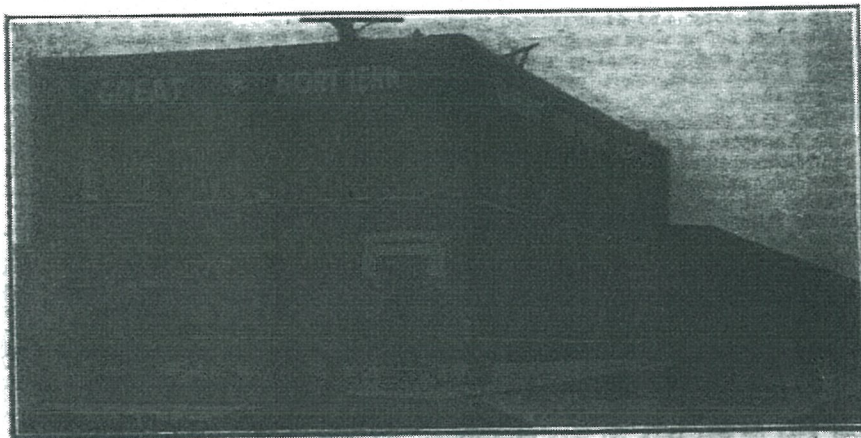
two entrances leading to a glass covered concourse, running the full length of the building, which in turn leads to 41 tracks, the platforms being covered by umbrella roofs, 700 ft. long. Off the main waiting room in the south wing are located the smoking room, which has access to the concourse, women's retiring room and lavatories. In the south wing are an immigrants' room and lavatories, but having no connection with the main waiting room. A corridor, 12 ft. wide, runs down the centre of the north wing to a

is the power house, 50 ft. x 42 ft., with a brick stack at the east end 90 ft. high. The power house supplies heat to the different buildings through an underground reinforced concrete tunnel, steam to the passenger cars at the stub tracks, and to the passenger car yards. In connection there is a transformer room and a motor driven air compressor. Provision is made in the boiler house for three 125-h.p. return tubular boilers.

There are two freight sheds, the Great Northern one being next the passenger station and the Northern Pacific farther over. They are both 50 x 600 ft. set back 15 ft. from Park Lane, providing a small parking strip in front of the buildings. The Great Northern freight shed is separated from the passenger station at the narrowest point by a 60 ft. driveway. Between the two sheds there are 6 tracks, and on the north side of the Northern Pacific shed is a 60 ft. driveway, and then come the team tracks. The westerly 66 ft. of both sheds, adjoining Park Lane, are two stories high, containing the office portion, the remainder being simply a one story shed, cut in the middle by a fire wall, the easterly half for bonded goods and the westerly half for free goods. Customs accommodation is provided in both sheds. The foundations for the freight sheds are similar to the passenger station, above grade a granite base, brick with terra cotta trimmings, wooden floors.

Locomotive House.—At the east end of the yard there is a 15 stall locomotive house, with a machine shop and boiler house in connection. The depth of the locomotive house is 92 ft., and the machine shop and boiler house is 50 x 160 ft. The foundations are similar to the passenger station, with brick and wood construction above grade. In close proximity to the locomotive house are an oil house, 20 x 36 ft., and a store house, 20 x 73 ft., of similar construction to the machine shop, etc.

In connection with the passenger car



Freight Stations, G.N.R. and N.P.R., Vancouver, B.C.

The centre portion, 45 ft. high, and approximately 106 ft. long, contains the main waiting room, 80 x 100 ft., which runs the full height. Flanked on either side are two wings, about 56 x 65 ft., two stories high. The upper floors of the wings are appropriated to the Great Northern and Northern Pacific for offices.

The main waiting room is paneled in Alaska marble, 7 ft. high, and has marble and terrazzo floors and ornamental plaster ceiling. Provision was made in

carriage entrance. Off the waiting room in the north wing are the parcels and news office and station master's, validating and information offices. Off the corridor leading to the carriage entrance are an exhibition room, a room for station officials and a checking lobby which is connected direct to the baggage room.

