DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR

FROM JULY 1, 1898, TO JUNE 30, 1899

SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF THE REVISED STATUTES OF CANADA, CHAPTER 37, SECTION 28

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1900

[No. 10—1900]

To His Excellency the Right Honourable the Earl of Minto, G.C.M.G.,
&c., &c., &c., Governor General of Canada, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY :—

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year, from July 1, 1898, to June 30, 1899.

All of which is respectfully submitted

ANDREW G. BLAIR,
Minister of Railways and Canals.

OTTAWA, April 25, 1900.

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CANAL SYSTEM.

13. St. Lawrence, Ottawa, Rideau and Richelieu Canals.
14. Welland Canal.
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Map showing the exploration made on proposed railway to Yukon District.

ERRATA.

Part I, p. 34.—Line 13 from top, for 1,282 read **1,137** miles.

Part II, p. 7.—Lachine Canal, for total Staff read $1,336,849.46.

" 8.—Beauharnois Canal, for total Staff read $542,209.03.

" 12.—Cornwall Canal, for total Staff read $470,994.68.

" 16.—St. Anne Canal, for total Repairs read $80,728.75.

" 17.—Carillon and Grenville Canal, for total Staff read $442,905.49.

" 28.—Recapitulation—Expenditure on Canals, for total Capital read $76,396,658.41, and total Staff, $7,326,177.32.

29.—Hydraulic and other rents, Welland Canal, in column 'Accrued during the year ended June 30, 1899,' read $12,417.38; and Carillon and Grenville Canal, in column 'Balance due June 30, 1899,' read $2,110.00.

33.—Intercolonial Ry., for total 'Working Expenses' read $70,297,571.74; and for total 'Revenue received,' read $63,998,738.02; and for 'Amounts transferred to Cons. Fund,' read $88,363.18.

" 41.—Annapolis and Digby Ry., for total Capital read $660,682.59.

" 44.—Recapitulation—Railways and Canals.—Total revenue received to July 1, 1898, $30,530,494.85.

" 45.—For Subsidies Voted to June 30, 1899, to Kingston Napanee and Western Railway read $208,732.80.

" 45.—Insert 'Canadian Pacific Ry. Co.' before 'Crow's Nest,' and change Subsidies Voted to June 30, 1899, to $2,776,250.00.

" 45.—For total Subsidies Voted to June 30, 1899, to Grand Trunk Ry.—'Victoria Bridge,' read $199,599.57.

REPORT OF THE DEPUTY MINISTER.

To the Honourable
ANDREW G. BLAIR,
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal year ended June 30, 1899.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers of the department, are given in appendices.

Attached hereto (Part II.) will be found statements showing the amounts expended during the past fiscal year in construction, repairs, and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, on each of the Government railways, and on the Canadian Pacific Railway so far as the Government is concerned; also a statement showing the payments made, year by year, to subsidized railways, with the aggregates of such payments.

RAILWAYS.

The present report deals with those railways of the Dominion directly controlled by the Federal Government, and others towards the construction of which subsidies have been authorized.*

In an appendix (Part VI.) will be found a special statistical report, embodying returns for the fiscal year ended June 30, 1899, made by Canadian railway companies, as required by statute. This report gives information as to railroad operations in Canada, including the Government roads.

The general facts gathered from the compilation will be of interest.

The number of railways in actual operation, including the two Government roads, the Intercolonial and the Prince Edward Island Railways, was 153: some of these however, are amalgamated or leased; making the total number of controlling companies 84, not including the Government railways. The number of companies absorbed by amalgamation is 33, and the number of leased lines is 35.

The number of miles of completed railway was 17,358, an increase of 488 miles, besides 2,402 miles of sidings. The number of miles laid with steel rails was 17,180, of which 562 miles was double track. The number of miles in operation was 17,250.

*It should be observed that while the usual reports furnished by the superintending officers, and to be found in the appendices hereto, deal with the fiscal year only, the report of the Chief Engineer of the department covers works of construction up to November 1, 1899.

The paid-up capital amounted to $964,699,784, an increase of $23,402,747. The gross earnings amounted to $62,243,784, an increase of $2,528,679, and the working expenses aggregated $40,706,217, an increase of $431,328 compared with those of the previous year, leaving the net earnings $21,537,567, an increase of $960,011. The number of passengers carried was 19,133,365, an increase of 689,316, and the freight traffic amounted to 31,211,753 tons, an increase of 2,425,750 tons. The total number of miles run by trains was 52,215,207, an increase of 1,526,924. The accident returns show 20 passengers killed.

The Government expenditure on railways prior to and since the date of confederation (1867) amounts, on capital account, to $124,327,857.65 (including a payment of $25,000,000 to the Canadian Pacific Railway Co.) and for railway subsidies charged against the Consolidated Fund the further sum of $20,633,842.16, making a total expenditure of $144,961,699.81 In addition, there has been an expenditure since confederation, for working expenses of $76,726,244.05, covering the maintenance and operation of the Government roads, or a grand total of $221,687,943.86,* all of which, with the exception of $13,881,460.65, has been expended on railways during the past thirty-two years. The revenue derived from the Government roads during the same period amounts to $68,451,220.29.

CANADIAN PACIFIC RAILWAY.†

By the payment during the fiscal year of the sum of $233.67, the total amount, $579,255.20, awarded to the Canadian Pacific Railway Company in 1891 by the special arbitrators in respect of transferred works in British Columbia, and to be expended by the company, under Government supervision, in certain specified directions, has now been earned and paid. A report from the Chief Engineer will be found in Part I., p. 30, giving certain information in respect of this railway.

GOVERNMENT RAILWAYS IN OPERATION.

The several lines maintained by the Government are: The Intercolonial, the Windsor Branch (maintained only), and the Prince Edward Island Railways.

Details respecting these railways and their operations will be found in the appendices, Part I., containing reports from the Chief Engineer of the department, the General Manager of Government Railways, and the officials of these roads.

The gross earnings of all the Government roads for the past fiscal year, 1898-9, amounted to $3,945,817.40, and compared with those of the preceding year show an increase of $631,970.30. The gross working expenses amounted to $3,906,612.31, an increase of $329,363.43.

The net profit on the operations of the year was $39,205.19.

The above figures include the sum of $210,000, rental of leased lines for the extension of the Intercolonial into Montreal.

*This does not include an annual subsidy of $186,600 to the Atlantic and North-west Railway Company for 20 years from July 1, 1889, nor interest at 5 per cent on the sum of $2,394,000, payable to the province of Quebec for the line from Quebec to Ottawa, which sum has been transferred to the Public Debt.

†A summarized statement showing the transactions of the government with the company will be found in the Annual Reports of this department for the years 1886-7 and 1895-6, the road having been opened for through traffic in June, 1886.

SESSIONAL PAPER No. 10

INTERCOLONIAL RAILWAY.

On March 1, 1898, the operations of the Intercolonial were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169·81 miles to the operation of the government line, its length being 1,314·67 miles, instead of 1,145.

Consequently, in the fiscal year 1897-8 a new element was introduced into the Intercolonial Railway accounts by the payment of rental during four months for these leased lines, and in order not to complicate the comparison of averages of that with those of the preceding year, the rental was treated as a separate matter, not entering into the ordinary statements of expenditure on the road. This led to some apparent discrepancies, as was explained in a foot-note on page XI. of my report.

This year (1898-9) the accountant of the railway has dealt with the rental as an addition to the ordinary working expenses (page 66), and in his comparative statement of averages (page 73) gives such averages, for each year, both with the rental included, and also with rental omitted. The figures of my present report as Deputy are based on his statements with the rentals included and the differences which have resulted from the use by the General Manager and by the Chief Engineer of the department of figures from which it was omitted will, next year, cease to exist. Meantime, this explanation will cover any seeming discrepancy of statement in the matter.

CAPITAL ACCOUNT.

During the fiscal year there was an addition of $1,081,929.94 to the Capital Account expenditure, making the total expenditure chargeable to 'Capital,' on the whole road as amalgamated under the Act 54-55 Vic., ch. 50 (1891), up to June 30, 1899, $56,750,843 89.

The additions made during the year included $63,945.04 for increased accommodation at Halifax, $195,534.59 for increased accommodation at St. John, $20,000 for increased accommodation at Moncton, $21,258.68 for the extension to deep water at North Sydney, $17,358.96 to build an elevator at St. John, $41,203.83 to build an elevator at Halifax, $49,990.39 to strengthen bridges, and $619,999.26 for rolling stock. The report of the General Manager (Part I., p. 59) shows and explains these several items.

REVENUE ACCOUNT.

The gross earnings of the year amounted to $3,738,331.44, an increase of $620,661.59, and the working expenses to $3,675,686.21 (including $210,000 rent paid for the extension into Montreal), being an increase in comparison with the previous year (when $70,000 was paid for such rental), of $348,037.70; the excess of earnings over expenditure being $62,645.23, against an excess of expenditure over earnings in the previous year of $209,978.66, or a betterment of $272,623.89.

Comparing the earnings with those of the previous year, the passenger traffic produced $1,167,453.16 or 31·23 per cent of the gross earnings, an increase of $113,588.52; the freight traffic amounted to $2,348,096.58 or 62·57 per cent of the gross earnings, an

increase of $490,356.52, and the carriage of mail and express freight produced $222,-781.70 or 5·96 of the gross earnings, an increase of $16,716.55. The earnings per mile were $2,843.55,* an increase of $249.02.

GENERAL OBSERVATIONS.

A comparison of the traffic of the past fiscal year with that of the previous year shows certain interesting features.

The number of passengers carried was 1,603,095, an increase of 74,651, and 1,750,-761 tons of freight were carried, an increase of 316,185 tons.

Of flour and meal 1,157,250 barrels were carried, an increase of 169,842. Of grain 2,595,353 bushels were carried, an increase of 1,043,981; of this 30,000 bushels was for shipment at Halifax. Lumber showed an increase of 52,460,215 superficial feet, the total quantity carried being 306,554,031 feet. There was an increase of 20,520 in the number of live stock, of which 109,821 head were carried. 494,206 tons of coal, an increase of 124,257 tons, were carried. Of raw sugar, none was carried. Of refined sugar, 26,164 tons, a decrease of 390 tons were carried. A total of 6,583 tons of fresh fish, a decrease of 1,747 tons, and a total of 5,474 tons of salt fish, an increase of 469 tons, were carried.

Of ocean borne goods, other than deals, to and from Europe via Halifax, the aggregate was 34,263 tons, an increase of 8,043 tons. Of this 31,555 tons was local traffic. In addition 82,260 tons of deals were carried.

In the winter of 1898–99 the removal of snow and ice entailed an expenditure of over $70,000, about $12,000 more than the cost the previous year.

The permanent way and all structures and works are in good order.

The train mileage (or number of miles run by trains) of the year was 4,881,695, an increase of 926,686 miles. The cost per train mile was 75·29 cents, 8·85 cents less than in the previous year.

The working expenses per mile of railway amounted to $2,795.90, an increase of $26.63 per mile.

The value of stores on hand at the close of the fiscal year, including fuel, rails and old material, was $553,177.72.

A number of interesting statistical and comparative tables and other information relating to the railway and the several features of its traffic during the past year and the previous year of its operation, will be found in the appended reports of the Chief Engineer of the department and of the officers of the road.

WINDSOR BRANCH.

This road is 32 miles in length. It extends from Windsor Junction, on the Intercolonial Railway, to Windsor.

This railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the

*These figures are based on a mileage for 1898-99 of 1,314·67 miles and an average mileage of 1,201·63 n 1897-98.

Government taking the remaining one-third, and assuming all costs of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends for a further term of 21 years, arrangements similar to those made in 1871.

All charges for superintendence and supervision of maintenance of works are borne by the Government; the duty of supervision being performed by the chief officers of the Intercolonial Railway.

The gross earnings of the Government (one-third of gross receipts) credited to this branch, amounted to $42,474.03, an increase of $5,247.39. The expenses of maintenance amounted to $12,873.09, a decrease of $5,308.54, leaving the profit to the Government $29,600.94.

The road has been maintained in good order. Details will be found in the appendices. (*See* Part I., p. 104.)

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

The total cost of the road and equipment chargeable to capital account at the close of the fiscal year was $3,790,107.26; there being an addition during the year of $22,000.00 on account of the shortening of the line between North Wiltshire and Colville, the purchase of a wharf at Mount Stewart, and rolling stock.

REVENUE ACCOUNT.

The gross earnings amounted to $165,012.03, and the working expenses to $218,053.01; the expenditure in excess being $53,040.98.

Compared with the previous year, the gross earnings show an increase of $6,061.42. The railway carried 129,667 passengers, an increase of 3,157, producing $65,383.11, an increase of $1,648.50. Of freight there were carried 57,968 tons, an increase of 429 tons, producing $75,888.52, an increase of $4,042.92, while the earnings from mails and sundries amounted to $19,740.40, an increase of $370.

Compared with the previous year, the working expenses were less by the sum of $13,365.73.

The train mileage (the number of miles run by trains) was 263,335, an increase of 10,441 miles.

The cost per mile run by trains was 82·80 cents, a decrease of 8·71 cents; and per mile of railway $1,038.35, a decrease of $63.64.

The value of stores on hand at the close of the fiscal year was $84,039.91.

The road, with its buildings and rolling stock, has been maintained in a satisfactory condition.

Details of operations will be found in the appendices (Part I., p. 109), including the reports of the superintendent and other officers.

SURVEY FOR A RAILWAY TO GIVE ACCESS TO THE YUKON DISTRICT.

In 1898 and 1899, in accordance with parliamentary provisions, surveying parties have been engaged in the work of endeavouring to find a feasible route for a railway, on Canadian territory entirely, to give communication with the Yukon District from a point on an existing Canadian railway, and also from a Canadian port on the Pacific coast, and the approximate cost of such a railway. Reports from the officers in charge of those surveys will be found printed in the appendices (Part I., p. 134) and a brief summary of the results obtained forms part of the chief engineer's report (Part I., p. 32) together with an explanatory sketch map.

GOVERNMENT ACTION AS TO SUBSIDIZED RAILWAYS.

NOTE.—The numbers within brackets after the title of the company refer to the lists of railways subsidized by Parliament, in Part III.

With regard to the several lines of railway subsidized by the Dominion, the following represents the action taken and the progress made, in so far as the Dominion Government is concerned; only those lines and companies being mentioned as to which definite steps, other than merely preliminary, have been taken towards securing the subsidy. Information has been brought down to the end of the fiscal year, June 30, 1899, only.

The following shows the aggregate of the payments made on ordinary subsidy account since the system of subsidizing railway enterprises was commenced:

For the fiscal year	1883–84,	ended on June 30,	1884	$ 208,000 00
do	1884–85	do	1885	403,245 00
do	1885–86	do	1886	2,171,249 00
do	1886–87	do	1887	1,406,533 00
do	1887–88	do	1888	1,027,071 92
do	1888–89	do	1889	846,721 83
do	1889–90	do	1890	1,491,595 72
do	1890–91	do	1891	1,079,105 87
do	1891–92	do	1892	1,061,615 93
do	1892–93	do	1893	624,794 07
do	1893–94	do	1894	1,043,285 10
do	1894–95	do	1895	1,123,949 10
do	1895–96	do	1896	648,145 49
do	1896–97	do	1897	230,355 30
do	1897–98	do	1898	1,228,334 78
do	1898–99	do	1899	3,014,620 05
				$17,608,592 16

To the above there have to be added the following exceptional subsidies:

Canada Central Railway	1,525,250 00
Canadian Pacific Railway	25,000,000 00
" " extension	1,500,000 00
Western Counties Railway (Digby-Annapolis section)	500,000 00
Total subsidies paid up to June 30, 1899	$46,133,842 16

The above does not include the annual subsidy payable to the Atlantic and Northwest Railway Company, nor the amount due to the province of Quebec for the railway between Ottawa and Quebec, which has now been transferred to the public debt. (*See* note on page 44 of the Accountant's statement, Part II.)

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the Government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been fully earned and paid prior to July 1, 1898.

A tabulated statement of payments will be found in Part II., page 45, and a list of subsidy agreements entered into during the fiscal year in part IV., Page 2.

The several Subsidy Acts passed in each year from 1882 will be found in Part III. No subsidies were authorized in the sessions of 1895, 1896 and 1898.

Albert Southern Railway Company.

(See Annual Report of 1891-92.)

Atlantic and North-west Railway Company.

(See Annual Report of 1889-90.)

Baie des Chaleurs Railway Company.

(See Annual Report of 1895-96.)

Beauharnois Junction Railway Company.

(See Annual Report of 1895-96.)

Belleville and North Hastings Railway Company.

(See Annual Report of 1888-89.)

Boston and Nova Scotia Coal Company.

(See Annual Report of 1895-96.)

Brockville, Westport and Sault Ste. Marie Railway Company.

(See Annual Report of 1896-97.)

Brantford, Waterloo and Lake Erie Railway Company.

(See Annual Report for 1895-96.)

Buctouche and Moncton Railway Company.

(See Annual Report for 1893-94.)

Canada Atlantic Railway Company.

(See Annual Report for 1888-89.)

Canada Eastern Railway Company.

(See Annual Report for 1894-95.)

Canadian Pacific Railway Company.

Revelstoke to Arrow Lake.

(See Annual Report for 1896-97.)

Canadian Pacific Railway Company.

(Crow's Nest Pass Railway.)

(See No. 415.)

By the special Act 60-61 Vic., ch. 5 (1897), authority was given for the grant to the Canadian Pacific Railway Company, of a subsidy towards the construction of a railway from Lethbridge, through the Crow's Nest Pass, to Nelson, such subsidy being to the extent of $11,000 a mile, not exceeding in the whole $3,630,000. A contract for this work was entered into with the company, on September 6, 1897, the line to be completed to the South end of Kootenay Lake, by December 31, 1898, and to Nelson, by December 31, 1900. These dates were subsequently extended, by order in council, to June 30, 1900, and December 31, 1901, respectively. The total payments made up to June 30, 1899, amount to $2,776,250.

Cap de la Madeleine Railway Company.

(See Annual Report of 1896-97.)

Cape Breton Railway Extension Company.

(See Annual Report of 1895-96.)

Caraquet Railway Company.

(See Annual Report of 1888-89.)

Central Railway Company of New Brunswick.

(See Nos. 40, 143, 156, 205, 353 and 382.)

By the Act of 1884, 47 Vic., ch. 8, a subsidy not exceeding $128,000 was granted in aid of the construction of about 40 miles of the Central Railway, from the head of the Grand Lake to a point on the Intercolonial Railway between Sussex and St. John, N.B.

Under the authority of an Order in Council of June 5, 1886, a contract was made with the Central Railway Company, on July 7, 1886, for a line from Salmon River, at the head of Grand Lake, to Norton, on the Intercolonial Railway; work to be completed by July 1, 1888. Certain work has been executed, but the contract obligations had not been carried out, and no portion of the subsidy was paid. The subsidy lapsed, but was revived by the Subsidy Act, 52 Vic., ch. 3 (1889.)

On December 1, 1890, a new contract was made with the company for this work under the Subsidy Act of 1889, the limit of subsidy being $128,000: this contract covered also a subsidy for 4½ miles, the limit of which was $14,400, authorized by the Act, 53 Vic., ch. 2, making a total subsidy of $142,400; the total length of road subsidized being 44½ miles. The date for completion was fixed as December 1, 1891.

By the Act 51 Vic., ch. 3, a grant as a subsidy to this company was authorized of used iron rails to the value $83,612.54, loaned to the St. Martin's and Upham Railway Company (which railway has been acquired by the Central Railway Company; the sale being approved by an Order in Council of November 15, 1887), the condition of the grant being that such rails should first be replaced by new steel rails. The new steel rails were substituted, and an Order in Council of October 18, 1889, authorized the transfer of the rails to the company.

By the Subsidy Act of 1894, 57-58 Vic., ch. 4, the grant of a subsidy, not exceeding $48,000, to this company was authorized for 15 miles of their railway from Chipman station to the Newcastle coal fields, and a contract for the work was made with the company on September 7, 1895.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), the subsidy of 1894 for the said 15 miles was, in effect, revoted, with addition of 50 per cent of cost over $15,000 a mile, the total subsidy not to exceed $6,400 a mile.

Up to the end of the fiscal year 1891-92, there had been paid, including the value of the said rails, the sum of $159,251.54. During the past fiscal year the sum of $66,761 has been paid, making a total of $226,012.54 up to June 30, 1899.

Chatham Branch Railway Company.

(See Annnal Report of 1893-94.)

Chignecto Marine Transport Company.

(See Annual Report for 1894-95.)

Coast Railway Company of Nova Scotia.

(See No. 403.)

This company was incorporated by the Provincial Act of Nova Scotia, 56 Vic., ch. 154 (1893), to build a line of railway from Yarmouth to Lockeport; a subsequent Act, 59 Vic., ch. 103 (1896) extending its powers.

By the Dominion Subsidy Act 60–61 Vic., ch. 4 (1897), the grant of a subsidy to this company for 61 miles of their railway from Yarmouth to Port Clyde was authorized, the amount being $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, the whole subsidy not to exceed $6,400 a mile.

The company were admitted to contract on the 26th of August, 1897, the road to be completed by September 1, 1899.

During the year 1897–98 they were paid the sum of $90,400. No further payments have been made during the past fiscal year.

Cobourg, Northumberland and Pacific Railway Company.

(See Nos. 301, 249, 275 and 378.)

This company was incorporated by the Act 52 Vic., ch. 62 (1889), for the construction of a line of railway from Cobourg Harbour to the River Trent, to the Ontario and Quebec Railway, and to the mining regions of Marmora and Belmont.

By subsequent legislation in 1891, 1892 and 1894, the company's charter has been revived, and powers given for extension to the mineral lands of the county of Hastings, and for leasing the road to the Canadian Pacific Railway Company; the time for completion being extended to July 9, 1898.

By the Subsidy Act of 1890, assistance to the extent of $96,000 was authorized for 30 miles of the company's railway from Cobourg to the Ontario and Quebec Railway, and by the Subsidy Act of 1892, an additional subsidy of $60,800 was authorized for 19 miles. By the same Act the subsidy voted in 1890, was revoted.

A contract for the construction of the 49 miles subsidized was entered into with the company on June 16, 1894, the date for completion being fixed as August 1, 1896.

By an Order in Council of December 28, 1894, approval has been given to an agreement between the company and the Canadian Pacific Railway Company, dated June 30, 1894, for the lease of the road to the latter company, when completed, for a term of 999 years.

By the Subsidy Act of 1897, 60-61 Vic., ch. 4, in lieu of the subsidies granted by the Act of 1892, a subsidy was authorized for 50 miles of railway from Cobourg to the Ontario and Quebec Railway, namely $3,200 a mile, with a further subsidy of 50 per cent on cost in excess of $15,000 a mile, the total subsidy not to exceed $6,400 a mile.

Under date April 25, 1898, a contract was entered into with the company for this work, the date for completion to be July 1, 1900.

No payments have been made up to June 30, 1899.

Columbia and Kootenay Railway and Navigation Company,

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report for 1891-92.)

Cornwallis Valley Railway Company.

(See Annual Report for 1891-92.)

Cumberland Railway and Coal Company.

(See Annual Report for 1894-95.)

Dominion Atlantic Railway Company.

(See Western Counties Railway Company.)

Dominion Eastern Railway Company.

(No. 399.)

By the Subsidy Act 60-61 Vic., ch. 4 (1897), the grant of a subsidy was authorized for a railway from Sunny Brae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, N.S., 65 miles, namely $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile.

The Dominion Eastern Railway Company having applied, they were admitted to contract on March 25, 1898, for the work so subsidized, the date for completion being fixed as July 1, 1901. No payments have been made up to June 30, 1899.

Dominion Lime Company.

(See Annual Report for 1888-89.)

Dominion Coal Company.

(See Annual Report for 1895-96.)

Drummond County Railway Company.

(See Nos. 99, 175, 214, 292, 339 and 406.)

SESSIONAL PAPER No. 10

By the Railway Subsidy Act of 1888, 50-51 Vic., ch. 24, the grant of aid to an extent not exceeding $96,000 was authorized to the Drummond County Railway Company for 30 miles of their railway from Drummondville towards Nicolet, Quebec.

Under the authority of an Order in Council of November 12, 1887, a contract was made with the company on December 1, 1887, covering a line from the South-eastern Railway, at the village of Drummondville, to the south-west branch of the River Nicolet; the road to be completed by August 1, 1891.

On May 2, 1889, the company were admitted to contract for the balance, 17½ miles, of the 30 miles subsidized.

By the Subsidy Act of 1889, 52 Vic., ch. 3, the company were further subsidized for 4½ miles from the end of the line already subsidized, to Ball's Wharf, on the River St. Lawrence, to the extent of $14,400, and were admitted to contract on January 21, 1890.

By the Subsidy Act, 53 Vic., ch. 2 (1890), authority was given for the grant of a subsidy, the limit of which was $76,800, for 24 miles of the railway of the company from Drummondville to Ste. Rosalie. Under date of February 2, 1891, the company were admitted to contract for this work.

By the Subsidy Act, 55-56 Vic., ch. 5 (1892), authority was given for the grant of a subsidy to the company for 4 6/10 miles from Ball's Wharf, to Ste. Rosalie Junction, not exceeding $14,720.

By the Subsidy Act, 57-58 Vic., ch. 4 (1894), authority was given for the grant of a subsidy to this company for 30 miles of railway from St. Leonard northerly towards a junction with the Intercolonial at Chaudière Junction; the limit being fixed at $96,000, and a contract for the work was made with the company on November 14, 1894.

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), the grant of a subsidy to this company of $3,200 a mile for 42½ miles from Moose Park to Chaudière was authorized, with an addition of 50 per cent on the cost exceeding $15,000 a mile, the amount of such subsidy to be refunded to the Government in the event of its purchasing or leasing for a term of years their railway from Ste. Rosalie to Chaudière River. A contract was made with the company for this work on December 13, 1897; work to be completed by September 1, 1898.

Under an agreement dated February 25, 1898, the Government, in connection with the extension of the Intercolonial Railway traffic into Montreal, leased from the company their line from Ste. Rosalie to Chaudière, for the period between March 1, and June 30, 1898, with option of renewal for one year, and also option of purchase.

The total payments up to June 30, 1895, amounted to $287,936. During the past fiscal year the further sum of $136,000 was paid, making a total $423,936 up to June 30, 1899.

East Richelieu Valley Railway Company.

(No. 395.)

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), the grant of a subsidy to the East Richelieu Valley Railway Company was authorized, namely, for 24 miles of their railway from Iberville to St. Thomas, P.Q., $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, the whole not exceeding $6,400 a mile.

A contract was entered into with the company for the work so subsidized on March 1, 1898, and during the past fiscal year the sum of $69,952 has been paid up to June 30, 1899.

Elgin, Petitcodiac and Havelock Railway Company.

(See Annual Report for 1885-86 and 1890-91.)

Erie and Huron Railway Company.

(See Annual Report for 1886-87.)

Esquimalt and Nanaimo Railway Company.

(See Annual Report for 1886-87.)

Fredericton and St. Mary's Bridge Company.

(See Annual Report for 1888-89.)

Grand Trunk, Georgian Bay and Lake Erie Railway Company.

(See Annual Report for 1893-94.)

Grand Trunk Railway Company.

(See No. 410.)

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), the grant of a subsidy to the Grand Trunk Railway Company towards the rebuilding and enlargement of the Victoria Bridge over the River St. Lawrence at Montreal was authorized, namely, 15 per cent of the cost of the work, not exceeding $300,000, and a contract to this effect was made with the company on January 14, 1898.

The work undertaken is the removal of the old tubular iron bridge (a single track bridge) and the erection, without interruption to traffic, of a new steel truss bridge to carry four railway tracks—two for steam locomotives and ordinary railway trains, and two for electric railway purposes—and also two sidewalks, the superstructure to consist of 24 spans of through steel trusses, each 254 feet long ,and one span of 348 feet.

During the past fiscal year the sum of $68,331.05 was paid, making, up to June 30, 1899, a total of $199,599.57.

Great Eastern Railway Company.

(See Annual Report for 1896-97.)

Great Northern Railway Company.

(See Nos. 33, 37, 72, 79, 154, 215, 231, 308, 309, 346, 371, 380, 405, 407, and 413.)

By the Act 47 Vic., ch. 8 (1884), a subsidy not exceeding $32,000 was granted to this company for the construction of a line from St. Jérôme to New Glasgow, Que., the estimated length being 10 miles.

Under the authority of an Order in Council of February 3, 1885, a contract for the work was entered into with the company on the 14th of that month, the road to be completed by July 1, 1885.

The line was duly completed and inspected. Under an Order in Council of March 2, 1885, payment was made therefor, namely 7·84 miles, $25,088.

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By the Act 49 Vic., ch. 10 (1886), a subsidy not exceeding $57,600 was authorized for a line from New Glasgow to Montcalm, a distance of about 18 miles. The Great Northern Railway Company having applied for it, it was granted to them by an Order in Council of July 18, 1887, which also approved of the location. The contract was made on August 19, 1887, the road to be completed by August 1, 1890.

By the Act 49 Vic., ch 10, a subsidy not exceeding $22,400 was granted for a line from St. Andrews to Lachute, Que., 7 miles. For this subsidy the above named company applied, but no contract was made. The same subsidy was again voted by the Act of 1889, 52 Vic., ch. 3, and under date October 8, 1890, a contract was entered into with them for the work, calling for completion by August 1, 1891. The road was built and allowed to be opened for public traffic in January, 1892.

By the Act 53 Vic., ch. 2 (1890), the grant of a subsidy was authorized, limited to $48,000, for a line from, at or near Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, fifteen miles.

By the Act 54-55 Vic., ch. 2 (1891), the unpaid balance, $28,100 of the subsidy granted in 1886, was revoted.

By the Act 56 Vic., ch. 8 (1893), the unpaid balance, $25,600 of the subsidy granted in 1891, was revoted, and a new contract for this work was entered into with the company on June 16, 1894.

Also, by the same Act, the subsidy not exceeding $48,000 granted to the company for 15 miles of their railway from Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, by 53 Vic., ch. 2, was revoted, and a contract for this work was entered into with them on June 16, 1894.

By the Subsidy Act 57-58 Vic., ch. 4 (1894), the grant to this company of a subsidy limited to $96,000, was authorized for 30 miles of railway from a junction with the Lower Laurentian Railway near St. Tite, westwards, in lieu of a subsidy previously granted to the Maskinongé and Nipissing Railway Company. A contract was entered into with the company for this work on September 16, 1895, the railway to be completed by November 30, 1896.

By the Subsidy Act, 60-61 Vic., ch. 4, (1897), payment was authorized of unpaid balances for 67 miles of railway, between Montcalm and the junction with the Lower Laurentian Railway near St. Tite, not exceeding $182,400; also a subsidy of 15 per cent, not exceeding $52,500, of the cost of a bridge over the River Ottawa at Hawkesbury. Also, for 9 miles shortage in distance between Montcalm and St. Tite; also, for 35 miles from St. Jérôme to Hawkesbury; the last two being subsidies of $3,200 per mile with 50 per cent of expenditure in excess of $15,000 per mile, the total not to exceed $6,400 per mile.

The total payments to this company, up to June 30, 1896, amount to $142,688. During the past fiscal year the sum of $32,000 was paid, making a total of $174,688 up to June 30, 1899.

Gulf Shore Railway Company of New Brunswick.

(See Nos. 374 and 383.)

This company was incorporated by the New Brunswick Act 48 Vic., ch. 49 (1885), with powers to construct a railway from some point on the Caraquet Railway to the village of Tracadie or to some point in the parish of Sumarey, county of Gloucester. The Charter Act was revived by the Act 57 Vic., ch. 73 (1894).

By the Dominion Subsidy Act 57–58 Vic., ch. 4 (1894), assistance was authorized to the extent of $38,400 for a railway from a point on the Caraquet Railway at or near Pokemouche siding towards Tracadie village, 12 miles.

The above company having applied, they were admitted to contract for the work on April 22, 1896, and were paid during the fiscal year 1896–7, $28,635.05.

By the Subsidy Act, 60–61 Vic., ch. 4 (1897), authority was given for the grant to them of a subsidy for 5½ miles from the end of the section subsidized to Tracadie and thence to Big Tracadie, namely $3,200 a mile with an additional 50 per cent of expenditure in excess of $15,000 a mile, to a limit, in all, of $6,400. The company were admitted to contract on the 29th of October, 1897. No further payments have been made during the past fiscal year. The total paid up to June 30, 1898, was $53,699.20.

Guelph Junction Railway Company.

(See Annual Report of 1888–89.)

Harvey Branch Railway Company.

(See Annual Report of 1889–90).

Hereford Railway Company (formerly Hereford Branch Railway Company).

(See Annual Report of 1891–92.)

International Railway Company.

(See Annual Reports of 1887–88 and 1889–90.)

Inverness and Richmond Railway Company.

(See Nos. 208, 357, and 400.)

This company was incorporated by the Act of the province of Nova Scotia, 50 Vic., ch. 60 (1887), with powers for the construction of a line of railway between Hawkesbury and a point in the district of Margaree. By the Act of 1888, ch. 79, the location of the line was authorized as from Port Hawkesbury, through Port Hastings, Judique, Port Hood, Mabou and Margaree, to a point at Eastern Harbour, Cheticamp.

By the Subsidy Act, 57-58 Vic., ch. 4 (1894), assistance to the extent of $80,000 was authorized for 25 miles of railway from Port Hawkesbury towards Cheticamp, and the above company was admitted to contract for the work on November 23, 1894, the time for completion being fixed for December 1, 1896.

By the Subsidy Act of 1897, 60-61 Vic., ch. 4, in lieu of the subsidy granted in 1894, a subsidy of $3,200 a mile with an addition of 50 per cent on expenditure in excess of $15,000 a mile, such subsidy in all not to exceed $6,400 a mile, was authorized for a railway from Port Hawkesbury to Port Hood and Broad Cove, 53 miles, and the company were admitted to contract thereunder on April 29, 1898.

No payments have been made up to June 30, 1899.

Irondale, Bancroft and Ottawa Railway Company.

(See Nos. 24, 159, 301, and 412.)

By the Act 47 Vic., ch. 8 (1894), the Irondale, Bancroft and Ottawa Railway Company were subsidized, to an extent not exceeding $160,000, for a line about 50 miles long, to connect the Victoria Branch of the Midland Railway with the village of Bancroft.

With the sanction of an Order in Council of July 10, 1886, a contract was made with the company on August 19, 1886.

The unpaid balance of subsidy, $145,000, which had lapsed, was revoted by the Act 52 Vic., ch. 3 (1889), and was again revoted by the Act 56 Vic., ch. 2 (1893).

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), in lieu of the subsidy voted in 1893, the sum of $16,000 was voted for the last five miles of this railway as the unpaid balance. The company were admitted to contract on the 20th of September, 1897.

The total payments amounted to $144,000, up to June 30, 1897. No payments were made during the past fiscal year.

Joggins Railway Company.

(See Annual Report for 1891-92.)

Kingston, Napanee and Western Railway Company.

(See Napanee, Tamworth and Quebec Railway.)

Kingston and Pembroke Railway Company.

(See Annual Report for 1884-85.)

Lake Erie and Detroit River Railway Company.

Formerly "the Lake Erie, Essex and Detroit Railway Company." Name changed by Dominion Act, 54-55 Vic., ch. 88 (1891).

(See Annual Report for 1893-94).

L'Assomption Railway Company.

(See Annual Report of 1886-7.)

Leamington and St. Clair Railway Company.

(See Annual Report of 1888-9.)

Lake Temiscamingue Colonization Railway Company.

(See Annual Report 1896-7.)

Lotbinière and Mégantic Railway Company.

(See Annual Report of 1896-7.)

Midland Railway Company.

(No. 336.)

This company was incorporated by the Act of the province of Nova Scotia, 59 Vic., ch. 85 (1896,) with powers to build a railway from Windsor to a point at or near

Maitland, thence via Clifton to a point between Truro and Stewiacke, on the Intercolonial; thence to Eastville; with extensions and branches to coal and iron fields, and shipping ports.

By the Dominion Subsidy Act, 57-58 Vic., ch. 4 (1894), authority was given for the grant of a subsidy of $3,200 per mile for 90 miles of railway, from Newport or Windsor to Truro, or to a point between Truro and Stewiacke, and from a point on the said railway to a point at or near Eastville, and from Eastville, through the valley of Musquodoboit River, towards a point on the Dartmouth branch of the Intercolonial, in lieu of a subsidy authorized in 1892; also for a railway bridge over the River Shubenacadie, a subsidy of 15 per cent on the value of the structure; the total of the subsidies not to exceed $300,000.

The Midland Railway Company having applied, were admitted to contract for these works on July 30, 1896; the date for completion being fixed as August 1, 1898.

No payments have been made up to June 30, 1899.

Montfort Colonization Railway Company.

(See Nos. 245, 310, 373 and 411.)

This company was incorporated by the Quebec Act, 53 Vic., ch. 107 (1890), for the construction of a railway from a point on the Canadian Pacific Railway, or the Montreal and Occidental Railway, either from Lachute, St. Jérôme or St. Sauveur, or near the same, to Montfort, and for the continuation of the road to a point on the Rivière Rouge, in the township of Arundel.

By the Subsidy Act, 55-56 Vic., ch. 5 (1892,) the grant of a subsidy to this company to the extent of $67,200 was authorized for 21 miles of railway from Lachute, St. Jérôme, or a point at or near St. Sauveur, on the line of the Montreal and Western Railway to Montfort and westward.

By the Subsidy Act, 56 Vic. (1893), this subsidy was revoted, with an addition specifying the gauge as three feet.

On May 16, 1893, a contract was entered into with this company for the construction of 21 miles of railway from St. Sauveur to Montfort and westward, the road to be completed by September 1, 1895.

By the Subsidy Act, 57-58 Vic., ch. 4 (1894), a subsidy to the company was authorized to the extent of $38,400 for 12 miles from the end of the 21 miles previously subsidized, and the company were admitted to contract on July 30, 1896; the River Rouge being the terminal point for the distance subsidized.

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), authority was given for the grant to this company of a subsidy of $2,000 a mile for 33 miles of their railway from Montfort Junction to Arundel; and the company were admitted to contract on December 29, 1887.

During the past fiscal year the sum of $64,400 was paid, making the total payments $167,440 up to the 30th of June, 1899.

Montreal and Champlain Junction Railway Company.

(See Annual Report for 1892-93.)

Montreal and Lake Maskinongé Railway Company.

(See Annual Report for 1890-91.)

Montreal and Sorel Railway Company.

(See Annual Report for 1892-93.)

Montreal and Western Railway Company.

(See Annual Report for 1893-94.)

Montreal and Ottawa Railway Company.

(Formerly 'the Vaudreuil and Prescott Railway Company.' Name changed by 53 Vic., ch. 58.)

(See Nos. 97, 186, 237 and 320.)

By the Railway Subsidy Act of 1887, 50-51 Vic., ch. 24, the grant of a subsidy to the above company was authorized for 30 miles of their railway from Vaudreuil towards Hawkesbury, the extent of such subsidy being $96,000.

A contract was made with the company on the 11th of February, 1889, for the distance named, starting from the Grand Trunk Railway at Vaudreuil. The date for completion was fixed as the 1st August, 1891.

The company, on the 4th of October, 1890, were authorized to open the portion of their road between Vaudreuil and Rigaud, 16 miles, for public traffic.

By the Act 53 Vic., ch. 2 (1890), a subsidy for a further distance of 30 miles towards Ottawa, $96,000, was authorized.

By the Act 54-55 Vic., ch. 8 (1891), the unpaid balance, $46,040, of the subsidy granted in 1887, was revoted.

In September, 1892, after inspection, permission was given to open for traffic the portion of the road between Vaudreuil and Pointe Fortune, 23½ miles.

By the Subsidy Act 57–58 Vic., ch. 4 (1894), the unpaid balances of subsidies granted in 1887 and 1890 were revoted, and a contract under this Act was made with the company, dated June 26, 1896, the date for completion being fixed as August 1, 1898.

During the past fiscal year the sum of $46,400 was paid, making the total payments $192,000 up June 30, 1899.

This railway has been leased in perpetuity to the Canadian Pacific Railway Company.

Napanee, Tamworth and Quebec Railway Company.

(Name changed to the **Kingston, Napanee and Western Railway Company** *by the Act 53 Vic., ch. 62.)*

(See Annual Report of 1895–96.)

Nakusp and Slocan Railway Company.

(See Annual Report for 1894–95.)

New Brunswick and Prince Edward Island Railway Company.

(See Annual Report for 1888–89.)

New Glasgow Iron, Coal and Railway Company.

(See Annual Report for 1895-96.)

Northern and Pacific Junction Railway Company.

(See Annual Report of 1890-91.)

Northern and Western Railway Company.

(See Annual Report of 1889-90.)

Also under the head 'Canada Eastern Railway' in Annual Report of 1894-95.

Nova Scotia Central Railway Company.

(See Nos. 129, 135 and 307.)

By the Subsidy Act of 1887, 50-51 Vic., ch. 24, the Nova Scotia Central Railway Company were subsidized for 34 miles of their railway, to an extent not exceeding $108,800. Under an Order in Council of September 16, 1887, the company were admitted to contract on October 17, 1887, the works to be executed being a line of railway from Lunenburg, on the east coast of Nova Scotia, westward to a point in the district of New Germany, together with a spur, about ¾ mile long, to Bridgewater Railway wharf, the whole to be completed by December 31, 1889.

By the Act 51 Vic., ch. 3 (1888), the grant of further subsidy, not exceeding $147,200, was authorized for 46 miles of the company's railway, and under an Order in Council of October 9, 1888, a contract, dated October 15, 1888, was executed, covering a line of railway, 39½ miles, starting from a point 33½ miles from Lunenburg, and running to Middleton, on the Windsor and Annapolis Railway; the work to be completed by December, 1890.

By the Subsidy Act, 56 Vic., ch. 2 (1893), the unpaid balance, $4,500, was revoted. Up to the close of the fiscal year 1891-92, the total payments to this company amounted to $230,700, covering the distance from Lunenburg to Middleton and the spur to Bridgewater, a total of 73½ miles. Authority for payment of the said balance of $4,500 has been given by an Order in Council dated July 2, 1894, but further payment was withheld pending decision on certain matters in litigation. During the past fiscal year the said balance was paid, making the total payments up to June 30, 1899, $235,200, the full amount of the subsidy earned.

Nova Scotia Southern Railway Company.

(See Annual Report for 1896-97.)

Ontario and Pacific Railway Company.

(Name changed to Ottawa and New York Railway Company, by 60-61 Vic., ch. 57, 1897.)

(See Nos. 31, 115, 150, 288 and 375.)

By the Act 47 Vic., ch. 8 (1884), the grant of a subsidy to the Ontario and Pacific Railway Company was authorized, namely, to the extent of $262,400, on an estimated distance of 82 miles, for a line from Cornwall to Perth; and on July 27, 1886, a contract was made with the company, under the authority of an Order in Council of the first day of that month, for the construction of such line, via Newington, Chrysler,

Manotick and Franktown; the road to be completed by July 1, 1888. This subsidy lapsed on July 1, 1888.

By the Act 50–51 Vic., ch. 24, a further subsidy of $19,200 for a further distance of 6 miles was granted.

By the Act 52 Vic., ch. 3 (1889), a subsidy not exceeding $172,400 was authorized to this company for a line from Cornwall to Ottawa.

By the Subsidy Act of 1892, 55–56 Vic., ch. 5, the subsidy granted in 1889 was revoted, the length being set down as $53\frac{87}{100}$ miles. Under date June 1, 1895, a contract was entered into with the company for the construction of this line from Cornwall to Ottawa, 53·87 miles; the work to be completed by August 1, 1896.

By the special Act 60–61 Vic., ch. 57, the name of the company was changed to 'The Ottawa and New York Railway Company,' and its construction powers were extended to July 1, 1901.

By the Subsidy Act, 60–61 Vic., ch. 4 (1897), in lieu of the subsidy voted in 1892, a subsidy was authorized of $3,200 a mile, for 53·87 miles from Cornwall to Ottawa, with a further subsidy for expenditure in excess of $15,000 a mile, to an extent of 50 per cent of such expenditure, the total subsidies not to exceed $6,400 per mile.

The company were admitted to contract for the above on December 4, 1897.

During the fiscal year they have been paid $138,784; making the total payments up to June 30, 1899, $172,384.

Ontario and Quebec Railway Company.

(See West Ontario Pacific Railway Company, and Annual Report for 1891–92.)

Ontario, Belmont and Northern Railway Company.

(See Annual Report for 1896–97.)

Orford Mountain Railway Company.

(See Annual Reports for 1893–94 and 1894–95.)

Ottawa and New York Railway Company.

(See Ontario Pacific Railway Company,)

Ottawa, Arnprior and Parry Sound Railway Company.

Now the **Canada Atlantic Railway Company,** *by amalgamation, under the Act 62-63 Vic., ch. 81 (1899.)*

(See Nos. 92, 134, 199, 242, 276, 277 and 388.)

This company was formed by the amalgamation, under the Act 54-55 Vic., ch. 93, of the Ottawa and Parry Sound Railway Company, incorporated by the Act 51 Vic., ch. 35, and the Ottawa, Arnprior and Renfrew Railway Company, incorporated by the Act 51 Vic., ch. 71. The company has powers to build a line of railway from the city of Ottawa through Arnprior, Renfrew, Eganville and Killaloe, to a point on the Georgian Bay at or near the village of Parry Sound.

By the Subsidy Act, 55-56 Vic., ch. 5 (1892), there were granted to this company the following subsidies (in lieu of subsidies previously granted but not utilized) :—

(*a.*) For 22 miles of railway from a point on the Canadian Pacific Railway to Eganville, a subsidy limited to $70,400.

(*b.*) For 30 miles of railway from Eganville to Barry's Bay, a subsidy limited to $96,000,

(*c.*) For 55 miles of railway from Barry's Bay towards the Northern Pacific Junction Railway, a subsidy limited to $6,400 a mile on the first half of that division, and to $3,200 a mile on the second half, not exceeding in the whole $264,000.

The first two subsidies were covered by a contract dated September 29, 1892 ; the starting point on the Canadian Pacific Railway being Renfrew, and the date for completion being fixed as August 1, 1896.

The third subsidy, from Barry's Bay towards the Northern Pacific Junction Railway, was covered by a contract with the company, dated November 8, 1892, for which was substituted a contract dated September 20, 1894.

By the end of the fiscal year 1895-96, the total payments to the company aggregated $430,400, the whole amount of the subsidies. The distance covered thereby was to the end of the 55th mile west from Barry's Bay, or a total of 107 miles west from Renfrew, the whole distance subsidized.

By the Act 60 Vic., ch. 8 (1896), the company became amalgamated, under its own name, with the Parry Sound Colonization Railway Company.

A portion, the westerly 47¾ miles of the amalgamated company's railway, namely between the crossing of the Northern Pacific Junction Railway and Parry Sound, had been subsidized under the name of the Parry Sound Colonization Railway Company, and at the close of the fiscal year 1895–96, there had been paid to that company a total of $152,800.

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), a subsidy was authorized for the portion, 52 miles, of the company's railway from the crossing of the Northern Pacific Junction Railway (at Scotia) to the point, 55 miles west of Barry's Bay, up to which previous subsidies had been granted ; also for 4 miles of railway across Parry Island.

The new subsidy is $3,200 per mile, with a further subsidy of 50 per cent on expenditure in excess of $15,000 per mile ; the total subsidies not to exceed $6,400 per mile.

The company were admitted to contract under this Subsidy Act on August 7, 1897 ; the work to be completed by September 1, 1899.

During the past fiscal year they have been paid the sum of $22,080, making the total payments to this company $779,712 up to June 30, 1899.

Ottawa and Gatineau Valley Railway Company.

Name changed to the **Ottawa and Gatineau Railway Company** (by the Act 57-58 Vic., ch. 87, which consolidated and amended Acts relating to the company).

(See Nos. 8, 26, 58, 151, 305, 349, 379 and 409.)

By the Act 48-49 Vic., ch. 29 (1885), the grant of a subsidy to this company was authorized (in lieu of subsidies granted in previous years), namely, for a line of railway from Hull station towards the village of Le Désert, 62 miles, the amount being $320,000. The subsidy having lapsed, it was revoted by the Act 52 Vic., ch. 3 (1889).

Under authority of an Order in Council of July 10, 1889, a contract with the company for the work in question, 62 miles, was signed on August 19, 1889.

By the Subsidy Act 56 Vic., ch. 2 (1893), the unpaid balance, $89,248, was revoted.

By the Subsidy Act 57-58 Vic., ch. 6 (1894), authority was given for subsidizing, to the extent of $64,000, a further distance of 20 miles from the end of the 62 miles already subsidized, and a contract for the work was entered into with the company on October 7, 1895.

By the Subsidy Act of 1897 (ch. 4) in lieu of this subsidy, the said 20 miles were subsidized to the extent of $3,200 per mile, with a further subsidy of 50 per cent of the expenditure in excess of $15,000 a mile; the total subsidy not to exceed $6,400 a mile.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), the unpaid balance, $35,872, of the vote of 1893 was revoted.

The total payments up to June 30, 1894, amounted to $284,128. No further payments have been made up to June 30, 1899.

Oshawa Railway and Navigation Company.

Name changed to the **Oshawa Railway Company** by 54-55 Vic., ch. 91.

(See Annual Report for 1895-96.)

Parry Sound Colonization Railway Company.

(See Annual Report for 1895-96.)

Pembroke Southern Railway Company.

(See No. 389.)

This company was incorporated by the Act of the Province of Ontario, 56 Vic., ch. 96, 1893; with powers to build a line of railway from Pembroke to Douglas, and by the Ontario Act 59 Vic., ch. 107 (1896), were allowed the option of building from Pembroke to Golden Lake.

By the Railway Subsidy Act 60-61 Vic., ch. 4 (1897), the grant of a subsidy to this company was authorized for 20 miles of their railway from Pembroke to Golden Lake, namely, $3,200 a mile with an addition of 50 per cent on the average cost in excess of $15,000 a mile, the whole limited to $6,400 a mile.

The company having applied for the said subsidy, an agreement was entered into with them on August 22, 1898, for the construction of the 20 miles in question.

No portion of the subsidy has been paid up to June 30, 1899.

Philipsburg Junction Railway and Quarry Company.

(See Annual Report for 1894-95.)

Port Arthur, Duluth and Western Railway Company.

(Formerly the **Thunder Bay Colonization Railway Company.**)

(See Annual Report for 1892-93.)

Pontiac and Renfrew Railway Company.

(See Annual Report for 1889-90.)

Pontiac Pacific Junction Railway Company.

(See Nos. 25, 138, 211, 294, 329, 330, 331, 385 and 408.)

This company was incorporated by the Dominion Act 43 Vic., ch. 55 (1880), with powers to construct a railway from a point on the line of the Quebec, Montreal, Ottawa and Occidental Railway, at or near Hull or Aylmer, to a point in the county of Pontiac, suitable for crossing the River Ottawa, thence to Pembroke to connect with the Canada Central Railway.