The leg of the L, or baggage room wing, is a one story building containing the baggage room, bonded baggage, Canadian and United States customs, train-

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yards there are a commissary building, 100 x 40 ft.; an oil house, 20 x 20 ft.; car repairers' building, 30 x 20 ft.; car foreman's building, 20 x 12 ft.; car cleaners' building, 16 x 20 ft.; carpet cleaning building, 16 x 20 ft., and a coal house, 40 x 20 ft.

Under the direction of A. H. Hogeland, Chief Engineer, G.N.R., the buildings were designed by Fred L. Townley, architect, Vancouver, in whose office all the drawings were made and under whose supervision the buildings were erected.

In connection with the erection of the terminals the Vancouver, Victoria and Eastern Ry. has filled in the whole of the area from the southern boundary of the property, which is purchased from the city, to the shore line on the north side of False Creek. This area was previously part of the bed of False Creek. The average depth of the fill required to bring

those now in service to be so stencilled from time to time when shopped for repairs.

Assessing Grand Trunk Pacific Railway Property in Calgary.

The Supreme Court of Canada has, in a recent judgment, upheld in several respects the contention of the City of Calgary, Alta., as to the assessment of the old Royal North West Mounted Police barracks in the city, acquired by the Grand Trunk Pacific Ry. for station purposes, and the company's other property in the city. The City Solicitor in reporting on the judgment to the Council said: "The company contended that the city's method of assessing in 1916 was illegal, claiming that the site comprising 25.3 acres should be assessed on a mileage

pany is entitled to have 4.3 acres assessed at the mileage basis instead of 3.64. The judgment is in effect a practical affirmation of the method of assessment contended for and adopted by the city."

Freight and Passenger Traffic Notes.

The Canadian Government Railways have opened a train enquiry office at Moncton, N.B., station.

The Lethbridge, Alta., Board of Trade is urging the C.P.R. to open a downtown ticket office there.

The Pacific Northwest Tourist Association, which is co-operating with the railway companies in promoting tourist travel in British Columbia, Oregon and Washington is said to have sent out \$150,000 of advertising matter this year.

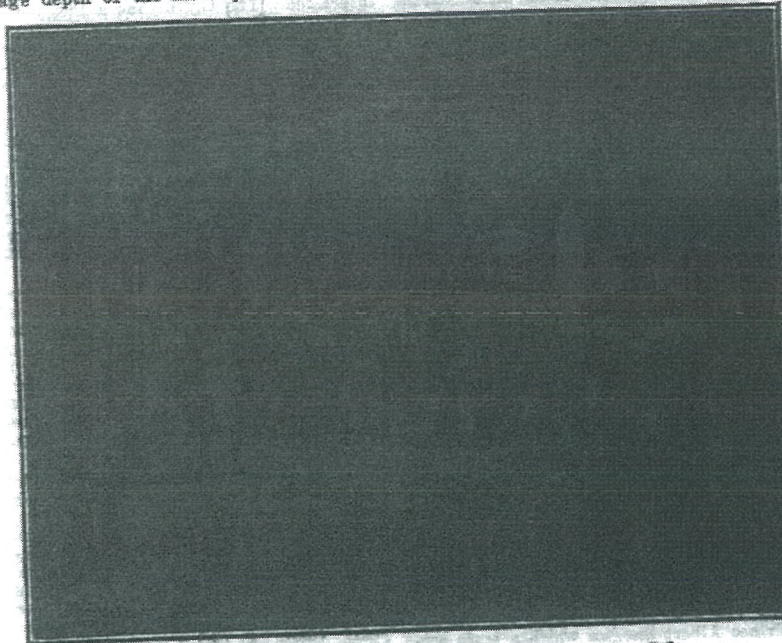
The trans-Pacific steamship lines operating to the far east, out of Victoria and Vancouver, have advanced the steerage rates by approximately 10% from Sept. 1. The C.P.R. rates on the Empress of Russia are advanced from \$55 to \$60 and on the Empress of Japan and Montevideo from \$51 to \$55.