The Act 45 Vic., ch. 69, gave authority for the construction of a bridge across the River Ottawa.

This line was subsidized in 1884, by 49 Vic., ch. 8, to the extent of $3,200 a mile, not exceeding $272,000.

Under authority of an Order in Council, dated December 12, 1884, a contract, dated the 22nd of that month, was made with this company for the building of the line subsidized, namely, from Aylmer to Pembroke, crossing the River Ottawa at a point 'not east of Lapasse;' the first twenty-seven miles to be completed by September 1, 1885 (extended to December 15, by an Order in Council of August 13, 1895), the second twenty-seven miles by July 1, 1886, and the whole road, estimated at eighty-five miles west of Aylmer, by July 1, 1887.

By the Act 51 Vic., ch. 3 (1888), a subsidy to this company of $31,500 was authorized for the bridging of the River Ottawa at Culbute; also a subsidy of $9,600 for 3 miles of their railway from a point 3 miles east of Pembroke to Pembroke, provided that the entire work subsidized on this railway be completed within four years from May 22, 1888.

By the Act 53 Vic., ch. 2 (1890), a subsidy, limited to $24,000, was authorized for 7½ miles of this railway, between Hull and Aylmer.

By the Act 63 Vic., ch. 69 (1890), the time for completion of the railway to the town of Pembroke, and of the bridge over the River Ottawa, at or near the city of Ottawa, which the company were empowered to construct by the Act 45 Vic., ch. 69, was extended to May 22, 1892. The same Act gave the company power to extend their line from the said bridge to the canal basin in the city of Ottawa.

The Act 53 Vic., ch. 69 (1890), gave to this company power to purchase from the Canadian Pacific Railway Company the section between Hull and Aylmer, or any part thereof.

By the Subsidy Act 55-56 Vic., ch. 5, clause 4 (1892), the balance unpaid of the subsidy voted in 1884 was revoted; and by the special Act of 1892, ch. 56, the time for the commencement of a bridge over the River Ottawa, at or near Ottawa, was extended for two years, and its completion for five years from July 9, 1892. The time for the completion of the line to Pembroke was also extended for four years from that date.

By the Subsidy Act 57-58 Vic., ch. 4 (1894), the subsidies voted in 1888 were revoted, subject to the condition that the entire work subsidized on this railway should

be completed within four years. The time for completion was thus extended, so far as subsidy is concerned, to July 23, 1898.

By the same Act the unpaid balance of the subsidy voted by ch. 8 of the Act of 1884, less $24,000 for the 7½ miles from Hull to Aylmer, was revoted, namely, $73,172.

By the same Act the sum of $24,000, voted for the road from Hull to Aylmer in 1890, was, in effect, revoted.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), the unpaid balances of the subsidies granted by the Acts of 1894, amounting to $114,272, were revoted.

By the same Act the subsidy for 7½ miles from Hull to Aylmer, revoted by the Act of 1894, was, in effect, revoted, with the addition of 50 per cent on expenditure in excess of $15,000 per mile, the total of the subsidies not to exceed $6,400 per mile.

Up to the close of the fiscal year 1887-88, a total of $174,828 had been paid out of the subsidy voted in 1884. During the fiscal year 1894-95 the sum of $18,750 was paid, making a total of $193,578. No further payments have been made up to June 30, 1899.

Quebec Central Railway Company.

(See Annual Report of 1895-96.)

Quebec and Lake St. John Railway Company.

(See Annual Report for 1895-96.)

Quebec, Montmorency and Charlevoix Railway Company.

(See Annual Report of 1894-95.)

Restigouche and Western Railway Company.

(See No. 384.)

This company was incorporated by the Act of the Province of New Brunswick, 60 Vic., ch. 82 (1897), with powers to construct a railway from Campbellton, to a point on the River Saint John between Grand Falls and Edmundston.

By the Subsidy Act 60-61 Vic., ch 4 (1897), there was authorized a subsidy for a railway from Campbellton, on the I. C. R., towards Grand Falls, N.B., 20 miles, $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile; the whole not to exceed $6,400 a mile. This was in lieu of a previous subsidy to a specified company.

The Restigouche and Western Railway Company having applied were admitted to contract for the work on December 24, 1897, and during the past fiscal year, the sum of $32,000 was paid, the total payments up to June 30, 1899.

Shuswap and Okanagan Railway Company.

(See Annual Report of 1894-95.)

South Norfolk Railway Company.

(See Annual Report of 1888-89.)

South Shore Railway Company.

(See Annual Report of 1896-97.)

St. Catharines and Niagara Central Railway Company.

(See Annual Report for 1895-96.)

St. Clair Frontier Tunnel Company.

(See Annual Reports of 1890-91 and 1891-92.)

St. John Valley and Rivière du Loup Railway Company.

(See Annual Report for 1893-94.)

St. Stephen and Milltown Railway Company.

(See Annual Report for 1895-96.)

(No. 393.)

A further subsidy to this company was authorized by the Act 60-61 Vic., ch. 4 (1897), namely, for 41 miles of their railway from Milltown to St. Stephen, $3,200 a mile, with 50 per cent additional on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile. The company were admitted to contract for this work on September 29, 1897. No payments were made during the past fiscal year, and the total paid is $14,848 up to June 30, 1899.

Stewiacke Valley and Lansdowne Railway Company.

(See Annual Report for 1895-96.)

St. Lawrence and Adirondack Railway Company.

(See Annual Report for 1893-94.)

(No. 394.)

A further subsidy to this company was authorized by the Act 60-61 Vic., ch. 4 (1897), namely, for 13½ miles of their railway from Beauharnois to Caughnawaga, $3,200 a mile, with an addition of 50 per cent on expenditure in excess of $15,000 a mile, such subsidy not to exceed in the whole $6,400 a mile.

The company were admitted to contract on October 16, 1897, and have been paid $149,481.60 up to June 30, 1899, no payments being made during the past fiscal year.

St. Lawrence, Lower Laurentian and Saguenay Railway Company.

Name changed to **'Laurentian Railway Company'** *by Provincial Act 51-52 Vic., ch. 108.*

(See Annual Report for 1891-92.)

St. Louis and Richibucto Railway Company.

(See Annual Report for 1884-85.)

Témiscouata Railway Company—Rivière du Loup to Edmundston.

(See Annual Report for 1892-93.)

Thousand Islands Railway Company.

(See Annual Report for 1895-96.)

Tilsonburg, Lake Erie and Pacific Railway Company.

(See Annual Report for 1895-96.)

(No. 387.)

A further subsidy to this company was authorized by the Act 60-61 Vic., ch. 4 (1897), namely, for 3·50 miles from the then present terminus, through Tilsonburg to the Michigan Central Railway, $3,200 a mile, with an addition of 50 per cent of the cost in excess of $15,000 a mile, the whole not to exceed $6,400 a mile.

Under date December 4, 1897, the company were admitted to contract. During the past fiscal year the sum of $10,912 was paid from this subsidy, making, with their previous subsidy of $51,200, paid in 1895-96, a total of $62,112 up to June 30, 1899.

Tobique Valley Railway Company.

(See Annual Report for 1893-94.)

Toronto, Grey and Bruce Railway Company.

(See Annual Report for 1887-88.)

United Counties Railway Company.

(See Nos. 297, 344 and 393.)

This company was incorporated by the Quebec Act 46 Vic., ch. 90 (1883), for the construction of a railway from a point on the line of the Montreal, Portland and Boston Railway, at Richelieu, to a point on the River Richelieu and the River St. Lawrence.

By the Subsidy Act 56 Vic., ch. 2 (1893), a subsidy to the extent of $102,400 for 32 miles between Iberville and St. Hyacinthe, and beyond, towards Sorel, was authorized.

On August 19, 1893, a contract was entered into with the company for this work.

By the Subsidy Act 57-58 Vic., ch. 4 (1894), a subsidy, limited to $102,400, was authorized for a further distance of 32 miles, and on October 23, 1894, a contract was made with the company for the work, covering the whole distance from St. Hyacinthe to Sorel.

By the Act 60-61 Vic., ch. 4 (1897), the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for one mile of this company's railway from Johnson to St. Grégoire station.

During the past fiscal year, no payments were made, leaving the total payments $188,816 up to June 30, 1899.

Vaudreuil and Prescott Railway Company.

(See *Montreal and Ottawa Railway Company.)*

Waterloo Junction Railway Company.

(See Annual Report for 1891-92.)

Western Counties Railway Company.

(Name changed to **'The Yarmouth and Annapolis Railway Company'** *by 56 Vic., ch. 63.)*

(Name further changed to **'The Dominion Atlantic Railway Company'** *by 57-58 Vic., ch. 69.)*

(See Annual Report for 1894-95.)

West Ontario Pacific Railway Company.

(Leased to Ontario and Quebec Railway Company—C. P. R.)

(See Annual Report of 1890-91.)

Woodstock and Centreville Railway Company.

(See Annual Report for 1895-96.)

Yarmouth and Annapolis Railway Company.

(See *Western Counties Railway Company.*)

LAND SUBSIDIES.

A number of companies have been aided by subsidies in land, duly authorized by Parliament and granted by the Department of the Interior, to whose report reference must be had for information as to their position. Certain details in respect of these roads will, however, be found in the annual report of this department for 1896-97.

CANALS.

The total expenditure charged to capital account on the original construction and the enlargement of the several canals of the Dominion up to June 30, 1899, was $76,404,279.16. A further sum of $15,632,242.84* was expended on the repairs, maintenance and operation of these works, making a total of $92,036,522.* The total revenue derived, including tolls, and rentals of lands and water-powers, amounted to $12,079,274.46. (See the accountant's statement, Part II., p. 28.)

The total expenditure for the fiscal year ended on June 30, 1899, including 'canals in general,' was as follows: on construction and enlargement a total of $3,899,877.31, and a further sum of $633,315.61 for repairs, renewals, and operation, making a total for the year of $4,533,192.92.

The total net revenue collected for the fiscal year was $369,044.38, a decrease compared with the net revenue of the previous year of $38,618.43. The net canal tolls amounted to $322,285.12, a decrease of $21,672.01, and the rents received to $46,659.26, an increase of $2,608.87.

The total expenditure on canal staff and maintenance, repairs and renewals amounted, for the year, to $633,315.61, an increase of $8,559.65, and the total net receipts amounting, as above, to $369,044.38, the amount of expenditure in excess of receipts was $264,271.23, compared with an excess expenditure the previous year of $248,495.63.

The above figures relate to the *fiscal year* 1898-99, but very voluminous statistics relating to the canal traffic, and various commercial statistics for the *season of navigation* of the year 1898 will be found in Part V., 'Canal Statistics.'

* These figures are the aggregate expenditure on specific canals and do not comprise certain items charged to 'Canals in general.'

The following features of the principal canal traffic during the *season of navigation* of 1898 will be of interest :—

On the Welland Canal, 1,140,077 tons of freight were moved, a decrease of 134,215 tons ; of which 732,470 tons were agricultural products, a decrease of 92,015 tons, and 140,031 tons produce of the forest ; 916,671 tons passed eastward and 223,406 westward ; 1,120,730 tons were through freight, of which 902,519 tons passed eastward.

Of this through freight Canadian vessels carried 310,286 tons, a decrease of 35,691 tons, and United States vessels 810,444 tons, a decrease of 88,329 tons.

The total freight passed eastward and westward through this canal from United States ports to United States ports was 487,539 tons, a decrease of 77,155 tons compared with the year 1897.

The quantity of grain passed down the Welland and the St. Lawrence canals to Montreal was 519,532 tons, a decrease of 40,722 tons compared with the previous year ; of this 40,257 tons were transhipped at Ogdensburg, as against 89,659 tons transhipped in 1897. The further quantity of 55,565 tons of grain passed down the St. Lawrence canals, only, to Montreal, making the total 575,097 tons.

The rate of toll on grain for passage through the Welland (giving free passage through the St. Lawrence canals) was 10c. a ton.

On the St. Lawrence canals 1,439,134 tons of freight were moved, an increase of 207,769 ; of which 783,976 were east bound through freight, and 29,728 tons west bound through freight ; 952,150 tons were agricultural products, 348,081 tons merchandise, and 61,502 tons forest products.

Seven cargoes of grain, aggregating 2,436 tons, were taken down direct to Montreal through the Welland and St. Lawrence canals.

On the Ottawa River canals the total quantity of freight moved was 549,986 tons, a decrease of 12,384, of which 538,250 tons were produce of the forest.

On the Chambly Canal 271,336 tons were moved, a decrease of 80,800 of which 155,939 tons were the product of the forest.

On the Rideau Canal 54,946 tons were carried, a decrease of 22,330, 30,238 tons being the product of the forest.

On the St. Peter's Canal 64,490 tons were carried, a decrease of 2,603, of which 50,666 tons were merchandise.

On the Murray Canal 15,543 tons passed, an increase of 2,312, and 4,037 tons, of this were the product of the forest.

On the Trent Valley Canal 27,676 tons were moved, of which 26,606 tons were product of the forest.

On the Sault Ste. Marie Canal the total movement of freight was 3,055,287 tons, being a decrease of 891,776 tons, carried in 3,675 vessels, the number of lockages being 2,520. Of wheat 9,746,452 bushels, and of other grain 3,188,177 bushels were carried ; 847,048 barrels of flour, 1,831,731 tons of iron ore and 13,611,580 feet, board measure, of lumber ; all these items except lumber show a considerable decrease. The total traffic at this point, accommodated by the two canals, the American and Canadian, amounted to

21,239,438 tons, an increase of 2,252,749 tons, carried in 17,733 vessels, an increase of 653. The total quantity of wheat carried was 62,439,904 bushels, an increase of 6,508,125, and of other grain 26,139,117, an increase of 1,170,981. Of lumber the total was 898,787,580 feet, board measure, an increase of 96,547,424.

As having an interesting bearing on the question of canal *versus* railway transport of grain from the west, it may be noted that whereas grain and pease passed down to Montreal through the St. Lawrence canals to the extent of 519,532 tons, a decrease of 40,722 tons over the previous year, the quantity carried to Montreal via the Canadian Pacific and Grand Trunk Railways amounted to 293,391 tons, an increase of 64,780 tons. The quantity of grain carried to tide-water on the New York State canals was 459,404 tons, a decrease of 9,958 tons, while the quantity carried by the railways of the state to tide-water amounted to 5,371,500 tons, an increase of 238,760 tons.

Of the total freight carried by the canals and railways of the State of New York, respectively (amounting in 1898 to 49,311,030 tons—greater by 5,599,518 tons than in 1897), the proportion carried by the canals has fallen steadily from 68·9 per cent in 1859 and 47·0 per cent in 1869 to 6·8 per cent in 1898.

On the opening of navigation in the spring of 1900, by means of the enlarged canal systems and the intermediate water ways (though not fully completed), passage to vessels drawing 14 feet of water from Lake Superior to the head of ocean navigation at Montreal will be afforded.

The extent of the improved facilities of communication so to be obtained, and their value to commercial interests may be understood from the fact that in place of the old limit of lock dimensions, viz., length, 200 feet; width, 45 feet; depth of water on the sills, 9 feet; the enlarged locks are 270 feet in length, 45 feet in width, with 14 feet of water on the sills, accommodating vessels 255 feet long and 44 feet wide. As an index to the carrying power of the new canal works, it may be observed that a typical vessel, the propeller *Aragon*, whose length is 247 feet and width 42·6 feet, has passed through the enlarged Welland Canal, drawing 14 feet of water and carrying 2,212 tons of corn.

In the report of the Chief Engineer, and in the reports of the superintending engineers, will be found full details as to the operation of the various canals, and as to the progress and position of the works of enlargement and construction now being carried on.

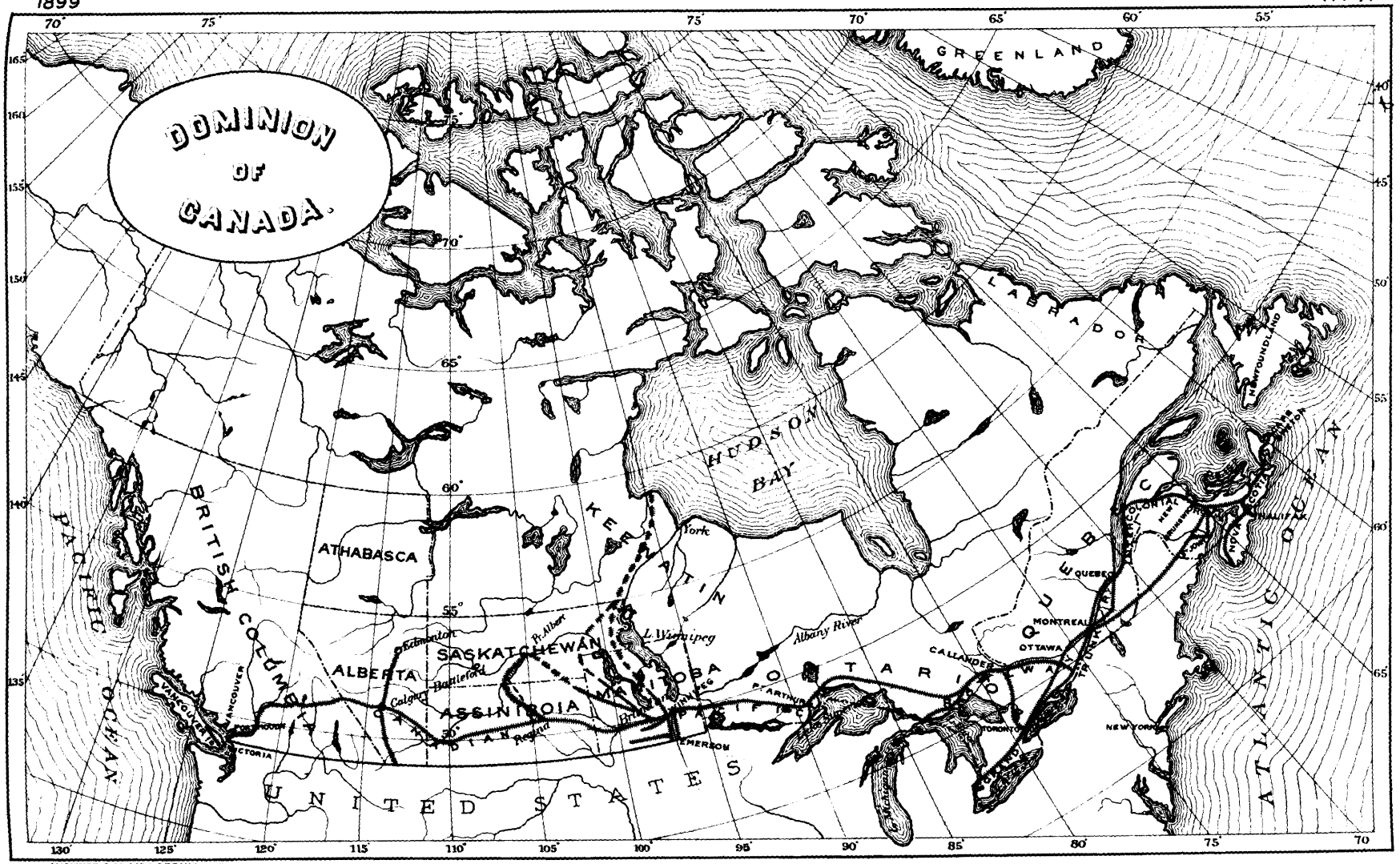
I have the honour to be, sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,
Deputy of the Minister of Railways and Canals.

1899

No 1.



MORTIMER & CO LITH OTTAWA ONT

1899

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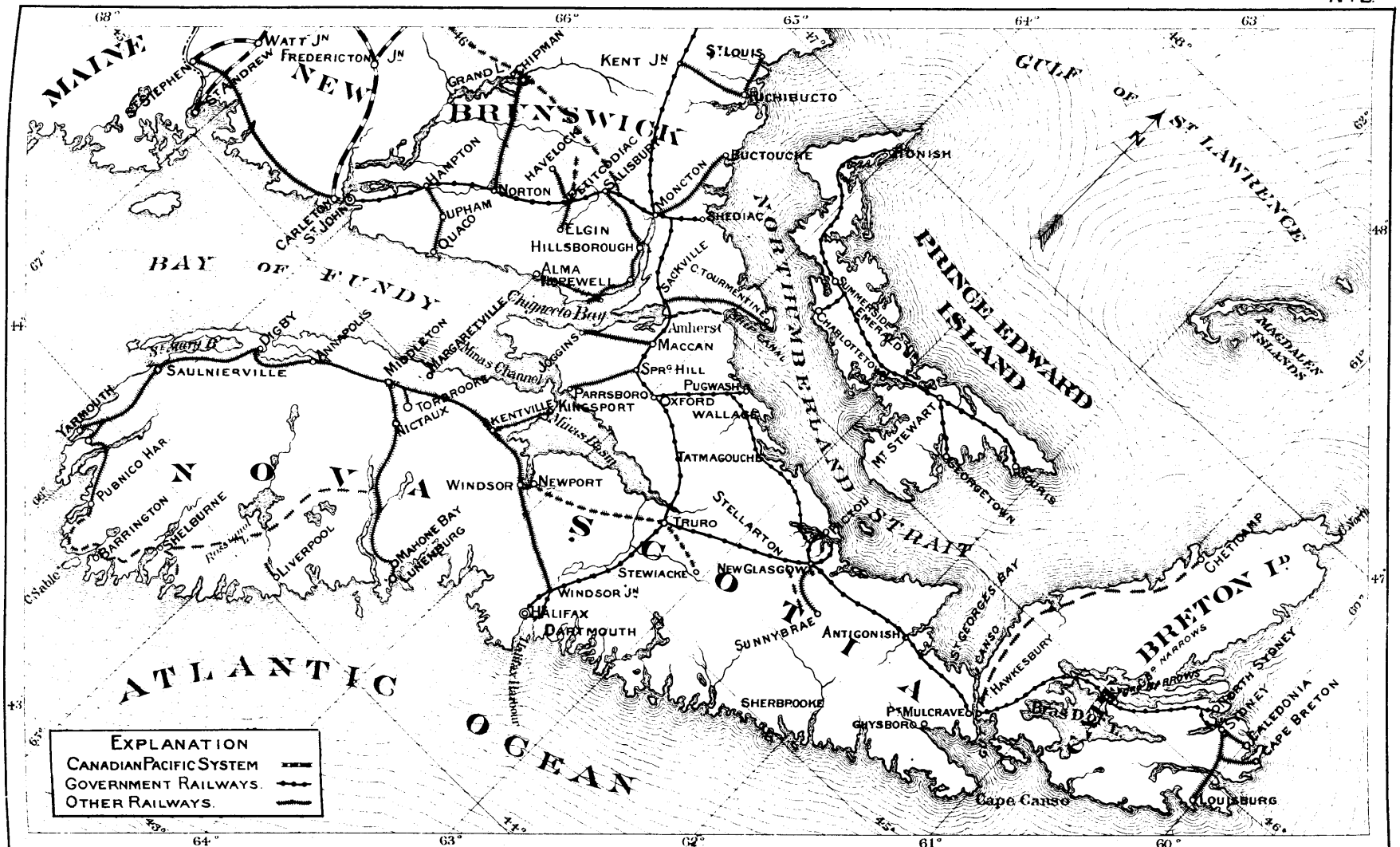

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1899

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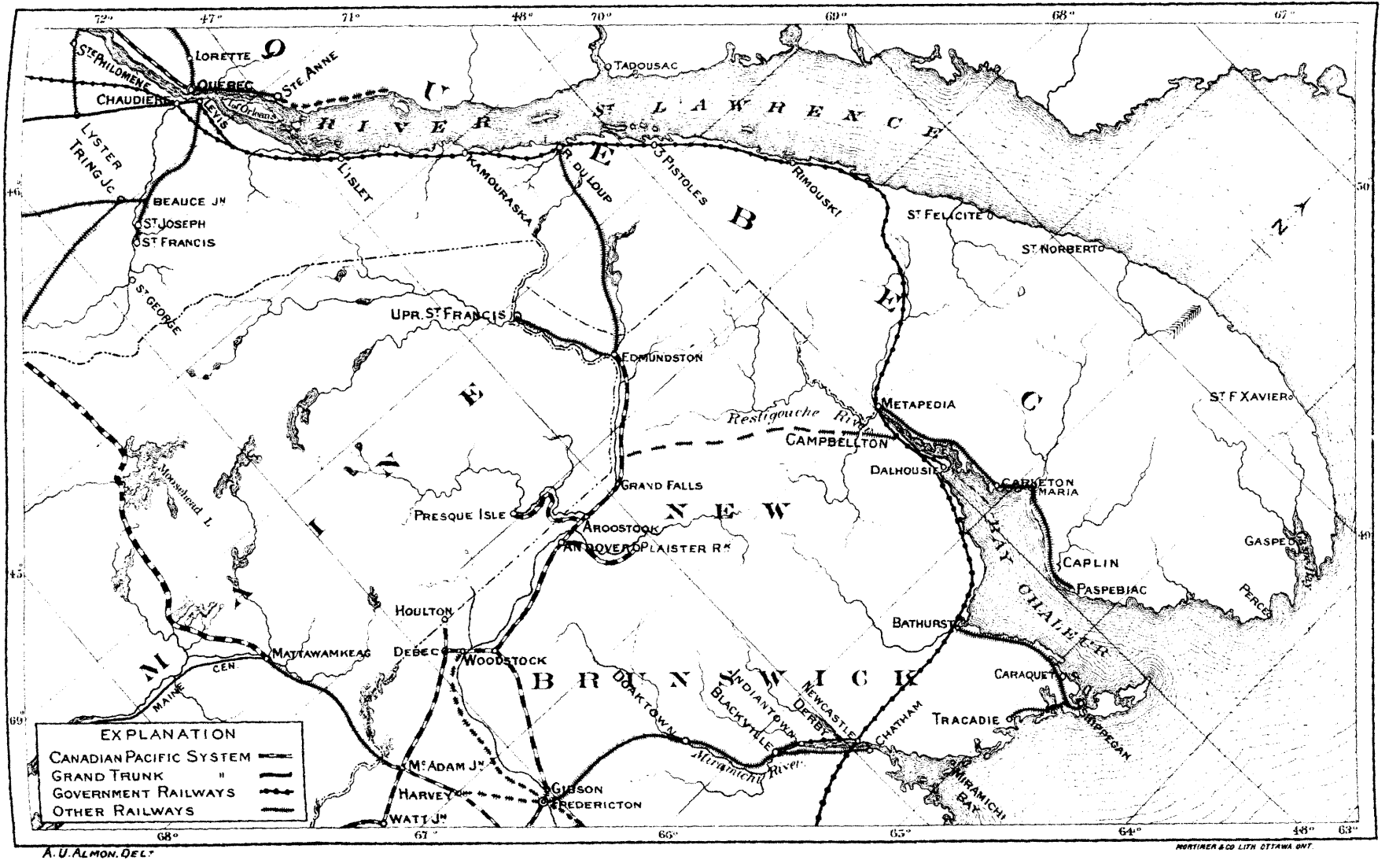

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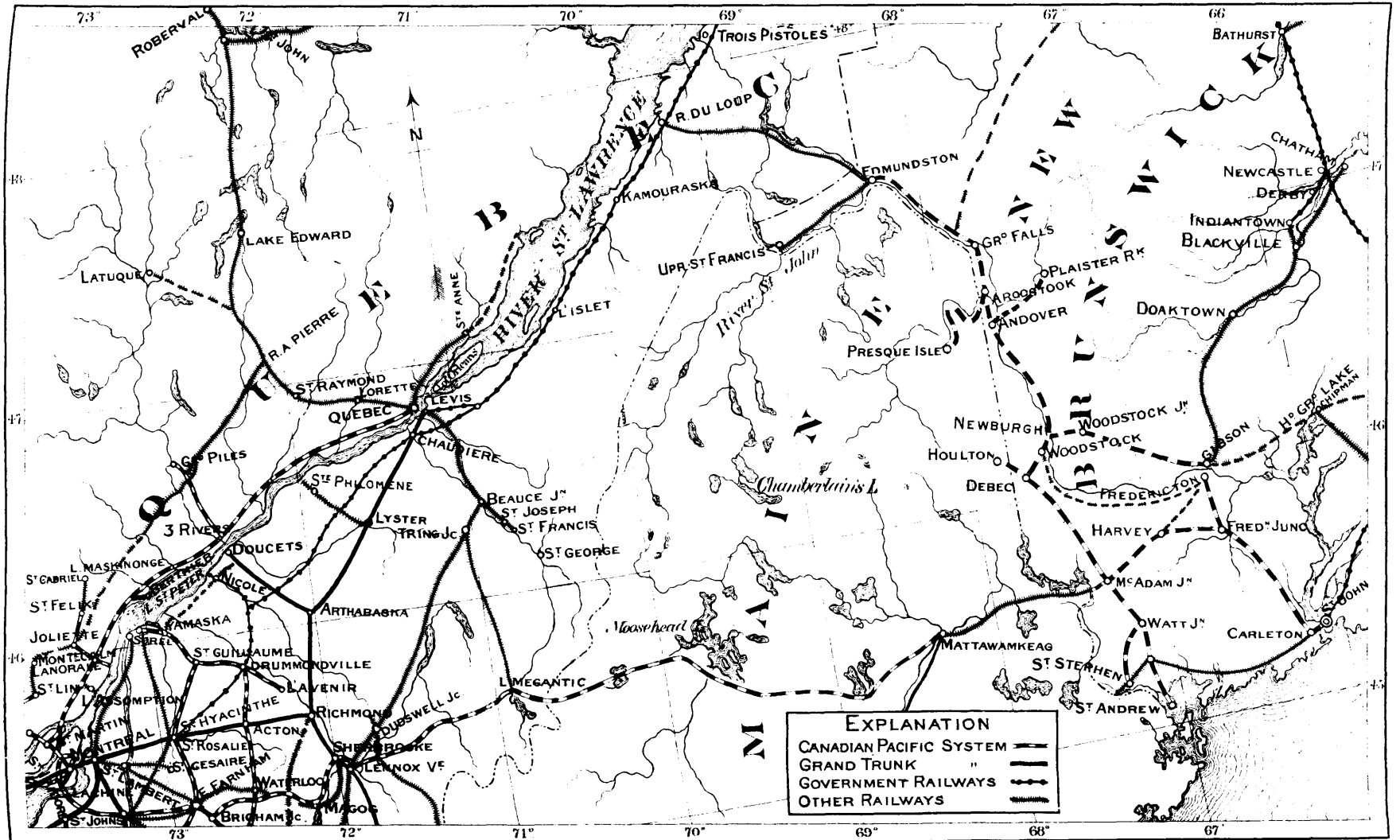

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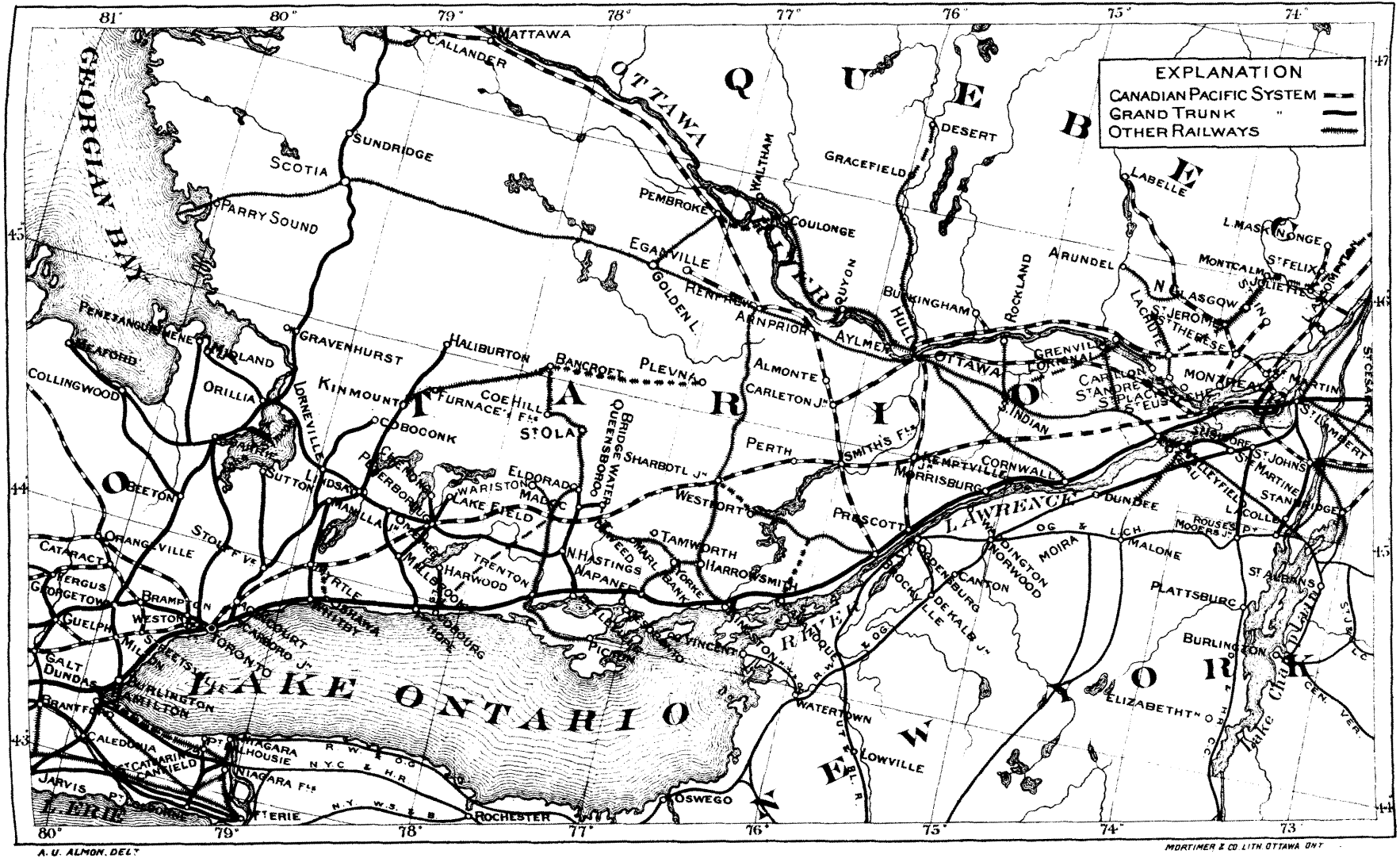

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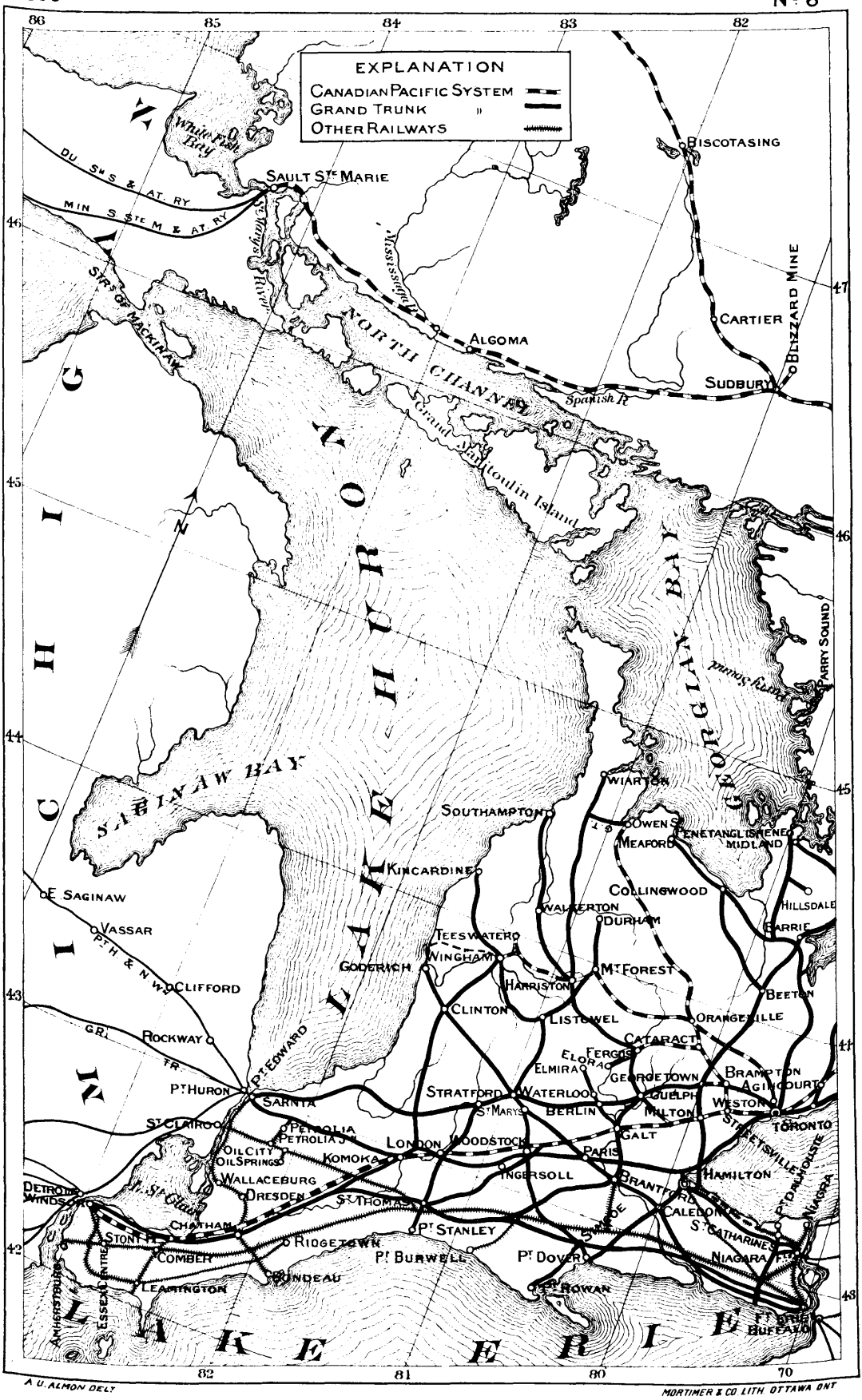
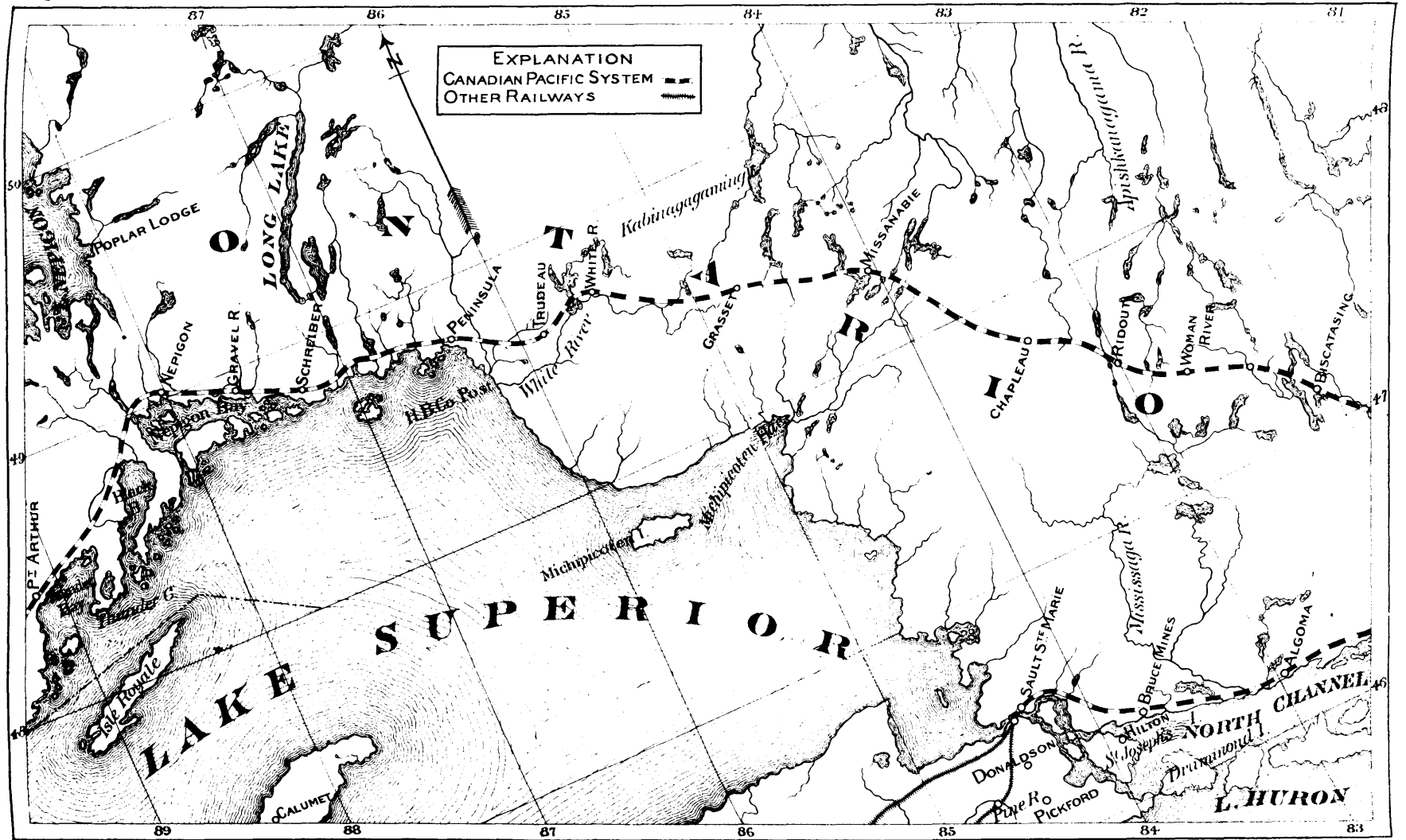

EXPLANATION
CANADIAN PACIFIC SYSTEM
GRAND TRUNK "
OTHER RAILWAYS
LAKE HURON
LAKE ERIE
GEORGIAN BAY
SAGINAW BAY
NORTH CHANNEL
Manitoulin Island
Spanish R.
Mississaga R.
St Marys River
Whitefish Bay
Str's of Mackinaw
DU S Ste M & AT RY
MIN S Ste M & AT RY
Sault Ste Marie
Algoma
Biscotasing
Cartier
Blizzard Mine
Sudbury
Parry Sound
Parry Sound
Wiarton
Southampton
Owen S.
Penetanguishene
Midland
Meaford
Collingwood
Hillsdale
Barrie
Walkerton
Durham
Kincardine
Teeswater
Wingham
Goderich
Mt Forest
Harriston
Clinton
Listowel
Orangeville
Beeton
Cataract
Elora
Fergus
Elmira
Georgetown
Brampton
Agincourt
Guelph
Weston
Milton
Toronto
St Catharines
Niagara Falls
Niagara R.
Hamilton
Brantford
Caledonia
Ingersoll
Paris
Galt
Woodstock
London
Stratford
Waterloo
St Marys
Berlin
Petrolia
Petrolia J.
Oil City
Oil Springs
Komoka
Wallaceburg
Dresden
St Thomas
Pt Stanley
Ridgetown
Pt Burwell
Pt Dover
Rowan
Chatham
Stony Pt
Comber
Leamington
Pelee I.
Pt Pelee
Windsor
Detroit
St Clair R.
Lake St Clair
Essex Centre
Pt Edward
Sarnia
Pt Huron
Rockway
Clifford
E Saginaw
Vassar
Pt H & N W
GR TR
Buffalo
Pt Shiff
Tonawanda
Pt Colborne
Welland Canal
Welland R.
Port Dalhousie
Port Colborne
Fort Erie
Lake Erie
Lake St Clair
Lake Huron
Georgian Bay
Saginaw Bay
North Channel
Manitoulin Island
Spanish R.
Mississaga R.
St Marys River
Whitefish Bay
Str's of Mackinaw
Parry Sound
Niagara R.
Welland Canal


EXPLANATION
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Michipicoten R.
White River
Mississagi R.
Pt ARTHUR
Thunder G.
Isle Royale
Calumet
Nepigon Bay
H.B.Co. Post
Nepigon
Gravel R.
Schreiber
Peninsula
Trudeau
Whitby R.
Grasset
Missanabie
Chapleau
Ridout
Woman River
Biscatasing
Poplar Lodge
Sault Ste Marie
Bruce Mines
Algoma
Hilton
St Joseph I.
Drummond I.
Donaldson
Pickford
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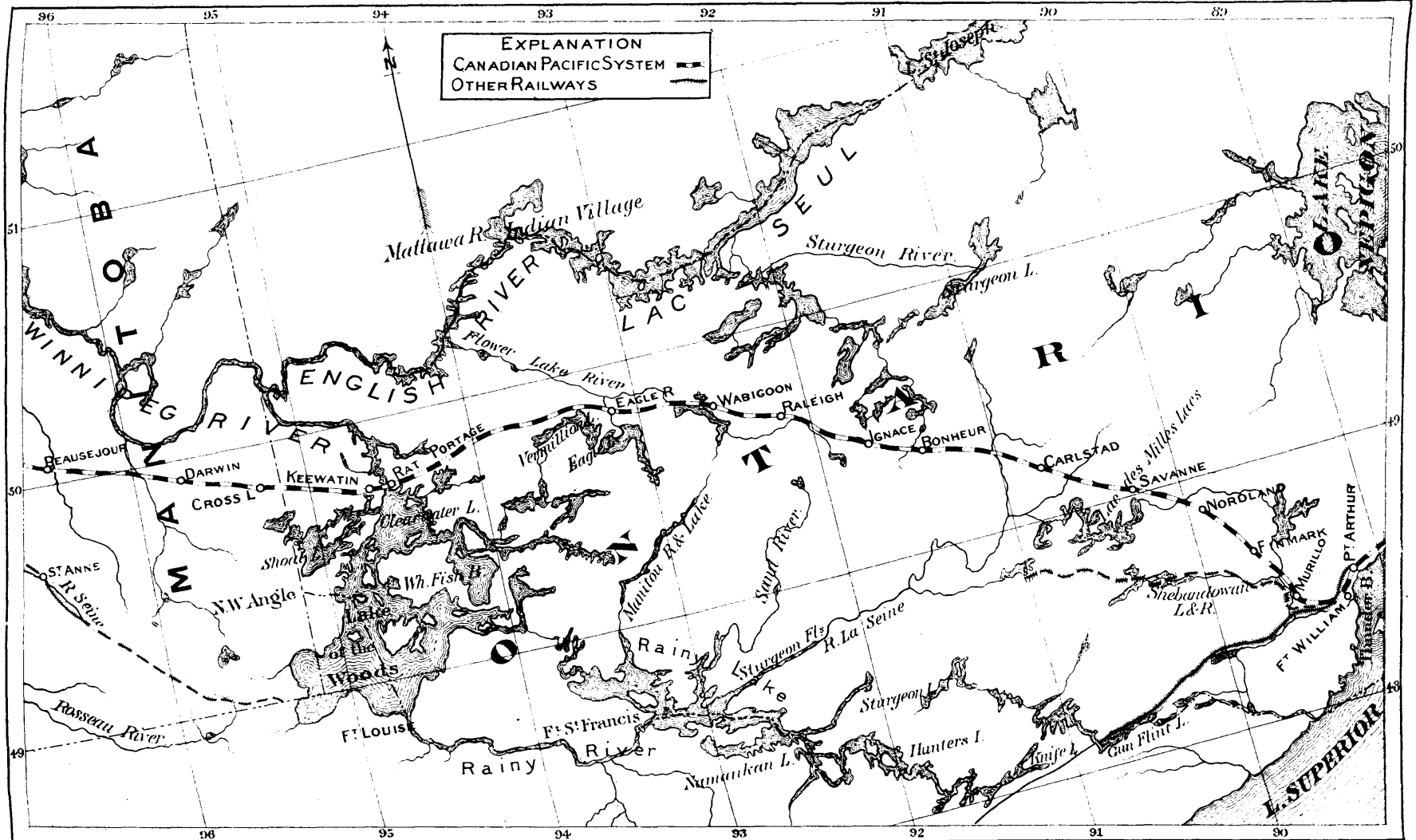

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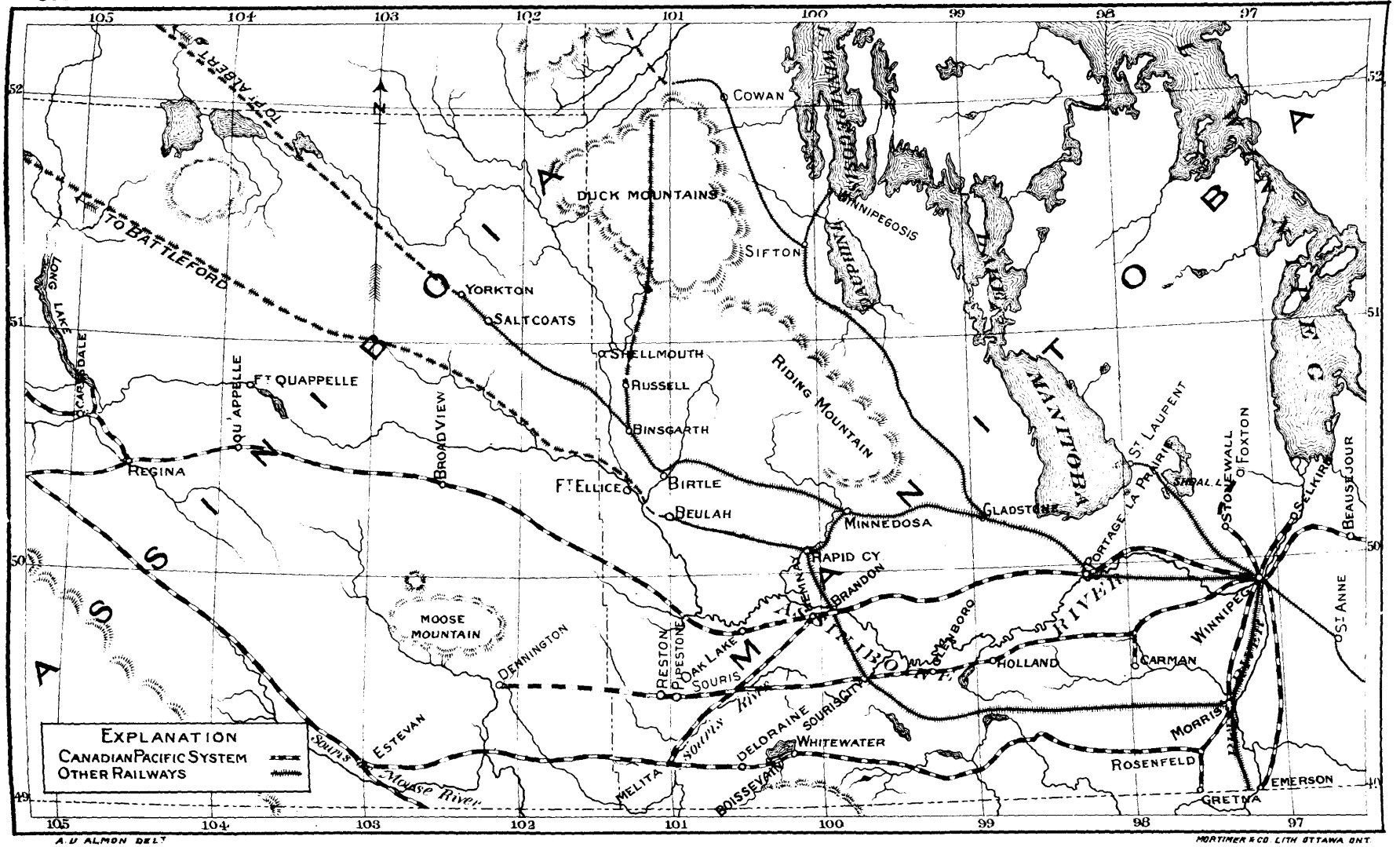
1899