The Grand Trunk Pacific Ry. announces in connection with the removal of rails in the Yellowhead Pass district that tickets must not be sold to Alpland, Burrows, Dyke, Galloway, Geikie, Miette, Hot Springs, Obed, Parkgate, Podley, Rainbow, rant Brook, Hinton, Hurgwen, Lucerne, Medicine Lodge, Red Pass, Resplendent, Roundcroft, and Yellowhead. Track connection is, however, being maintained and a stub service is in operation between Henry House and Pochontas, and tickets may be sold to Pochontas, Hawes and Interlakes.

The Canadian Freight Association issued on Aug. 1 a new all-rail tariff from Montreal and all eastern territory to Port William and points west, effective Sept. 1. The new tariff provides an increase in class rates per 100 lbs. as follows—Class 1, 6c; class 2, 3c; class 3, 3c; class 4, 3c; class 5, 2c. Nos. 4 and 5 of Canadian Freight Association's tariff cover respectively class and commodity rates. This is a similar advance to the allowed recently by the Board of Railway Commissioners in connection with rail and water rates.

Delaware and Hudson Co. trains which now run into the G.T.R. Bonaventure station, Montreal, will after Oct. 1 be operated into the C.P.R. Windsor St. station, and from same date Rutland Rd. trains now operating to Montreal over the C.P.R. will be operated over the G.T.R. The new arrangement of the Rutland service is as follows: The Montreal-New York route will be as follows: Montreal to Rouse's Point, N.Y., by G.T.R.; Rouse's Point to White Creek, N.Y., by Rutland Rd.; White Creek to Troy, N.Y., by Boston & Maine Rd.; Troy to New York, by New York Central Rd. The Montreal-Boston route is: Montreal to Rouse's Point, by G.T.R.; Rouse's Point to Bellows Falls, Vt., by Rutland Rd.; Bellows Falls to Boston, by Boston & Maine Rd. The Ottawa-New York route is: Ottawa to Rouse's Point, by G.T.R.; Rouse's Point to White Creek, by Rutland Rd.; White Creek to Troy, by Boston & Maine Rd.; Troy to New York, by New York Central Rd.

Martin N. Todd, President, Galt, Preston & Hespeler St. Ry., and General Manager, Lake Erie & Northern Ry., who had been in ill health for some months, died at his home at Galt, Ont., Aug. 23, aged 59.



Main Waiting Room, G.N.R. and N.P.R. Union Station, Vancouver, B.C.

the property up to the approximate level of Main St. was about 12 ft. The company also owns considerable property on the south side of False Creek.

Stencilling Cars for Bulk Grain Shipments.

The Board of Railway Commissioners passed general order 206 Aug. 15, as follows: Re petition of Alberta Pacific Grain Co. and others, for an order requiring railway companies to stencil inches in box cars suitable for shipments of bulk grain. Upon hearing the matter at Calgary, June 18, the petitioners, the Alberta Farmers' Co-operative Association, and the Canadian Pacific, Canadian Northern, and Grand Trunk Pacific Railways being represented. It is ordered that railway companies be required to stencil inches, on the inside walls of cars used in the grain traffic in Manitoba, Saskatchewan, and Alberta, so as to show the depth of grain loaded therein, one stencil on each side of each door and 3 or 4 ft. therefrom; all such cars hereafter built to be so stencilled before going into service, and

basis of \$1,000 a mile. The city did assess the registered right of way, comprising 3.64 acres, according to the Alberta statute, which says that the roadway and any superstructure thereon of any railway company shall be limited to an assessment of \$1,000 a mile. The area actually comprised in the company's roadway from the eastern limits to the terminal site at the station is 4.3 acres, owing to the fact that the company did not build its station on the registered right of way which would have made it face Eighth Ave, consequently there is more land in the right of way. The Supreme Court rejected the company's contention that all of the terminal site should be assessed on a mileage basis, but allowed the company's appeal as to 4.3 acres comprising its actual roadway. All the rest of the acreage in question is to be assessed according to the method adopted by the city, viz., its actual value per acre. This means that the company's assessment for 1916 must be reduced by the difference between the assessment of 4.3 acres at \$2,000 an acre and the assessment figured on a mileage basis. For each subsequent year it means that the com-

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