No 9



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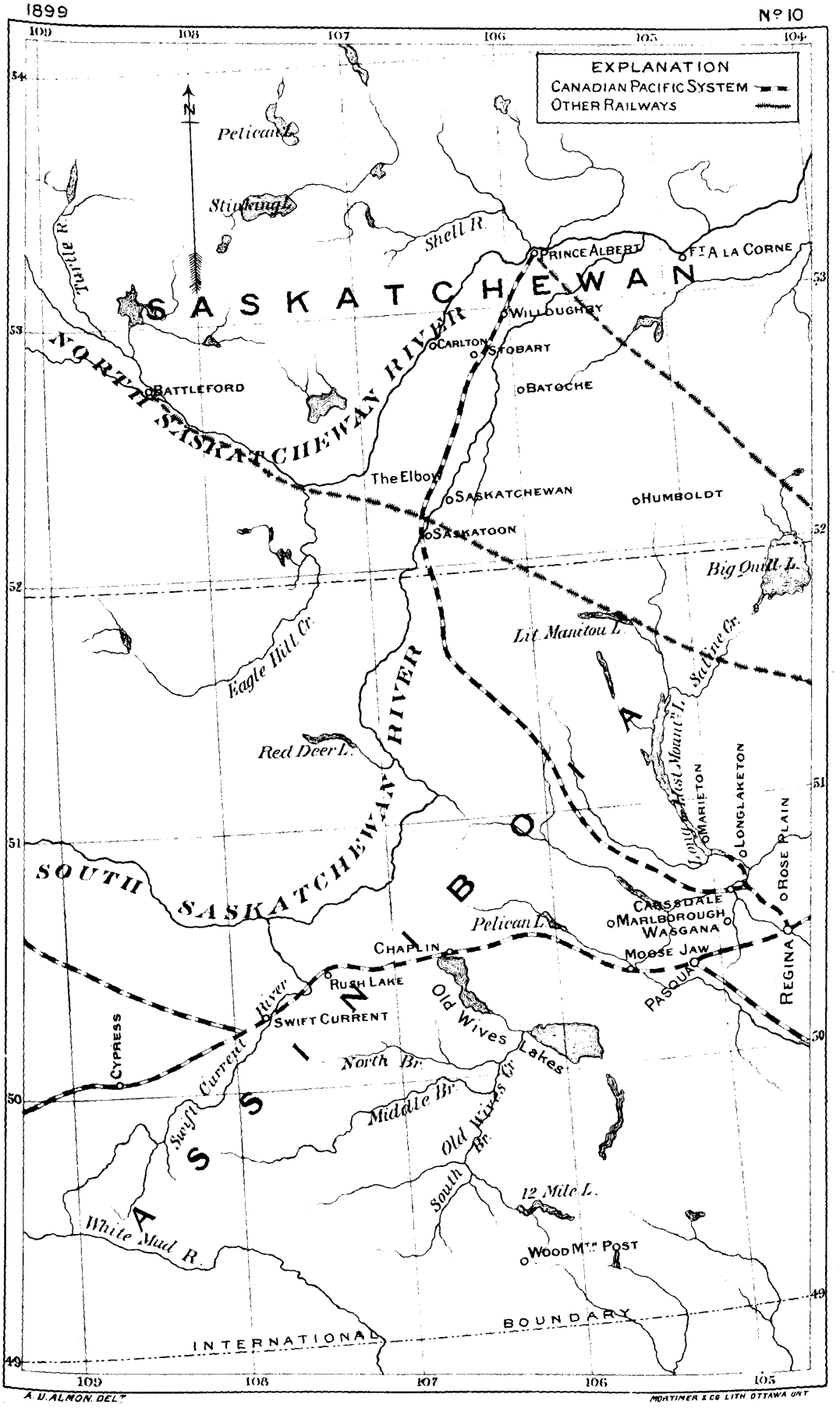

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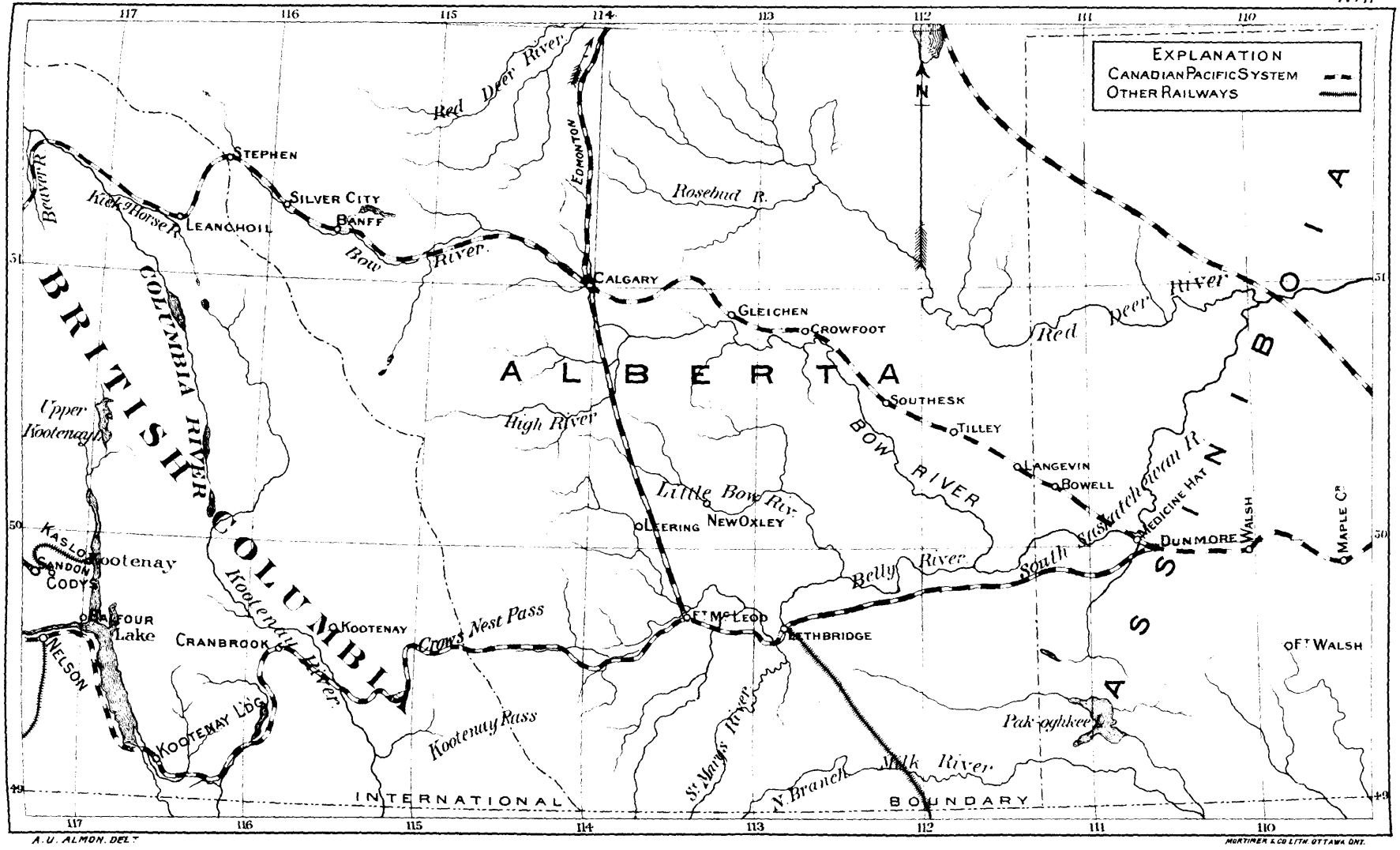

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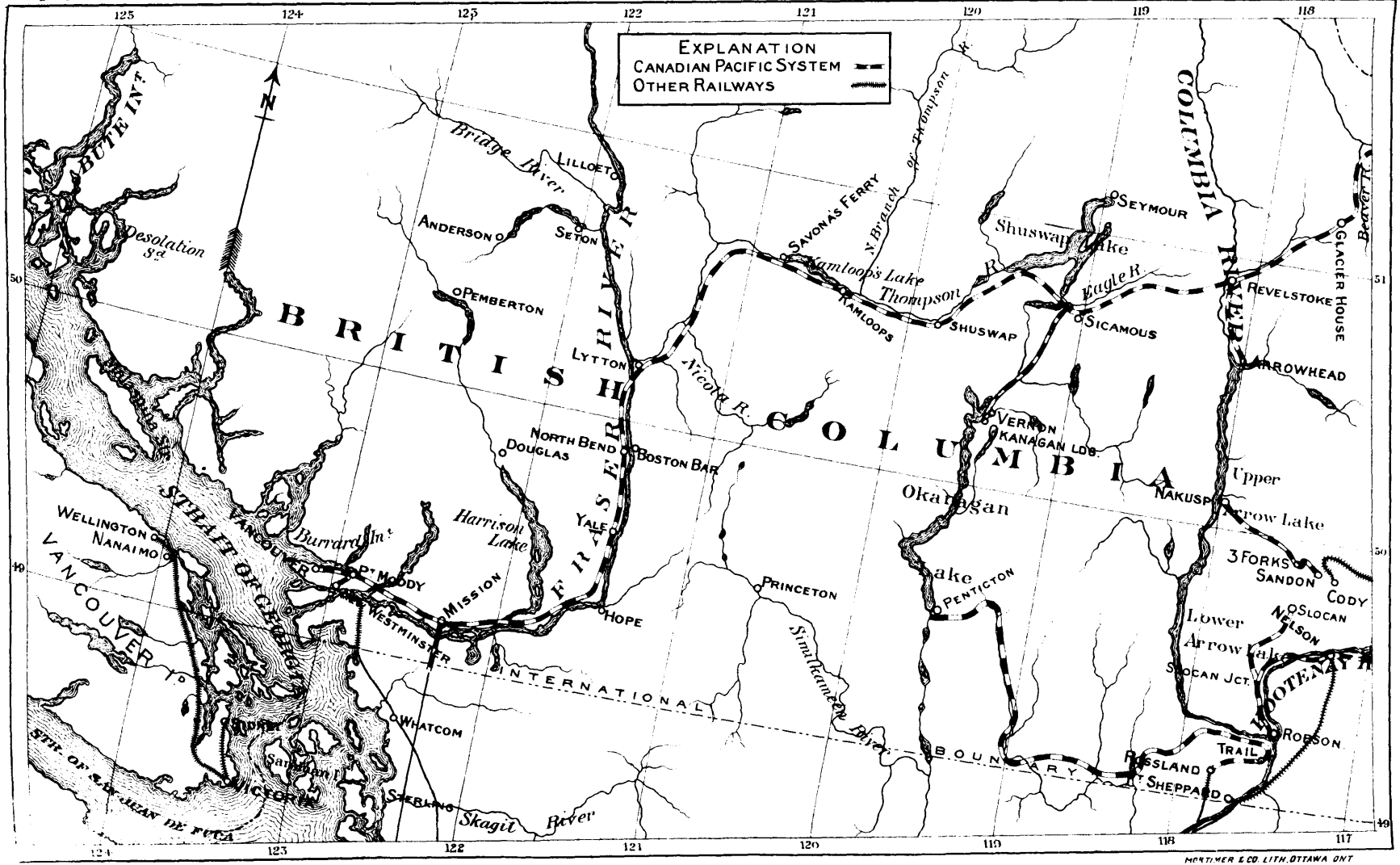

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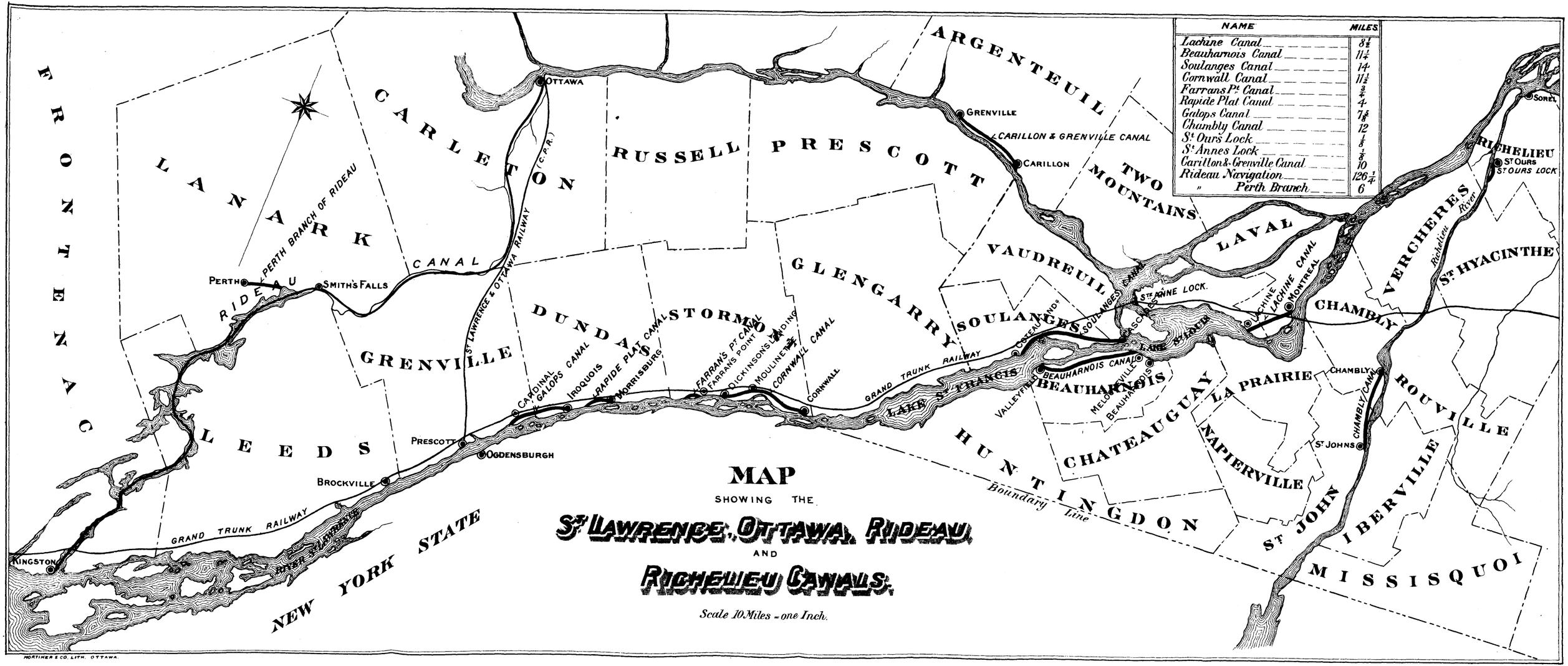
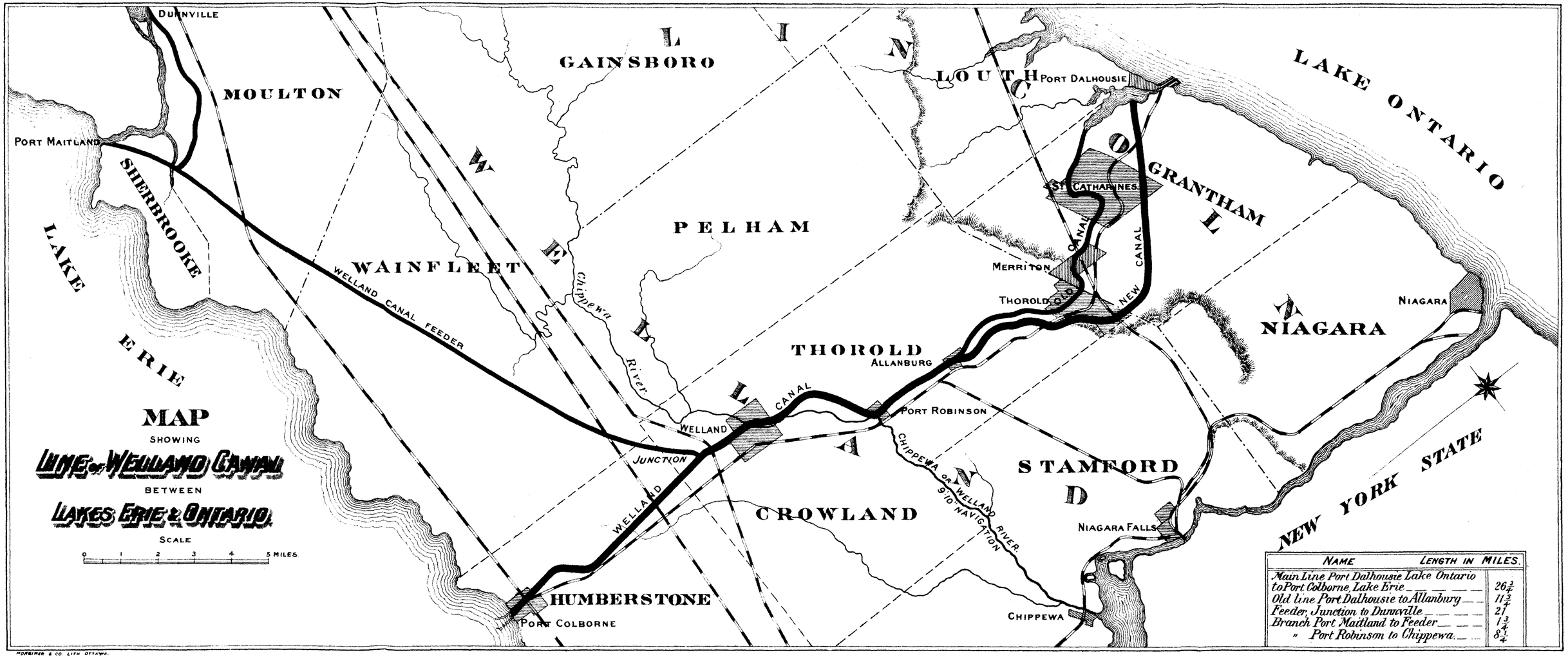

NAME MILES
Lachine Canal 8 1/2
Beauharnois Canal 11 1/4
Soulanges Canal 14
Cornwall Canal 11 1/2
Farrans Pt Canal 3/4
Rapide Plat Canal 4
Galops Canal 7 5/8
Chambly Canal 12
St Ours Lock 1/8
St Annes Lock 1/8
Carillon & Grenville Canal 10
Rideau Navigation 126 1/4
" Perth Branch 6
FRONTENAC
LANARK
CARLETON
RUSSELL
PRESCOTT
ARGENTEUIL
TWO MOUNTAINS
LAVAL
VERCHERES
RICHELIEU
LEEDS
GRENVILLE
DUNDAS
STORMONT
GLENGARRY
VAUDREUIL
SOULANGES
BEAUHARNOIS
CHATEAUGUAY
LA PRAIRIE
NAPIERVILLE
ST JOHN
IBERVILLE
ROUVILLE
MISSISQUOI
HUNTINGDON
ST HYACINTHE
CHAMBLY
NEW YORK STATE
Boundary line
PERTH BRANCH OF RIDEAU CANAL
RIDEAU
PERTH
SMITH'S FALLS
OTTAWA
ST LAWRENCE & OTTAWA RAILWAY (C.P.R.)
GRENVILLE
CARILLON & GRENVILLE CANAL
CARILLON
SOREL
RICHELIEU
ST OURS
ST OURS LOCK
Richelieu River
CARDINAL
GALOPS CANAL
IROQUOIS
RAPIDE PLAT CANAL
MORRISBURG
FARRAN'S Pt CANAL
FARRANS POINT
DICKINSON'S LANDING
MOULINETTE
CORNWALL CANAL
CORNWALL
GRAND TRUNK RAILWAY
LAKE ST FRANCIS
CÔTEAU LANDG
SOULANGES CANAL
CASCADES
LAKE ST LOUIS
STE ANNE LOCK
LACHINE
LACHINE CANAL
MONTREAL
BEAUHARNOIS CANAL
VALLEYFIELD
MELOCHEVILLE
BEAUHARNOIS
CHAMBLY
CHAMBLY CANAL
ST JOHNS
PRESCOTT
OGDENSBURGH
BROCKVILLE
GRAND TRUNK RAILWAY
KINGSTON
RIVER ST LAWRENCE
MAP
SHOWING THE
ST LAWRENCE, OTTAWA, RIDEAU
AND
RICHELIEU CANALS.
Scale 10 Miles = one Inch.
MORTIMER & CO. LITH. OTTAWA.


Dunnville
MOULTON
GAINSBORO
LOUTH
Port Dalhousie
LAKE ONTARIO
Port Maitland
SHERBROOKE
WAINFLEET
PELHAM
GRANTHAM
St. Catharines
Merriton
Thorold
NIAGARA
Niagara
LAKE ERIE
WELLAND CANAL FEEDER
Chippewa River
THOROLD
Allanburg
Welland
Port Robinson
CHIPPEWA or WELLAND RIVER
9 10 NAVIGATION
STAMFORD
CROWLAND
Niagara Falls
NEW YORK STATE
HUMBERSTONE
Port Colborne
Chippewa
MAP
SHOWING
LINE of WELLAND CANAL
BETWEEN
LAKES ERIE & ONTARIO
SCALE
0 1 2 3 4 5 MILES
NAME
LENGTH IN MILES.
Main Line Port Dalhousie Lake Ontario to Port Colborne, Lake Erie 26 3/4
Old line Port Dalhousie to Allanbury 11 3/4
Feeder, Junction to Dunville 21
Branch Port Maitland to Feeder 1 3/4
" Port Robinson to Chippewa 8 1/4
MORRISETT & CO. LITH. OTTAWA.

SIMCOE

YORK

ONTARIO

DURHAM

VICTORIA

PETERBOROUGH

NORTHUMBERLAND

HASTINGS

PRINCE EDWARD

ADDINGTON

LENNOX

LAKE SIMCOE

LAKE ONTARIO

Severn River

Lake Couchiching

Orillia

Barrie

Kempenfelt Bay

Cameron Lake

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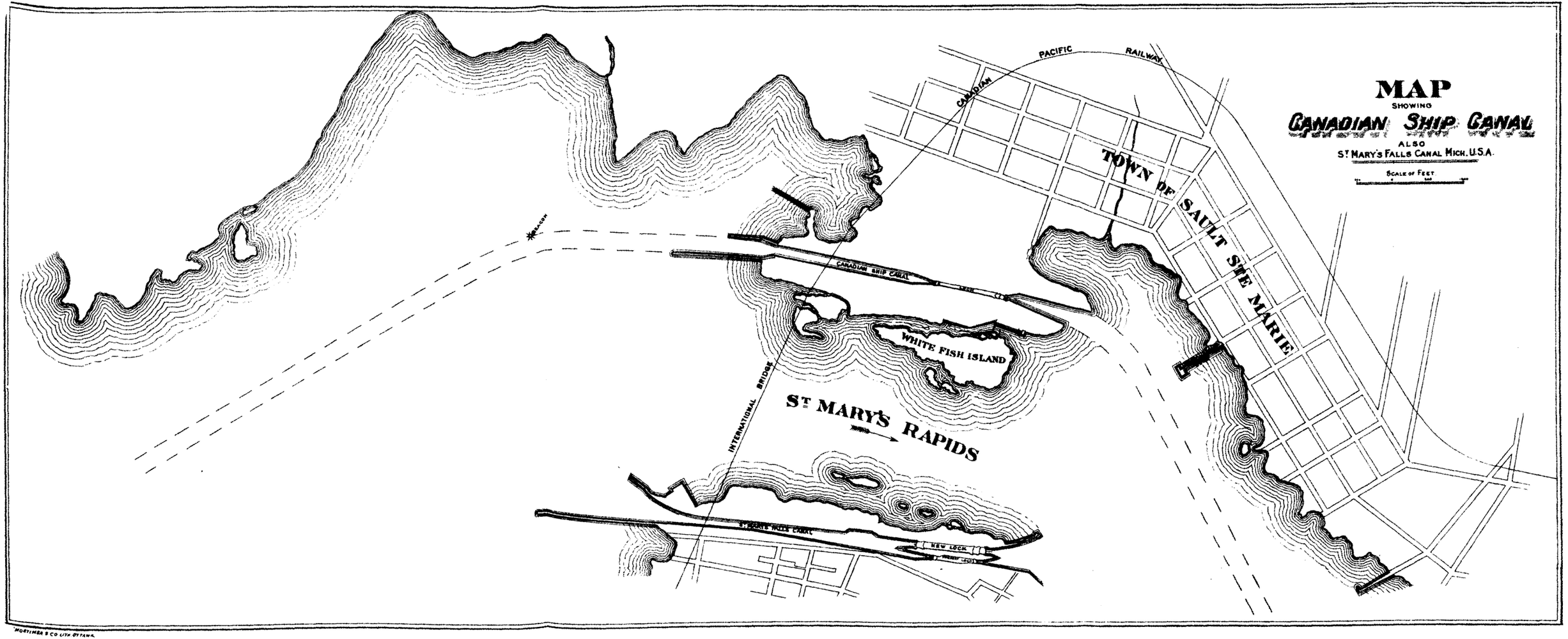
Cameron Lake


MAP
SHOWING
CANADIAN SHIP CANAL
ALSO
St MARY'S FALLS CANAL MICH. U.S.A.
SCALE OF FEET
CANADIAN PACIFIC RAILWAY
TOWN OF SAULT STE MARIE
CANADIAN SHIP CANAL
WHITE FISH ISLAND
INTERNATIONAL BRIDGE
St MARY'S RAPIDS
St MARY'S FALLS CANAL
NEW LOCK
MORTIMER & CO LITH OTTAWA

PART I

SKETCH MAPS OF DOMINION RAILWAYS AND CANALS

ALSO INFORMATION AS TO

TRANSCONTINENTAL RAILWAY COMMUNICATION AND AS TO ROUTES OF CANAL NAVIGATION

AND

REPORT OF THE CHIEF ENGINEER

COMPRISING REPORTS OF

GENERAL MANAGER OF GOVERNMENT RAILWAYS AND SUPERINTENDENTS OF CANALS

ALSO

DECISIONS OF THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL

CANADIAN TRANSCONTINENTAL RAILWAY COMMUNICATION.

HALIFAX OR ST. JOHN TO MONTREAL.

The routes available between Halifax and Montreal are four in number; in all of which the Intercolonial is used, either in whole or in part, as follows: (the names adopted are those of the dominating roads):—

Intercolonial Railway Route—

	Miles.	
By Intercolonial Railway to Point Lévis	675	
" " Lévis to Montreal	173	
		848

(Or by ferry across the St. Lawrence to Quebec, thence by Canadian Pacific Railway, also 173 miles.)

Canadian Pacific Railway Route—

By Intercolonial Railway to St. John, N.B	275	
Canadian Pacific Railway and Maine Central Railway to Mattawamkeag	146	
Canadian Pacific Railway to Montreal	334	
		775

Grand Trunk Railway Route—

By Intercolonial Railway to St. John, N.B	275	
Canadian Pacific Railway	90	
Maine Central Railway	224	
Total up to Danville Junction	589	
By Grand Trunk Railway to Montreal	270	
		859

Témiscouata Railway Route—

By Intercolonial Railway to St. John, N.B	275	
Canadian Pacific Railway to Edmundston	170	
Témiscouata Railway to Rivière du Loup	81	
Intercolonial Railway to Montreal	282	
		808

MONTREAL TO THE PACIFIC COAST, CANADIAN PACIFIC RAILWAY.

Trunk Line.

	Miles.	Miles.
Quebec to St. Martin's Junction (13 miles north of Montreal).		159
Montreal (at head of Atlantic Ocean Navigation to St. Martin's Junction)		13
St. Martin's Junction to Callander		331
Callander to Port Arthur	649	
Port Arthur to Red River (opposite Winnipeg)	428	
Red River to Savona's Ferry	1,257	
Savona's Ferry to the waters of the Pacific Ocean at Port Moody	213	
		2,547
Port Moody to Vancouver		15
Total, Montreal to Vancouver		2,906

This railway was opened for through traffic on June 28, 1886.

INTERCOLONIAL RAILWAY.

The Intercolonial Railway touches six Atlantic Ocean ports, namely, Pointe du Chêne, Pictou, Halifax, St. John, Sydney and North Sydney, as well as the ports of Quebec and Montreal on the St. Lawrence River.

The total length of the road operated during the year ended June 30, 1899, was 1,315 miles, and for freight branches 12½ miles, making a total of 1,327½ miles.

The following are the through distances:—

		Miles.
Montreal via St. Joseph and St. Charles Junction (14 miles) to Halifax		838
Montreal to St. John		741
Montreal via Truro	to Sydney	990
	to North Sydney	983

NOTE.—At Montreal the passengers make connection with the Canadian Pacific Railway and with the Grand Trunk Railway. Freight is carried direct along the line between Chaudière Junction and St. Charles Junction (17 miles), instead of round by Lévis to St. Charles Junction, a total distance of 24 miles, thence to Montreal.

WINDSOR BRANCH.

This road is 32 miles in length. It extends from Windsor Junction, on the Intercolonial Railway, to Windsor.

PRINCE EDWARD ISLAND RAILWAY.

LENGTH OF LINE.

	Miles.
Souris to Tignish	168
Mount Stewart to Georgetown	24
Charlottetown to Royalty Junction	5
Emerald Junction to Cape Traverse	13
Alberton to Cascumpec Wharf	1
	211

Communication between the Prince Edward Island Railway and the Intercolonial is afforded in summer by steamer between Summerside and Pointe du Chêne, between Charlottetown and Pictou, and between Georgetown and Pictou, and in winter by specially-built steamers between Georgetown and Pictou and between Charlottetown and Pictou; there is also further provision made for communication by iceboats from Cape Traverse. These cross the Strait to Cape Tormentine, on the mainland, a distance of about 9 miles. Here, by the line of New Brunswick and Prince Edward Railway, about 40 miles in length, connection is made with the Intercolonial Railway at Sackville. This winter service across the Straits is conducted by the Marine Department, the mails being taken to and met at Cape Traverse by special trains, whenever required by the Post Office Department.

CANALS.

The canal systems of the Dominion, under Government control, in connection with lakes and navigable rivers, are as follow:—

First.—Montreal to Port Arthur at head of Lake Superior.

1. Lachine Canal.
2. Soulanges "
3. Cornwall "
4. Farran's Point Canal.
5. Rapide Plat "
6. Galops "
7. Murray "
8. Welland "
9. Sault Ste. Marie "

Second.—Ottawa to Lake Champlain.

1. Grenville Canal.
2. Carillon "
3. St. Anne's "
4. Chambly "
5. St. Ours "

Third.—Ottawa to Kingston and Perth.

1. Rideau Canal.

Fourth.—

1. Trent Canal.

Fifth.—Ocean to the Bras d'Or Lakes.

1. St. Peter's Canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,260 statute miles. The distance to Duluth is 2,384 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal the distance is 986 miles. From Quebec to Montreal the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869 this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the Government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness incurred. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

Navigation, which is closed by ice during the winter months, opens about the end of April.

Montreal has by this work been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access, through the St. Lawrence Canals, the Welland Canal, the Great Lakes and the Sault Ste. Marie Canal, to the head of Lake Superior.

The difference in level between the point on the St. Lawrence near Three Rivers where tidal influence ceases, and Lake Superior, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior are the Lachine, Soulanges, Beauharnois, Cornwall, Farran's Point, Rapide Plat, Galops, Murray,

Welland and Sault Ste. Marie. Their aggregate length is 85 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 47. The Soulanges Canal takes the place of the Beauharnois Canal, the latter may be abandoned for navigation purposes.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie Canal, and also by the St. Mary's Falls Canal situated on the United States side of the River St. Mary. Both these canals are free of toll.

It is important to note that the enlargement of the canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions:—Length 270 feet, width 45 feet, depth of water on sills 14 feet. *The length of the vessels to be accommodated is limited to 255 feet.* At Farran's Point, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops Canal, the object being to pass a full tow at one lockage.

LACHINE CANAL.

Length of canal	8½ statute miles.
Number of locks	5
Dimensions of locks	270 feet by 45 feet.
Total rise or lockage	45 "
Depth of water on sills { at two locks	18 "
{ at three locks	14 "
Mean width of new canal	150 "

The old lift locks, 200 feet by 45 feet, are still available with 9 feet of water on mitre sills.

The depth of the canal between locks is now adapted to vessels of 14 feet draught.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. The old locks are 200 feet by 45 feet. There are two lock entrances at each end.

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis Rapids, the first of the series of rapids which bars the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle Isle.

BEAUHARNOIS CANAL.

Length of canal	11¼ statute miles.
Number of locks	9
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	82½ "
Depth of water on sills	9 "
Breadth of canal at bottom	80 "
Breadth of canal at water surface	120 "

This canal commences on the south side of the St. Lawrence, 15¼ miles from the head of the Lachine Canal. It connects Lakes St. Louis and St. Francis, and passes the three rapids known, respectively, as the Cascades, the Cedars and the Coteau. This canal will no longer form a link in the chain of canals on the through route.

The Soulanges canal, on the north side of the river, is now open for navigation purposes.

CORNWALL CANAL.

Length of canal	11 statute miles.
Number of locks	6
Dimensions of locks	270 by 45 feet.
Total rise or lockage	48 feet.
Depth of water on sills	14 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "

The old lift locks, 200 feet by 45 feet, are also available with 9 feet of water on the mitre sills.

From the head of the Soulanges to the foot of the Cornwall Canal there is a stretch, through Lake St. Francis, of 32¾ miles, which is being made navigable for vessels drawing 14 feet.

The Cornwall Canal extends past the Long Sault Rapids from the town of Cornwall to Dickenson's Landing.

WILLIAMSBURG CANALS.

The Farran's Point, Rapide Plat, and Galops Canals are collectively known as the Williamsburg canals.

FARRAN'S POINT CANAL.

Length of canal	1 mile.
Number of locks	1
New lock	800 feet by 45 feet.
Old lock	200 " 45 "
Total rise or lockage	3½ "
Depth of water on sills of new lock at ordinary water level	14 "
Depth of water on sills of old lock at ordinary water level	9 "
Breadth of canal at bottom	90 "
Breadth of canal at water surface	154 "

From the head of the Cornwall Canal to the foot of Farran's Point Canal, the distance on the River St. Lawrence is 5 miles. The latter canal enables vessels ascending the river to avoid the Farran's Point rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

Rapide Plat Canal.

Length of canal	$3\frac{2}{3}$ miles.
Number of locks	2
Dimensions of locks	270 feet by 45 feet.
Total rise or lockage	$11\frac{1}{2}$ "
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	152 "

The old lift lock, 200 feet by 45, is also available with 9 feet water on mitre sills.

From the head of Farran's Point Canal to the foot of Rapide Plat Canal there is a navigable stretch of $10\frac{1}{2}$ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

Galops Canal.

Length of canal	$7\frac{1}{3}$ miles.
Number of locks	3
Dimensions of locks	2—270 by 45. 1—800 by 45.
Total rise or lockage	$15\frac{1}{2}$ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	144 "

From the head of Rapide Plat Canal to Iroquois, at the foot of the Galops Canal, the St. Lawrence is navigable for $4\frac{1}{2}$ miles. This canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western pier heads	$5\frac{1}{6}$ miles.
Breadth at bottom	80 feet.
Breadth at water surface	120 "
Depth below lowest known lake level	11 "

No locks.

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinté and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

MAIN LINE FROM PORT DALHOUSIE, LAKE ONTARIO, TO PORT COLBORNE, LAKE ERIE.

—	Old Line.	Enlarged or New Line.
Length of canal	27½ miles.	26¾ miles.
Pairs of guard-gates (formerly 3)		2
Number of locks { lift	26	lift 25
Number of locks { guard	1	guard 1
Dimensions	1 lock 200 x 45 1 " 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 45	270 feet x 45 feet.
Total rise or lockage	326¾ feet.	326¾ feet.
Depth of water on sills	10½ feet.	14 "

WELLAND RIVER BRANCHES.

Length of canal—Port Robinson Cut to River Welland	2,622 feet.
" From the Canal at Welland, to the river, via lock at aqueduct	300 "
Chippewa Cut to River Niagara	1,020 "
Number of locks—one at aqueduct and one at Port Robinson	2
Dimensions of locks	150 by 26½ feet.
Total lockage from the canal at Welland down to River Welland	10 feet.
Depth of water on sills	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal	21 miles.
Number of locks	2
Dimensions of locks	1 of 150 by 26½ feet. 1 of 200 by 45 "
Total rise or lockage	7 to 8 feet.
Depth of water on sills	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1¾ miles.
Number of locks	1
Dimensions of locks	185 by 45 feet.
Total rise or lockage	7½ feet.
Depth of water on sills	11 "

The Welland Canal has two entrances from Lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburgh, 11¾ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburgh to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland Canal there is a deep water navigation through Lake Erie, the Detroit River, Lake St. Clair, the St. Clair River, Lake Huron and River St. Mary to the Sault Canal, a distance of about 394 miles. From the Sault the distance through Lake Superior to Port Arthur is 266 miles, and to Duluth 390 miles.

SAULT STE. MARIE CANAL.

Length of canal, between the extreme ends of the entrance piers	5,967 feet.
Number of locks	1
Dimensions of lock	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	20 feet 3 inches.
Total rise or lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

This canal has been constructed through St. Mary's Island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian territory between Lakes Huron and Superior. The masonry pier of the bridge carrying the Canadian Pacific Railway over the canal which stood in the channel of the canal forming an obstruction to navigation, has been removed, the swing now spanning the full width of the channel or prism of the canal.

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine Canal, the navigation section of the lower River Ottawa, and the Ottawa Canals, to the city of Ottawa; thence by the River Rideau and the Rideau Canal to Kingston, on Lake Ontario—a total distance of 245⅝ miles.

After leaving the Lachine Canal the works constructed to overcome difficulties of navigation are:—

The Ste. Anne's Lock,
Carillon Canal,
Grenvillle Canal,
Rideau Canal,
} Ottawa River Canals.

The total lockage (not including that of the Lachine Canal) is 509 feet—(345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour :—

Sections of Navigation.	Intermediate distances.	Total distance from Montreal.
	Miles.	Miles.
The Lachine Canal	8½	
From Lachine to Ste. Anne's Lock	15	23½
Ste. Anne's Lock and piers	⅛	23⅝
From Ste. Anne's Lock to Carillon Canal	27	50⅝
The Carillon Canal	¾	51⅜
From Carillon Canal to Grenville Canal	6¼	57⅝
The Grenville Canal	¾	63⅜
From the Grenville Canal to entrance of Rideau navigation	56	119⅜
Rideau navigation, ending at Kingston	126¼	245⅝

STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Length of canal	⅛ mile	⅛ mile.
Number of locks	1	1
Dimensions of locks	190 x 45 feet.	200 x 45 feet.
Total rise or lockage	3 feet.	3 feet.
Depth of water on sills	6 "	9 "

This work, with guide piers above and below, surmounts the Ste. Anne's Rapids between Ile Perrot and the head of the Island of Montreal at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23½ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal	¾ mile.
Number of locks	2
Dimensions of locks	200 x 45 feet.
Total rise or lockage	16 feet.
Depth of water on sills	9 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	110 "

This canal overcomes the Carillon Rapids.

From Ste. Anne's Lock to the foot of the Carillon Canal there is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Length of canal	5¾ miles.
Number of locks	5
Dimensions of locks	200 x 45 feet.
Total rise or lockage	43¾ feet.
Depth of water on sills	9 "
Breadth of canal at bottom	40 to 50 feet.
Breadth of canal at surface of water	50 to 80 "

This canal, by which the Long Sault Rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters	126¼ miles.
Number of locks going from Ottawa to Kingston.	35 ascending. 14 descending.
Total lockage.... 446¼ feet.	282¼ rise and 164 fall. at high water.
Dimensions of locks	134 x 33 feet.
Depth of water on sills, 5 feet; navigation depth through the several reaches	4½ feet.
Breadth at canal reaches at bottom	60 " in earth. 54 " in rock.
Breadth at surface of water	80 " in earth.

PERTH BRANCH.

Length of canal	6 miles.
Number of locks	2
Dimensions of locks	134 feet x 32 feet.
Total rise or lockage	26 "
Depth of water on sills	5 " 6 inches.
Length of dam	200 "
Breadth of canal at bottom	40 "
Breadth of canal at surface of water	40 " in rock. 60 " in clay.

The Perth branch on the Rideau Canal affords communication between Beveridge's Bay, on Lake Rideau, and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:—

From the summit, the route towards Ottawa follows the Rideau River, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz. :

1. The summit level, supplied by the Wolf Lake system. 2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau. 3. The south-west descending level to Kingston, supplied by the Mud Lake system, formerly known as the Devil Lake system, discharging into Lake Openicon.

Lake Openicon receives the waters of Buck Lake and Rock Lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Cranberry Lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the River St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours Lock to the basin of Chambly, thence by the Chambly Canal to St. Johns and the River Richelieu and Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain Canal is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York, the distance is 330 miles.

The following table shows the distances between Sorel and New York :—

Section of Navigation.	Intermediate Distances in Miles.	Total Distances.
Sorel to St. Ours Lock	14	14
St. Ours Lock to Chambly Canal	32	46
Chambly Canal	12	58
Chambly Canal to boundary line	23	81
Boundary line to Champlain Canal	111	192
Champlain Canal to junction with Erie Canal	66	258
Erie Canal, from junction to Albany	7	265
Albany to New York	146	411

ST. OURS LOCK AND DAM.

Length	$\frac{1}{8}$	mile.
Number of locks	1	
Dimensions of lock	200	feet by 45 feet.
Total rise or lockage	5	"
Depth of water on sills	7	" at low water.
Length of dam in eastern channel	300	"
" " western channel	690	"

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours Lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours Lock and Chambly Basin, a distance of 32 miles.

CHAMBLY CANAL.

Length of canal	12 miles.	
Number of locks	9	
Dimensions of locks:—		
Guard Lock, No. 1, at St. Johns	122 feet	From 22½ to 24 feet wide.
Lift " 2	124 "	
" " 3, 4, 5, 6	118 "	
" " 7, 8, 9 combined	125 "	
Total rise or lockage	74 "	
Depth of water on sills	7 "	
Breadth of canal at bottom	36 "	
" " surface of water	60 "	

This canal succeeds the 32 miles of navigable water between St. Ours Lock and Chambly Basin. The canal overcomes the rapids between Chambly and St. Johns.

TRENT CANAL.

The term "Trent Canal" is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which in their present condition, are efficient only for local use. By various works, this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the River Trent, Rice Lake, the River Otonabee, and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 165 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe; thence by the River Severn to Georgian Bay, Lake Huron; the total distance being about 200 miles, of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried

out. A branch of the main route, extending from Sturgeon Lake south, affords communication with the town of Lindsay, and, through Lake Scugog, to Port Perry, a distance of 190 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches :—

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté, to Nine Mile Rapids.....		9
" Nine Mile Rapids to Percy Landing.....	19½	
" Percy Landing to Heeley's Falls Dam.....	....	14½
" Heeley's Falls Dam to Peterborough.....	51¾	
" Peterborough to Lakefield.....	....	9
" Lakefield to a point across Balsam Lake.....	61	
	132¼	32¾
Total distance, Bay of Quinté to a point across Balsam Lake.....	....	165
From Sturgeon Point on Sturgeon Lake, 48¾ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog..	....	27½

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Burleigh Rapids, Buckhorn Rapids and Fenelon Falls ; also dams at Lakefield and Young's Point. By these works there is afforded communication between Lakefield, 9½ miles from Peterborough and Balsam Lake, the headwaters of the system ; opening up a total of about 160 miles of direct and lateral navigation.

At Lakefield, 9½ miles from Peterborough, the dam, at the head of the Nine Mile Rapids of the River Otonabee, maintains navigation on Lake Katchiwannoe up to Young's Point.

At Young's Point, five miles from Lakefield, the dam between Lake Katchiwannoe and Clear Lake controls the water level through Clear and Stony Lakes up to the foot of the Burleigh Canal. The lock here, it should be observed, is controlled by the Provincial Government.

At Burleigh Rapids, 10 miles from Young's Point, a canal about 2¼ miles in length, passes the Burleigh and Lovesick Rapids, and gives communication between Stony Lake and Deer Bay.

At Buckhorn Rapids, seven miles from Burleigh Rapids, there is a canal about one fourth of a mile long.

At Bobcaygeon, 15¾ miles from Buckhorn Rapids, a dam, 553 feet long, controls the water level up to Fenelon Falls.

At Fenelon Falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length connects Sturgeon Lake with Cameron Lake.

The following is a list of the locks, with their dimensions :—

1	lock at	Rosedale (maintained by the Ontario Government). 100′ x 30′ x 4′ 6′ to 6′ 6″ depth water on mitre sill.				
2	locks at	Fenelon	134′ x 33′ x	5′ 0″	to 7′ 6″	depth water on mitre sill.
1	"	Lindsay	"	5′ 0″	to 7′ 0″	" "
1	"	Bobcaygeon	"	5′ 8″	to 7′ 6″	" "
1	"	Buckhorn	"	5′ 0″	to 9′ 0″	" "
1	"	Lovesick	"	5′ 0″	to 9′ 4″	" "
2	"	Burleigh	"	2′ 4″	to 7′ 0″	" "
1	"	Young's Point (a Provincial Government work) 134′ x 33′ x 5′ 0″ to 14′ 0″ depth water on mitre sill.				
1	"	Peterborough	134′ x 33′ x	5′ 0″	to 10′ 0″	depth water on mitre sill.
1	"	Hastings	"	7′ 0″	to 10′ 6″	" "
1	"	Chisholms	"	5′ 0″	to 8′ 6″	" "
13						

ST. PETER'S CANAL, CAPE BRETON.

Length of canal	About 2,400 feet.
Breadth at water line	55 feet.
Lock	One tidal lock, 4 pairs of gates.
Dimensions	200 feet by 48 feet.
Depth of water on sills	18 " at lowest water.
Depth through canal	19 "
Extreme rise and fall of tide in St. Peter's Bay	4 "

This canal connects St. Peter's Bay, on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or Lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

SOULANGES CANAL.

This work is being constructed on the north side of the River St. Lawrence in place of enlarging the Beauharnois Canal on the south side. It follows a line extending upwards from Cascades Point to Macdonald's Point, near Côteau Landing. The scheme contemplates a canal on a practically straight line, 14 miles long, comprising one guard and four lift locks, overcoming a total rise of 82½ feet. (The number of locks on the Beauharnois Canal, including the guard-lock, is nine.) The dimensions of the Soulanges locks are, length 270 feet, width 45 feet, depth of water on sills 14 feet.

CHIEF ENGINEER'S REPORT.

DEPARTMENT OF RAILWAYS AND CANALS,
OFFICE OF THE CHIEF ENGINEER,
OTTAWA, December 6, 1899.

SIR,—I have the honour to submit my annual report for the fiscal year ended June 30, 1899, covering, however, works of construction up to November 1, instant. Accompanying it are the following :—

First.—The annual report of the General Manager of the Government Railways, attached to which are the reports of the Chief Engineer and Mechanical Superintendent of the Intercolonial Division, and the report of the Superintendent of the Prince Edward Island Division, with statements of accounts prepared by the Accountants of these Roads. (Part I.)

Second.—The report of the Engineer who inspected the Crow's Nest Pass Railway. (Part I.)

Third.—The reports of the Engineers on the exploratory surveys to ascertain the most practicable route for an all Canadian railway from some point on an existing railway into the Yukon District, also between the Stikine River and an ocean port in British Columbia. (Part I.)

Fourth.—The annual reports of the Superintending Engineers of the several canals. (Part I.)

Fifth.—A statement of the condition of the subsidies granted in aid of the construction of railways ; also a list of Railway Subsidy Acts. (Part III.)

Sixth.—Statement of contracts entered into during the year, prepared by Mr. Ruel. (Part IV.)

Seventh.—Statement of water powers and other public property leased by the department during the year, prepared by Mr. Ruel. (Part IV.)

Eighth.—Statement of property purchased or damaged during the year, prepared by Mr. Ruel. (Part IV.)

Ninth.—Agreements respecting subsidies in aid of construction of railways entered into during the year, prepared by Mr. Ruel. (Part IV.)

Tenth.—The canal statistics for the season of navigation of 1898, compiled by Mr. Devlin. (Part V.)

Eleventh.—The railway statistics for the year ended June 30, 1899, compiled by Mr. Ridout, from returns prepared by the railway companies. (Part VI.)

The following table shows the length of the Government railways in operation on June 30, 1899 :—

INTERCOLONIAL DIVISION.

	Miles.	Total Miles.
Montreal to Halifax	840	
Moncton to St. John	89	
Truro to Sydney	217	
Oxford Junction to Pictou	70	
Chaudière Junction to Lévis	8	
Lévis to St. Charles Junction via Harlaka	16	
Dalhousie Junction to Dalhousie	7	
Derby Junction to Indiantown	14	
Painsec Junction to Pointe du Chene	12	
Pugwash Junction to Pugwash	5	
Stellarton Junction to Brown's Point	12	
North Sydney Junction to North Sydney	5	
New Glasgow to Pictou Landing	7	
Dartmouth Branch	13	
		1,315·00

Freight Branches.

Nicolet Branch		14 76	
Rivière du Loup Wharf Branch		4	
Rimouski	"	2	
Newcastle	"	2	
Dorchester	"	1	
Courtney Bay	"	1	
Sackville	"	·50	
Stewiacke	"	1	
Halifax Cotton Factory Branch		1	
			27·26
Total			1,342·26

WINDSOR BRANCH.

Windsor Junction to Windsor	32

PRINCE EDWARD ISLAND RAILWAY.

Souris to Tignish	168	
Mount Stewart to Georgetown	24	
Charlottetown to Royalty Junction	5	
Emerald Junction to Cape Traverse	13	
Alberton to Cascumpec Wharf	1	
		211
Total length of Government railways		1,585·26

The result of the year's operations of the Government railways may be stated as follows:—

Name of Railway.	Mileage in operation.	——	Amount.	Profit.	Loss.
			$ cts.	$ cts.	$ cts.
Intercolonial Division	1,315	Working expenses	3,465,686 21		
		Earnings	3,738,331 34	272,645 23	
Windsor Branch	32	½ earnings	42,474 03		
		Maintenance	12,873 09	29,600 94	
Prince Edward Island Division	211	Earnings	165,012 03		
		Working expenses	218,053 01		53,040 98
				302,246 17	53,040 98
		Deduct loss from profit		53,040 98	
Total miles	1,388	Net profit		249,205 19	

The maintenance of the roads and rolling stock has received careful attention, and both roads and rolling stock continue to be in efficient condition.

The gross earnings of the Government railways for the last two years compare as follows:—

——	1897-98.	1898-99.
	$ cts.	$ cts.
Intercolonial Division	3,117,669 85	3,738,331 34
Windsor Branch	37,226 64	42,474 03
Prince Edward Island Division	158,950 61	165,012 03
Total	3,313,847 10	3,945,817 40

Showing an increase in the gross earnings of $631,970.30.

The gross working expenses of the Government railways for the last two years compare as follows:—

——	1897-98.	1898-99.
	$ cts.	$ cts.
Intercolonial Division	3,327,648 51	3,465,686 21
Windsor Branch	18,181 63	12,873 09
Prince Edward Island Division	231,418 74	218,053 01
Total	3,577,248 88	3,696,612 31

Showing an increase in working expenses for the year, compared with the previous year, of $329,363.43, which is made up of the following :—

—	1897-98.	1898-99.	Difference.	
			Increase.	Decrease.
	$ cts.	$ cts.	$ cts.	$ cts.
Locomotive power	1,088,151 47	1,158,655 18	70,503 71	
Car expenses	772,194 02	679,729 95		2,464 07
Maintenance of way and works	974,242 76	942,382 20		31,860 56
Station expenses	429,241 20	483,886 87	54,645 67	
General charges	222,207 79	269,062 00	46,854 21	
Car mileage	21,211 64	72,896 11	51,684 47	
Rental of leased lines	70,000 00	210,000 00	140,000 00	
	3,577,248 88	3,906,612 31	363,688 06	34,324 63
Deduct decrease			34,324 63	
Net increase			329,363 43	

INTERCOLONIAL DIVISION.

The ocean passenger and freight traffic via the port of Halifax shows a considerable increase for the winter season of 1898-99, as compared with the previous winter season.

COMPARATIVE STATEMENT of ocean-borne passenger business done at the port of Halifax during the winter seasons of 1897-98 and 1898-99.

Name of Steamer.	897-98. No. of Passengers.			Name of Steamer.	1898-99. No. of Passengers.		
	1st Class.	2nd Class.	Total.		1st Class.	2nd Class.	Total.
Gallia	25	239	264	Vancouver	75	298	373
Lake Winnipeg	15	180	195	Parisian	41	110	151
Lake Ontario	13	90	103	Tongario	7	108	115
Lake Huron	17	112	129	Labrador	41	213	254
Lake Superior	21	125	146	Carthaginian	7	300	307
Numidian	34	270	304	Laurentian	34	219	253
Parisian	37	463	500	Scotsman	48	256	304
Siberian	2	22	24	Siberian	4	158	162
Assyrian		13	13	Californian	46	492	538
Mongolian	19	130	148	Numidian	12	135	147
Vancouver	15	144	159	Castilian	14	98	112
Roumanian		4	4	Lake Ontario		9	9
Laurentian	6	39	45	Dominion	34	207	241
Scotsman	32	223	255	Mongolian	21	204	225
Carthaginian	13	44	57	Armenian		554	554
Labrador	41	333	374	Corean		25	25
Sarmatian		47	47	Brazilia		1,792	1,792
Californian	33	341	374	Phœnicia		1,308	1,308
La Champagne	90		90	Bulgaria		771	771
Bulgaria	91	614	705				
Palatia		441	441				
Pisa		468	468				
Italia		738	738				
Christiana		527	527				
Sorrenta		78	78				
Total	503	5,685	6,188	Total	384	7,257	7,641

Of the 6,188 passengers in 1897-98, 5,364 travelled via St. John by the Canadian Pacific Railway, and 622 travelled via Chaudière by the Grand Trunk Railway.

Of the 7,641 passengers in 1898-99, 7,180 travelled via St. John by the Canadian Pacific Railway, and 461 travelled by the Intercolonial Railway to Montreal.

COMPARATIVE STATEMENT of ocean-borne freight traffic during the winter seasons of 1897-98 and 1898-99.

Name of line of Steamers.	Winter of 1897-98. Measurement tons.	Weight tons.	Total tons.	Name of line of Steamers.	Winter of 1898-99. Measurement tons.	Weight tons.	Total tons.
Allan Line from Liverpool	907	1,302	2,209	Allan Line from Liverpool	1,265	1,030	2,295
Beaver Line from Liverpool	195	111	306	Beaver Line from Liverpool	401	69	470
Canada & Newfoundland from Liverpool	67	882	949	Canada & Newfoundland from Liverpool	Nil.	Nil.	Nil.
Furness Line from London	744	2,543	3,133	Furness Line from London	650	1,460	2,110
				Dominion Line from Liverpool	382	69½	451½
Total	1,913	4,838	6,597	Total	2,698	2,628½	5,326½

The above statement shows a decrease of 1,270 tons of ocean-borne freight traffic for the winter season of 1898-99, as compared with the winter season of 1897-98.

The following is a statement of the quantity and classes of the rolling stock purchased on capital account up to June 30, 1899 :—

	Engines.	Passenger Car Stock. 1st Class Sleeping and Parlour.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage and Mail.	Conductors' Van.	Box and Cattle Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.	Rotary Snow Ploughs.
	227	23	95	7	94	25	99	2,321	2,209	999	49	10	21	2
		5	....	....	....	42	....	103	110	329	....	....	....	....
										747				
Total	227	28	95	7	94	67	99	2,424	2,319	2,075	49	10	21	2

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The following is a statement of the quantity and classes of rolling stocks which have been rebuilt during the year ended June 30, 1899, at the cost of revenue to maintain the work :—

	Engines.	Passenger Car Stock.					Box and Cattle Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.	Rotary Snow Ploughs.
		1st Class Sleeping and Parlour.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage and Mail.	Conductors' Van.							
Total	3	....	2	....	....	....	....	2	131	71	....	....	....	....

The following table shows the working expenses, gross earnings, the tonnage of freight and number of passengers carried each year since July 1, 1876, when the road was first opened as a through line to the west :—

Year.	Average Miles in Operation.	Working Expenses.	Gross Earnings.	Profit.	Loss.	Tons of Freight carried.	No of Passengers carried.
		$ cts.	$ cts.	$ cts.	$ cts.		
1876-77	714	1,661,673 55	1,154,445 33	....	507,228 22	421,327	613,420
1877-78	714	1,816,273 56	1,378,946 78	....	432,326 78	522,710	618,957
1878-79	714	2,010,183 22	1,294,009 69	.... ..	716,083 53	510,861	640,101
1879-80	829	1,603,429 71	1,506,298 48	....	97,131 23	561,924	581,483
1880-81	840	1,759,851 27	1,760,393 92	542 65	....	725,777	631,245
1881-82	840	2,069,657 48	2,079,262 66	9,605 18	....	838,956	779,994
1882-83	840	2,360,373 27	2,370,910 10	10,547 83	.... ..	970,961	878,600
1883-84	887	2,377,433 62	2,384,414 92	6,981 30	....	1,009,237	944,636
1884-85	941	2,519,751 56	2,441,203 66	....	78,547 90	989,936	957,228
1885-86	946	2,583,999 67	2,450,093 88	....	133,905 79	1,023,788	932,880
1886-87	966	2,922,369 62	2,660,116 93	.. ....	262,252 69	1,143,020	942,784
1887-88	971	3,366,781 74	2,983,336 05	....	383,445 69	1,288,823	1,040,163
1888-89	971	3,244,647 73	2,967,801 00	....	276,846 73	1,218,877	1,136,272
1889-90	971	3,560,575 74	3,012,739 87	....	547,835 87	1,368,819	1,219,233
1890-91	1,094	3,662,341 94	2,977,395 38	....	684,946 56	1,304,534	1,298,304
1891 92	1,142	3,439,377 00	2,945,441 97	....	493,935 03	1,264,575	1,297,732
1892-93	1,142	3,045,317 50	3,065,499 09	20,181 59	....	1,388,080	1,292,878
1893-94	1,142	2,981,671 98	2,987,510 27	5,838 29	....	1,342,710	1,301,062
1894-95	1,142	2,936,902 74	2,940,717 95	3,815 21	....	1,267,816	1,352,667
1895-96	1,142	3,012,827 62	2,957,640 10	....	55,187 52	1,379,618	1,471,866
1896-97	1,145	2,925,968 67	2,866,028 02	....	59,940 65	1,296,028	1,501,690
1897-98		3,327,648 51	3 117,669 85	....	209,978 66	1,434,576	1,528,444
1898-99		3,465,686 21	3,738,331 44	272,645 23	....	1,750,761	1,603,095

The following table shows the number of tons of coal carried over the Intercolonial Railway from the Nova Scotia collieries to Chaudière Junction and St. John for points west thereof, and to local stations in each year since the road was opened as a through line :—

Year.	For the West.		To Local Stations.	Total.
	Via Chaudière.	Via St. John.		
1876-77	.....	.....	103,420	103,420
1877-78	.....	.....	97,043	97,043
1878-79	300	.....	112,232	112,532
1879-80	1,097	.....	135,369	136,466
1880-81	6,102	4,022	174,483	184,607
1881-82	18,015	11,779	218,364	248,158
1882-83	12,837	22,206	227,380	262,423
1883-84	22,014	19,534	252,014	293,562
1884-85	133,440	1,773	213,791	349,004
1885-86	171,170	21,150	215,272	407,592
1886-87	192,871	27,536	233,178	453,585
1887-88	183,704	36,228	309,727	529,659
1888-89	160,026	27,923	338,538	526,487
1889-90	164,453	25,126	366,967	556,546
1890-91	113,996	39,213	344,829	498,038
1891-92	35,447	5,918	392,441	433,806
1892-93	136,868	3,775	402,653	543,296
1893-94	102,273	8,028	367,390	478,691
1894-95	67,082	7,865	310,253	385,200
1895-96	53,124	9,681	369,708	432,513
1896-97	38,395	12,305	331,469	382,172
1897-98	9,084	9,796	351,069	369,949
1898-99	4,644	5,399	484,163	494,206

It thus appears that the largest tonnage of coal carried over the road for the west was in the year 1886-87, when it reached 220,407 tons, since which the through coal traffic for points west of the Intercolonial Railway has greatly declined.

TABLE showing the number of bushels of grain carried during each year for shipment at Halifax since the road was opened as a through line to the west.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-77	.....	.....	.....	1888-89	129,725	.....	129,725
1877-78	.....	.....	.....	1889-90	502,012	.....	502,012
1878-79	.....	.....	.....	1890-91	148,803	59,534	218,337
1879-80	.....	.....	.....	1891-92	745,997	519,500	1,265,497
1880-81	.....	.....	.....	1892-93	155,306	197,669	352,975
1881-82	.....	.....	.....	1893-94	Nil.	8,026	8,026
1882-83	31,011	.....	31,011	1894-95	Nil.	Nil.	Nil.
1883-84	73,389	.....	73,389	1895-96	Nil.	Nil.	Nil.
1884-85	300,901	.....	300,901	1896-97	Nil.	Nil.	Nil.
1885-86	389,122	.....	389,122	1897-98	8,000	Nil.	8,000
1886-87	575,880	.....	575,880	1898-99	30,000	Nil.	30,000
1887-88	69,021	.....	69,021				

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TABLE showing the number of barrels of flour carried during each year since the road was first opened as a through line to the west.

Year.	Barrels.	Year.	Barrels.
1876-77	254,710	1888-89	948,514
1877-78	657,778	1889-90	1,116,050
1878-79	630,329	1890-91	1,013,129
1879-80	533,248	1891-92	954,015
1880-81	672,310	1892-93	856,913
1881-82	692,095	1893-94	944,967
1882-83	983,916	1894-95	938,351
1883-84	817,134	1895-96	822,097
1884-85	935,977	1896-97	847,701
1885-86	761,127	1897-98	987,408
1886-87	763,894	1898-99	1,157,250
1887-88	871,838		

TABLE showing the number of bushels of grain carried during each year since the road was first opened as a through line to the west.

Year.	Bushels.	Year.	Bushels.
1876-77	292,852	1888-89	1,526,158
1877-78	331,170	1889-90	2,610,202
1878-79	302,921	1890-91	2,890,921
1879-80	534,021	1891-92	3,776,677
1880-81	565,678	1892-93	1,514,619
1881-82	560,253	1893-94	1,304,684
1882-83	1,195,601	1894-95	1,036,384
1883-84	654,673	1895-96	1,064,385
1884-85	734,902	1896-97	1,093,499
1885-86	849,800	1897-98	1,551,372
1886-87	1,018,395	1898-99	2,595,353
1887-88	1,219,035		

TABLE showing the quantity of lumber in feet carried during each year over the road since it was first opened for traffic as a through line to the west.

Year.	Feet.	Year.	Feet.
1876-77	58,096,474	1888-89	199,507,777
1877-78	56,626,547	1889-90	210,886,071
1878-79	55,626,696	1890-91	184,188,324
1879-80	55,462,654	1891-92	175,474,340
1880-81	72,841,388	1892-93	181,211,013
1881-82	78,356,418	1893-94	200,507,949
1882-83	104,633,417	1894-95	202,247,269
1883-84	131,120,948	1895-96	226,332,715
1884-85	138,493,675	1896-97	243,355,725
1885-86	117,186,512	1897-98	354,093,816
1886-87	161,801,763	1898-99	306,554,031
1887-88	197,755,272		

TABLE showing the number of live stock carried during each year over the road since it was first opened for traffic as a through line to the west.

Year.	Number.	Year.	Number.
1876-77	34,414	1888-89	85,960
1877-78	46,498	1889-90	86,771
1878-79	47,584	1890-91	95,529
1879-80	70,990	1891-92	87,889
1880-81	61,574	1892-93	93,369
1881-82	73,479	1893-94	79,203
1882-83	68,338	1894-95	72,106
1883-84	60,090	1895-96	64,051
1884-85	70,785	1896-97	72,082
1885-86	74,498	1897-98	89,301
1886-87	82,896	1898-99	109,821
1887-88	98,302		

TABLE showing the number of tons of ocean-borne goods to and from Europe, via the port of Halifax, carried over the road during each year since it was first opened for traffic as a through line.

Year.	Via Chaudière to and from the West.	Via St. John to and from the West.	To and from local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.
1876-77				
1877-78	14,949		3,405	18,354
1878-79	21,628		2,643	24,271
1879-80	21,073		4,952	26,025
1880-81	15,454		3,334	18,788
1881-82	21,607		4,168	25,775
1882-83	24,875		7,911	32,786
1883-84	19,696		6,533	26,229
1884-85	22,787		8,405	31,192
1885-86	13,464		8,216	21,680
1886-87	16,923		9,811	26,734
1887-88	41,864		8,878	50,742
1888-89	17,340		11,481	28,821
1889-90	9,895		11,730	21,625
1890-91	9,923		10,764	20,687
1891-92	9,719	17	23,825	33,571
1892-93	7,295	100	12,319	19,714
1893-94	3,023	204	13,455	16,682
1894-95	6,749	213	10,399	17,361
1895-96	3,767	314	16,748	20,829
1896-97	2,654	263	17,239	20,156
1897-98	5,950	1,637	18,633	26,220
1898-99	2,465	243	31,555	34,263

The above statement does not include deals, which amounted to 82,260 tons for the year 1898-99.

TABLE showing the number of tons of raw and refined sugar carried over the road during each year since it was first opened as a through line.

Year.	Raw Sugar.				Refined Sugar.			
	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77	340			340				
1877-78	186			186				
1878-79	1,041			1,041				
1879-80	12,220			12,220				
1880-81	13,872			13,872	4,022		2,902	6,924
1881-82	14,256		1,290	15,546	7,146		3,607	10,753
1882-83	9,465		508	9,973	11,126		5,497	16,623
1883-84	13,778		3,068	16,846	14,543		7,265	21,808
1884-85	10,381		3,661	14,042	18,024		8,445	26,469
1885-86	4,394		3,998	8,392	7,660		5,858	13,518
1886-87	20,450		8,500	28,950	15,044		8,395	23,439
1887-88	14,320		14,085	28,405	21,641		7,133	28,774
1888-89	24,358		7,160	31,518	12,955		11,120	24,075
1889-90	7,390		8,913	16,303	6,778		6,125	12,903
1890-91	5,088	4,670	8,215	17,973	10,130	468	5,996	16,594
1891-92	7,142	3,960	10,535	21,637	12,633	7,674	12,414	32,721
1892-93	Nil.	Nil.	10,137	10,137	8,327	6,456	7,840	22,623
1893-94	Nil.	Nil.	6,775	6,775	17,729	6,967	8,885	33,581
1894-95	Nil.	Nil.	10,342	10,342	13,351	15,819	4,695	33,865
1895-96	Nil.	Nil.	9,824	9,824	15,138	13,734	11,309	40,181
1896-97	Nil.	Nil.	4,925	4,925	5,694	8,069	6,957	20,720
1897-98	Nil.	Nil.	Nil.	Nil.	6,624	8,821	10,989	26,534
1898-99	Nil.	Nil.	Nil.	Nil.	8,138	2,193	15,833	26,164

TABLE showing the number of tons of fresh and salt fish carried over the road during each year since it was opened as a through line.

Year.	Fresh Fish.				Salt Fish.			
	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77	530	921	527	1,978	551	1,848	802	3,201
1877-78	596	1,015	474	2,085	898	1,644	805	3,347
1878-79	471	1,336	817	2,624	988	1,038	1,048	2,974
1879-80	519	1,362	453	2,334	1,612	2,238	959	4,809
1880-81	498	1,879	920	3,297	2,418	937	1,051	4,406
1881-82	475	1,619	957	3,051	4,031	1,066	2,487	7,584
1882-83	542	384	393	1,319	3,299	759	1,354	5,412
1883-84	838	1,682	412	2,932	1,322	1,143	1,224	3,689
1884-85	1,062	1,885	484	3,431	3,563	3,600	1,596	8,759
1885-86	1,669	1,645	902	4,216	1,680	2,047	3,376	7,103
1886-87	1,278	1,572	2,008	4,858	3,236	569	1,747	5,552
1887-88	1,533	1,477	1,031	4,041	2,617	476	1,099	4,193
1888-89	2,474	2,000	1,870	6,344	3,070	7,746	2,994	13,810
1889-90	2,235	1,787	2,111	6,223	2,449	847	3,288	6,584
1890-91	2,029	2,788	1,848	6,665	1,953	1,917	3,236	7,106
1891-92	1,367	1,746	547	3,660	1,946	928	1,889	4,763
1892-93	1,683	1,875	3,340	6,898	3,262	1,811	2,176	7,249
1893-94	1,959	2,192	2,224	6,375	2,921	1,814	2,962	7,697
1894-95	2,006	3,726	1,160	6,892	2,975	1,849	5,285	10,209
1895-96	1,966	3,059	1,319	6,344	1,863	1,087	2,791	5,741
1896-97	3,307	3,115	1,286	7,708	2,168	1,176	2,536	5,880
1897-98	3,575	3,703	1,052	8,330	1,729	1,066	2,210	5,005
1898-99	1,210	2,070	3,305	6,583	1,651	1,198	3,625	5,474

Four miles of the 56-lb. steel rails have been lifted and replaced at the cost of revenue by 67-lb. steel rails, and 490,368 ties have been renewed.

Capital Account.

Total cost of road and equipment up to June 30, 1899 :—

Road, &c	$48,222,729 86
Rolling stock	8,528,114 03
Total	$56,750,843 89

The increased accommodation provided at the deep water terminus at Halifax greatly facilitates the business.

Both the road and rolling stock have been efficiently maintained during the year.

WINDSOR BRANCH.

This road continues to be operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company, the company receiving two-thirds of the gross earnings for working the traffic, and the Government one-third of the gross earnings for maintaining the way and works.

The road has been maintained in efficient condition.

Table showing the earnings and its division between the Windsor Branch and the Main Line of the Intercolonial Railway between Windsor and Halifax, the maintenance expenses and net earnings of the Windsor Branch for each year since 1880 :—

Year.	Miles in Operation.	One-third Gross Earnings.	Proportion of one-third Gross Earnings credited to Line Windsor Junction to Halifax.	Proportion of one-third Gross Earnings credited to the Windsor Branch.	Maintenance Expenses.	Profit.	Loss.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1880-81	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	
1881-82	32	28,461 07	7,407 88	21,053 19	13,099 55	7,953 64	
1882-83	32	31,199 77	8,085 88	24,113 89	23,103 93	1,009 96	
1883-84	32	30,428 39	7,409 46	23,018 93	22,140 86	878 07	
1884-85	32	32,246 30	7,794 95	24,451 35	18,751 96	5,699 39	
1885-86	32	31,185 63	7,527 52	23,658 11	19,229 49	4,428 62	
1886-87	32	33,564 58	8,237 00	25,327 58	26,042 33		714 75
1887-88	32	32,242 85	6,689 30	24,553 55	24,040 33	513 22	
1888-89	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61	
1889-90	32	39,544 19	9,381 73	30,162 46	18,982 82	11,179 64	
1890-91	32	39,519 56	9,284 43	30,235 13	28,931 71	1,303 42	
1891-92	32	42,891 23	9,382 38	33,508 85	19,514 37	13,994 48	
1892-93	32	43,901 28	9,585 17	34,316 11	16,889 95	17,426 16	
1893-94	32	41,834 70	8,859 23	32,975 47	17,645 09	15,330 38	
1894-95	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	
1895-96	32	47,456 74	10,894 91	36,561 83	16,476 46	20,085 37	
1896-97	32	54,208 81	13,605 58	40,603 23	10,821 04	29,782 19	
1897-98	32	48,892 21	11,665 57	37,226 64	18,181 63	19,045 01	
1898-99	32	56,314 51	13,840 48	42,474 03	12,873 09	29,600 94	

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

Total cost of road and rolling stock up to June 30, 1899 :—

Road, &c.	$3,327,878 26
Rolling stock	462,229 00
Total	$3,790,107 26

The rolling stock provided on capital account consists of :—

Engines	Passenger Car Stock.				Box, Cattle and Refrigerator Cars.	Platform Car.	Conductors' Vans.	Pay Car.	Snow Ploughs	Flangers.
	1st Class Car.	2nd Class Car.	Baggage, Smoking and Postal Cars.	Official Car.						
21	17	13	6	1	183	125	3	1	8	7

Owing to converting of one class of car to another the stock now stands :—

21	17	11	9	1	183	125	3	1	8	7

Statement of rolling stock rebuilt during the year—1 first-class car, 1 postal and smoking car, 1 refrigerator car, 4 platform cars. Converted 2 second-class cars into baggage.

The following table shows the working expenses, the gross and net earnings, the tons of freight and number of persons carried each year since June 30, 1875, when the road was first opened for traffic :—

Year.	Miles in Operation.	Working Expenses.	Gross Earnings.	Loss.	Tons of Freight carried.	No. of Passengers carried.
		$ cts.	$ cts.	$ cts.		
1875-76	199	214,930 43	118,060 96	96,869 47	28,358	93,964
1876-77	199	228,595 25	130,664 92	97,930 33	41,039	93,478
1877-78	199	221,599 49	135,899 60	85,699 89	38,923	111,428
1878-79	199	223,313 12	125,855 99	97,457 21	38,668	105,046
1879-80	199	164,640 55	113,851 11	50,789 44	37,208	90,533
1880-81	199	203,122 88	131,131 43	71,991 45	45,336	102,937
1881-82	199	228,259 97	137,267 54	90,922 43	48,315	118,436
1882-83	199	252,808 41	146,170 42	106,637 99	51,920	117,162
1883-84	199	236,428 13	144,504 12	91,924 01	51,841	118,988
1884-85	211	211,207 01	158,588 06	52,618 95	57,346	130,423
1885-86	211	216,744 34	155,584 36	61,159 98	57,913	120,374
1886-87	211	204,237 37	155,303 37	48,934 00	53,589	103,067
1887-88	211	229,639 95	158,363 62	71,276 33	59,603	131,246
1888-89	211	247,559 44	171,369 56	76,189 89	55,682	152,780
1889-90	211	266,485 85	160,971 78	105,514 07	51,604	133,099
1890-91	211	257,990 08	174,258 05	83,732 03	59,511	145,508
1891-92	211	289,706 38	157,442 69	132,263 69	51,065	139,389
1892-93	211	226,422 17	162,690 42	63,731 75	56,718	132,111
1893-94	211	226,891 06	158,533 83	68,357 23	53,577	123,727
1894-95	211	232,905 19	149,654 71	83,250 41	48,325	125,089
1895-96	211	225,138 56	146,476 54	78,662 02	46,395	122,586
1896-97	211	240,489 90	153,443 13	87,046 77	52,151	121,498
1897-98	211	231,418 74	158,950 61	72,468 13	57,539	126,510
1898-99	211	218,053 01	165,012 03	53,040 98	57,968	129,667

The track stands the same as at date of my last annual report.

Steel rails (50 lbs. to yard)	151½
Iron rails (40 lbs. to yard)	59½
Total length of road	211

The road and rolling stock are in good running condition.

CROW'S NEST PASS RAILWAY.

The construction of this road being considered a necessity for the successful development of the mining interests of British Columbia, Parliament by 60–61 Victoria, chapter 5, 1897, granted a subsidy of $11,000 per mile in aid of it. Under this Act the Canadian Pacific Railway Company undertook the work of construction and entered into a contract, breaking ground on July 15, 1897, since which the works of construction have been prosecuted continuously, up to date there remaining only work to the value of $60,000 to complete the section between Lethbridge and Kootenay Lake.

The length of road under contract is:

	Miles.
Lethbridge to Knoknoack Station (Kootenay Lake)	290
Knoknoack Station to Nelson	54
Total length	344

The maximum grade is one per cent of $52\frac{80}{100}$ per mile, severest curves 10 and 12 degrees, except in one instance, where a 15 degree curve has been introduced.

The work of construction has so far been confined to the section between Lethbridge and Knoknoack Station 290 miles, which section of road is being successfully operated to the great benefit of the country. A train transfer landing has been constructed on Kootenay Lake at Knoknoack, so that cars with their loads are transferred without transhipment from that point to Nelson.

The amount of subsidy paid up to December 1, 1899, is $3,116,250.

CAPITAL ACCOUNT.

Canadian Pacific Railway.

The full amount of the arbitrators' award on the division between Savona's Ferry and Emory's Bar, has been earned and paid to the Company amounting to $579,255.20.

General Remarks.

The improvements made on the road and rolling stock in the last few years enabled the company to increase the speed of their transcontinental express trains during the past summer, which was greatly appreciated by the travelling public. The company now have equipped with self couplers 8,456 freight cars, and have fitted 6,601 freight cars with automatic brakes.

The following are the traffic operations of the Canadian Pacific Railway for each year ended June 30, since the road was first opened through to the Pacific Coast, for traffic, in June, 1886 :—

	1886-87. Miles, 4,274.	1887-88 Miles, 4,662.	1888-89. Miles, 4,974.	1889-90. Miles, 5,086.	1890-91. Miles, 5,537.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Earnings	10,650,254 08	12,711,010 01	13,016,611 81	15,572,985 62	18,672,174 04
Working expenses	7,299,045 16	9,034,360 27	8,997,312 05	9,424,166 45	11,538,133 53
Net revenue	$3,351,208 82	$3,676,649 74	$4,019,299 76	$6,148,819 17	$7,134,040 51
Number passengers carried	1,949,215	2,135,735	2,457,306	2,685,730	2,971,774
Tons freight carried	2,118,319	2,321,957	2,636,121	3,006,684	3,675,113

	1891-92. Miles, 5,537.	1892-93. Miles, 5,782.	1893-94. Miles, 6,094.	1894-95. Miles, 6,159.	1895-96. Miles, 6,211.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Earnings	20,789,104 17	20,795,304 66	19,357,098 05	17,912,273 60	20,175,384 99
Working expenses	12,441,126 28	12,665,5 7 12	12,447,808 03	11,282,506 00	12,202,360 50
Net revenue	$8,347,977 89	$8,129,717 54	$6,909,290 02	$6,629,767 60	$7,973,024 49
Number passengers carried	3,150,684	3,335,598	3,153,340	2,892,995	3,036,619
Tons freight carried	4,058,575	4,266,348	4,014,915	3,720,567	4,576,632

	1896-97. Miles, 6,314.	1897-98. Miles, 6,334.	1898-99. Miles, 6,719.		
	$ cts.	$ cts.	$ cts.		
Earnings	21,242,638 75	25,470,796 18	26,745,970 11		
Working expenses	12,576,800 42	14,684,790 65	15,454,173 45		
Net revenue	$8,665,838 33	$10,786,005 53	$11,291,797 16		
Number passengers carried	2,987,163	3,327,318	3,483,843		
Tons freight carried	4,640,578	5,493,030	5,971,205		

As the Government's dealings with the construction of the trunk line are closed with the payment in full of the arbitrators' award on the British Columbia section, this probably closes my reference to this road in my annual reports, except as they appear in the railway statistics.

SURVEYS FOR A RAILWAY TO THE YUKON DISTRICT FROM A POINT ON AN EXISTING RAILWAY, AND ALSO FROM AN OCEAN PORT.

Under express provisions made by Parliament in the sessions of 1898 and 1899, surveys have been conducted with a view to ascertaining the feasibility and approximate cost of a line of railway to be constructed entirely on Canadian territory, in order to give communication with the Yukon district from a point on an existing Canadian railway, and also from a Canadian port on the Pacific coast, three surveying parties having been engaged in the work, under the charge, respectively, of Mr. V. H. Dupont, Mr. C. F. K. Dibble, and Mr. J. S. O'Dwyer, whose reports, together with an explanatory map, will be found in the appendices hereto.

The results may be briefly summarized as follows :—

The most northerly point on an existing railway system is Edmonton, the present terminus of the Calgary and Edmonton Railway (leased to the Canadian Pacific Railway Company), at a distance of 192 miles north of Calgary on the Canadian Pacific Railway main line. This place was accordingly adopted as the objective point from which the projected line should start, and here two of the expeditions were orgainzed.

The point of commencement of actual survey, however, must be regarded as in the neighbourhood of the eastern boundary of British Columbia, a distance of about 500 miles from Edmonton by the existing trail via the Lesser Slave Lake, to the Peace River and thence following the course of that river. The intervening country is known, and is understood to present no serious obstacles to railway construction.

Starting from a point about nine miles east of the said boundary, a possible location has been found, which practically runs in a westerly direction along the southerly side of the Peace River for a distance of about 199 miles to the junction of the Rivers Parsnip on the south, and Finlay on the north, this junction of waters forming the Peace River. In this distance there occurs a stretch of about ten miles, where the waters of the Peace lie in a cañon the walls of which are about 400 feet high, pierced by numerous gullies or creeks which would require to be bridged. At the junction, it is necessary either to cross the Parnsip, which would be effected by a bridge at a point about two miles above the junction, the length of which would be 950 feet, with a height of about 32 feet above low water (a work for which the bed of the river, composed of very compact gravel, would offer good foundation) or by a bridge, below the junction, at Finlay Rapids, where the bed of the river, the Peace, is rock. This crossing would, however, necessitate the bridging, also, of the Finlay, which is about the same width as the Parnsip.

The work to be executed comprises 135 miles of light, 46 miles of medium, and 20 miles of heavy construction.

The estimated cost of this 201 miles, up to and including the crossing of the Parsnip, is at the average rate of $19,721.47 per mile, or a total of $3,964,016.88, including 16 bridges, varying in length from 25 to 950 feet. This estimate is based on prices for similar work in Eastern Canada, to which must, therefore, be added the cost

of transport of labourers, plant and material, and whatever difference there may be in rate of wages. Good sandstone for masonry work is abundant, but black and white spruce, which is plentiful, would be the only timber avilable.

From this junction of the Rivers Parsnip and Finlay the line for some 25 miles crosses the wide valley lying between the Rocky Mountains and the Cariboo Range. It follows the west bank of the Finlay 16 miles to the mouth of the Omenica, thence along the south bank of the latter 9 miles to the west border of the above mentioned valley. From this point it continues westward, following the Omenica to the mouth of the Osilinca, thence along this river to its headwaters, a distance of 90 miles from the Parsnip. These 90 miles are estimated to cost $15,600 per mile, including steel bridges, or a total of $1,404,000.

From this 90th mile a line will need to be obtained via Sestoot Lake and River—(passing a few miles north of Fort Connolly)—to the junction of the Sestoot with the main Skeena River. At this point the railway would probably turn to the north, following the valley of the Skeena, but the season was too far advanced to admit of full exploration; from information obtained, however, there does not appear to be any serious obstacle to construction. From a point about 28 miles lower down on the main River Skeena, an exploring party travelled about 53 miles in a northerly direction and up the valley of the Nass, to a point where the main waters of the Skeena were met. Here is a union of two parallel valleys formed by a high hilly range running for a distance of about 45 miles, north-west, in both of which are the summit waters of the Skeena, flowing south, and of the Stikine, flowing north. Either would appear to offer a feasible route for a railway. By the westerly one the distance would be about 6 miles longer than by the other. The gradients also of the westerly are more severe, being 54 feet to the mile against 22 feet. At this northerly end these two valleys join, and the waters which have traversed them become the main River Stikine. From this point of junction for a distance of about 130 miles down the Stikine, there appear to be no features of difficulty, considering the country traversed; but as the descent of the river continues, its waters pass through so severe and extensive a cañon district—the Great Cañon of the Stikine—that it was considered advisable to ascertain whether a less difficult route could not be found.

From information gained from various competent and reliable sources it appeared likely that by leaving the Stikine valley and following a north-westerly course to Dease Lake, not only would a better location be discovered, but that from Dease Lake a comparatively easy route could be followed to the head of Teslin Lake, along an existing trail between the two lakes, which would, approximately, be the route adopted, and which had been traversed by prospectors the previous winter in seven days. From Teslin, the river navigation to Dawson is, of course, that at present followed.

Exploration was accordingly carried on with the view to a railway location to Dease Lake in the auriferous Cassiar district *, and the results show that a practical route can be obtained from a point (Beaver Creek) above the Great Cañon of the Stikine to that lake, about 59 miles, with but a limited amount of heavy work. An

* Dr. G. M. Dawson, in his report on the economic minerals of British Columbia published as an appendix (R.p. 218) to Mr. (now Sir) Sandford Fleming's report of 1877 on the Canadian Pacific Railway surveys, refers to "rich deposits" of gold discovered on the sources of the River Dease and about Lake Dease—the upper end of which he states is separated by only a few miles of low country from a part of the Stikine.

estimate of the cost of the last 111 miles, comprised in 52 miles down the Stikine Valley to Beaver Creek, and the 59 miles from that creek to Dease Lake has been furnished, based on prices in Eastern Canada (to which has, therefore, to be added the cost of labour, transport, supplies and whatever difference there may be in wages) as follows : 74 miles of light work at an average cost of $14,000 per mile ; 32 miles at $23,000, and 5 miles at $35,000, which together with provision for bridges, $75,000, aggregates the sum of $2,022,000 as the estimated cost of this section.

Should the line indicated above be followed, the approximate distance from the easterly boundary of British Columbia to the southerly end of Dease Lake would be 646 miles, and a further distance of 136 miles would bring the railway to the head of Lake Teslin, making a total of 782 miles to the navigable waters of the Yukon district. From Edmonton to the boundary the approximate distance would be 500 miles, making the total approximate distance from an existing railway system to the head of Lake Teslin 1,282 miles. Of this distance much remains necessarily undetermined : connecting links of surveys have to be made ; alternative routes on certain portions have to be carefully considered ; and possible improvements may be found hereafter by which the location, even where now regarded as clearly defined, may be modified to advantage. Still a good deal of valuable information has been obtained, and the feasibility of constructing the railway without inordinate cost has been demonstrated. It appears, however, highly probable that a very much shorter line of no difficult character can be obtained from the head waters of the Stikine to Dease Lake by following down the valley of the River Clappan (or third south fork of the Stikine) and crossing the main Stikine above the Grand Cañon.

Ocean Port Surveys.

Explorations with a view to location of a railway from a Canadian Pacific Ocean port into the Yukon district were carried on, the general results of which may be summarized as follows :—

The known ports calling for attention are Port Essington, near the mouth of the River Skeena on its south side, and Port Simpson near the entrance to Portland Inlet.

These ports and the possible routes from them eastwards up the Skeena have been made the subject of examination in connection with the early surveys for the Canadian Pacific Railway, and the object of the present surveys being to obtain information as to the practicability of a line leaving the River Skeena at some point where its construction northwards would be feasible, Hazelton at the forks of the River Skeena, a distance of about 150 miles from Port Essington (which is navigable for steamers of light draught at stages of mean water) was made the starting point for an exploration which extended for a distance of about 130 miles to the point of junction of the waters of the Skeena and Sestoot, above mentioned as on the suggested line from Edmonton, from which point the line of railway might follow the route of that location to the northward as already described.

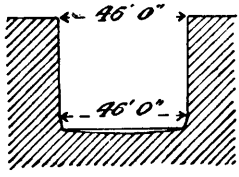
Port Simpson, the most northerly of the harbours of British Columbia, is about 50 miles north of Port Essington, and from it a survey was made in 1879, southerly to the River Skeena, about 40 miles ; thence up the river on its north side, in a north-easterly direction ; the first 60 miles was actually located, the work on the first 32 miles being

classed as very heavy. Port Simpson itself, however, which, in common with other possible ports, received in 1879 careful examination, has been pronounced both by naval and engineering experts to be an exceptionally fine, deep harbour, well protected from winds; easy of access from the sea; free from fogs and ice; never freezing over even during the winter of 1878, which was an extremely severe one; while the average winter snowfall does not exceed 18 inches, and this does not remain more than a day or two. The officer of the Hudson's Bay Company records the budding of trees and the blooming of garden flowers on February 10, 1878. These climatic advantages are, of course, due to the Japan current.

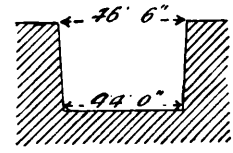
Port Essington, about 450 miles from Victoria, is situated on the south side of the Skeena about 11 miles from its mouth. It is not a good harbour, the access from the sea being bad, while it is exposed to winds and the action of masses of ice from the Skeena, which drifting up and down with the tide render it practically ice-bound for the winter months. A good harbour, however, exists beyond the mouth of the river, to which the name of Port Fleming has been given.

A third port might possibly be found on Kitimat Inlet, up the Douglas Channel. At the head of this inlet is the mouth of the River Kitimat, the valley of which, though not fully explored, was to some extent examined by the survey parties of 1876, resulting in the opinion that an easy route could be found up to the River Skeena. It would possibly join that river at a point about half way between Port Essington and Hazelton, considerably reducing the distance for traffic coming up from Victoria and Vancouver and greatly decreasing the cost of railway construction as compared with a line from Port Simpson. It may be observed that in the sessions of 1898 and 1899 powers were given by the province of British Columbia to a railway company for the building of a line from the Kitimat Inlet with an objective point, east of Lake Babine, on the River Omenica.

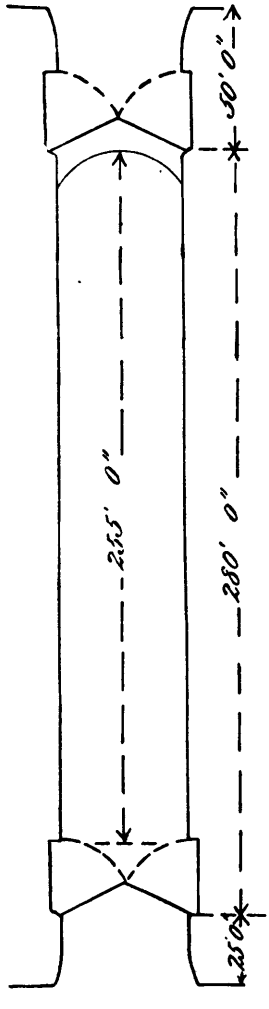
It might also be desirable that a route should be explored up the valley of the Nass, the mouth of which is on the south side of Portland Inlet, and which may be found to afford a practicable means of communication with Telegraph Creek on the Stikine, whence an easy location, with the exception of a small portion, can be found along the present trail to Dease Lake, distant about 72 miles.



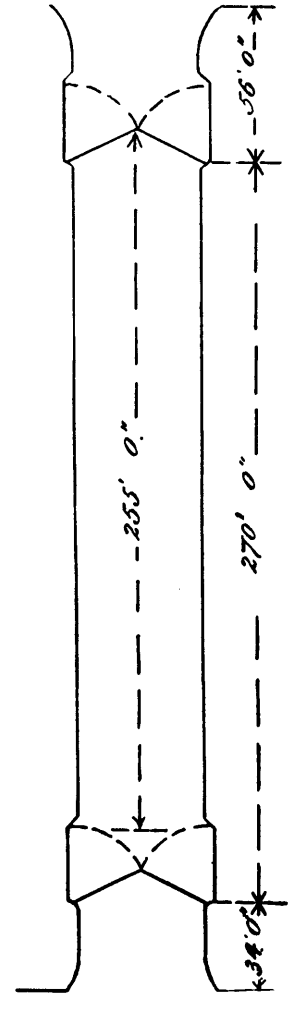
SECTION OF SOULANGES CANAL LOCK.



SECTION OF WELLAND CANAL LOCK



SOULANGES CANAL LOCK.



WELLAND CANAL LOCK

CANALS—CAPITAL ACCOUNT.

SAULT STE. MARIE CANAL.

The pier of the Canadian Pacific Railway bridge which stood in the centre of the prism of the canal having been found to be a source of danger to navigation, causing frequent complaints to be made by captains of vessels using the canal, it was decided that the obstruction must be removed, accordingly the work of its removal was undertaken and the work is now completed; the new swing bridge, now spanning the full width of the channel of the canal, is favourably commented on by the transportation companies. In addition to the work of removing the pier of the bridge some filling, grading and levelling of the canal grounds has been done, which greatly improves their appearance. The lower entrance channel at the bend has been widened and straightened at a cost of $12,806.94, which will prove a great benefit.

It is desirable for the improvement of the general appearance of the property that the work of levelling the grounds and the planting of ornamental trees be continued next season.

As regards its facilities for navigation, the canal in its upper entrance channel has a depth of water of 18 feet with 20 feet 4 inches on the mitre sill of the lock and 18 feet 6 inches in the lower entrance channel; these figures apply to the lowest known stages of water level.

The total cost of construction and equipment up to June 30, 1898 is	$3,678,578 21
Expenditure during year ending June 30, 1899	63,935 48
Total cost of construction and equipment up to June 30, 1899	$3,742,513 69
Expended from June 30, 1899, to November 1, 1899	332 25
Total cost of construction and equipment up to November, 1899	$3,742,845 94

SOULANGES CANAL.

I am pleased to be able to report the works of construction so far advanced towards completion as to make the canal available for traffic on October 10 last, on which day the first boat was passed through the canal. Instructions then issued that only vessels drawing over nine feet and up to fourteen feet of water would be allowed to pass through this canal this season, as to let the smaller craft, such as could utilize the Beauharnois Canal, pass through the Soulanges Canal would interfere with the work of stone lining of the slopes, now in progress. Up to November 23, 1899, only one vessel has offered for passage.

The work under contract upon the thirteen sections into which the canal was divided for construction purposes are so far advanced as to enable vessels drawing fourteen feet of water to navigate it. But there yet remains to be done to fully complete the canal a large amount of stone lining of slopes and sodding, the macadamizing

a considerable length of road along the canal bank and the trimming up of the works generally, as well as completing the electrical works. These works will entail a considerable amount of expenditure to carry them through to absolute completion. For further detailed particulars, I must refer you to the report of Mr. Thomas Munro, superintending engineer.

The following gives a statement of the position of each contract;—

Sections Nos. 1 and 2—

Approximate value of work under contract	$1,200,000 00
Gross amount of progress estimate for October, 1899..	1,012,358 55
Balance	$ 187,641 45

Section No. 3 (completed)—

Approximate value of work under contract	$ 200,000 00
Gross amount of last progress estimate	193,852 61
Balance	$ 6,147 39

Sections Nos. 4, 5, 6 and 7—

Approximate value of work under contract	$1,000,000 00
Gross amount of progress estimate for October, 1899..	923,672 58
Balance	$ 76,327 42

Section No. 8—

Approximate value of work under contract	$ 350,000 00
Gross amount of progress estimate for October, 1899..	300,609 09
Balance	$ 49,390 91

Section No. 9—

Approximate value of work under contract	$ 220,000 00
Gross amount of progress estimate for October, 1899..	169,809 88
Balance	$ 50,190 12

Section No. 10 (completed)—

Approximate value of work under contract	$ 300,000 00
Gross amount of last progress estimate	290,667 95
Balance	$ 9,332 05

Section No. 11—

Approximate value of work under contract	$ 370,000 00
Gross amount of progress estimate for last estimate...	325,639 75
Balance	$ 44,360 25

SESSIONAL PAPER No. 10

Section No. 12—

Approximate value of work under contract	$ 270,000 00
Gross amount of progress estimate for October, 1899	237,611 71
Balance	$ 32,388 29

Section No. 13—

Approximate value of work under contract	$ 670,000 00
Gross amount of progress estimate for October, 1899	639,778 05
Balance	$ 30,221 95

The contractors for these thirteen sections of the canal have been paid for work executed up to November 1, 1899, as follows :—

Sections 1 & 2	Archibald Stewart	$500,296 10	
	Ryan & McDonnell	458,710 00	
			$ 959,006 10
Section 3	O'Leary Bros.		193,852 61
Sections 4,5,6 & 7	George Goodwin	$356,726 85	
	Andrew Onderdonk	526,840 84	
			883,567 69
Section 8	Charles Raynor		294,550 00
" 9	Manning & McDonald		167,820 00
" 10	Rogers & Taylor		290,281 80
" 11	George Goodwin	$ 42,020 00	
	Thomas Feeney	53,780 00	
	Poupore & Fraser	228,373 00	
			324,173 00
Section 12	O'Brien & Sons	$ 25,367 50	
	George Goodwin	8,100 00	
	M. J. Hogan	180,900 00	
			214,367 50
Section 13	Manning & McDonald		635,800 00
Total payment for October, 1899, estimates			$3,963,418 70

Based on the contract prices, the estimated cost of thi canal including land purchases and damages is	$6,100,000 00
Total payment to Nov. 1, 1899, including September estimates	5,383,411 54
Balance	$ 716,588 46

The payments are divided as follows, viz. :

For works and expenses of supervision	$5,041,777 59
For land and damages	341,633 95
Total	$5,383,411 54

A further increase in the cost of construction has arisen owing to a break in one of the banks of the canal which occurred at the time the full head of water was let into the canal in October last, and to the numerous heavy land slides which have occurred from time to time.

LACHINE CANAL.

The works of enlargement for 14 feet navigation are completed.

ENLARGEMENT.

Messrs. McNamee & Mann, who are the contractors for deepening of the prism to a depth of 15 feet, have completed their work. The work of deepening has necessitated the rebuilding of the stone walls along the side of the canal in many places; this work is now being carried on above water line, and will be continued below water level when the canal is unwatered.

The approximate value of work under McNamee & Mann's contract is	$576,000 00
Gross amount of progress estimates for Oct., 1899	568,590 44
Balance	$ 7,409 56

The total amount expended on the works of enlargement of this canal, including progress estimates for October, 1899, $8,229,290.66.

LAKE ST. LOUIS.

CONSTRUCTION

The Weddell Dredging Company have completed the formation of this channel, which has a width of 300 feet and a depth of 16 feet, there remaining only a few boulders to be picked up. The forwarders, however, do not appear to be satisfied, and they have petitioned to have a shoal removed, which is located on one side of it and outside its limits; giving as a reason that there is a cross current which will make it difficult and dangerous to navigate long tows.

The approximate value of work under contract is	$251,000 00
Gross amount of progress estimates for Oct., 1899	236,926 85
Balance	$ 14,073 15

GRENVILLE CANAL.

ENLARGEMENT.

Messrs. Piggot & Ingles, the contractors for this enlargement, have made more satisfactory progress with the work than they had previously done, and it is hoped they will complete the work covered by their contract by next spring.

The approximate value of work under contract is	$ 100,000 00
Gross amount of progress estimate for Oct., 1899	82,065 03
Balance	$ 18,934 97

TRENT CANAL.

CONSTRUCTION.

No further section has been placed under contract since my report of last year, but tenders are now being invited for the section from Trenton to Frankford, a distance of about nine miles. Work on the three sections under contract has advanced very slowly. It is, however, anticipated that these three sections—Ashburnham to Nassau, Nassau to Lakefield and Balsam Lake to Kirkfield—will be completed next season.

Section No. 1—Lakefield end.

The approximate value of work under contract with Brown, Love & Aylmer is	$ 384,000 00
Gross amount of progress estimate for Oct., 1899	350,583 62
Balance	$ 33,416 38

Section No. 2—Peterborough end.

The approximate value of work under contract with Corry & Laverdure is	$ 453,000 00
Gross amount of progress estimate for Oct., 1899	227,264 40
Balance	$ 225,735 60

Two Wells for Main Press of Hydraulic Lock.

The approximate value of work under contract with Corry & Laverdure is	$ 23,000 00
Gross amount of progress estimate	Nil.
Balance	$ 23,000 00

Section No. 1—Balsam Lake end.

Approximate value of work under contract with A. Onderdonk is	$ 447,800 00
Gross amount of progress estimate of Oct., 1899	437,691 92
Balance	$ 10,108 08

The steel superstructure of the hydraulic lock is under contract with the Dominion Bridge Co., the contract price being $244,000. The work is in progress at Lachine, but inasmuch as the substructure is not ready to receive it they are not being pushed for its completion, but are being allowed to pile it on ground at Lachine leased to the Government. No payment has yet been made.

Section No. 1, Peterborough to Nassau.—The work on this section has progressed very slowly during the last past working season, appearances indicating that it will take

the greater part of next summer to complete the work, the most of which remaining to be done consisting of works in connection with the hydraulic lift lock, composed of concrete walls, the putting down of the wells for the hydraulic rams, the making up of the bank approach and taking out of cutting. There are other minor works to be done in connection with lock No. 6 and the entrance piers, &c.

Section No. 2, Nassau to Lakefield.—This section of work is practically completed, there remaining only the completing of the entrance piers and the deepening of the entrance channel, all of which should be easily finished early next season.

Section No. 1, Balsam Lake to Kirkfield.—Very little energy has been displayed during the working season about closing with the prosecution of this work. As a consequence, the contract will not be completed this year. It is true, the work remaining to be done is very small compared with the work undertaken, it being chiefly cleaning, repairing damage suffered by the delay in completing the section, and the building of the dam at Victoria road.

CORNWALL CANAL.

CONSTRUCTION AND ENLARGEMENT.

The works of construction and enlargement on this canal are completed with the exception of the works of improvement at the upper entrance which are under contract with the Weddell Dredging Company, who commenced operations a few weeks ago. There is now a clear way for vessels drawing 14 feet of water to pass through this canal, the works in progress at the upper entrance causing no impediment, and the canal proper being completed.

The following works were under contract to Wm. Davis & Sons:—Sections 2, 3, 4, and Sheik's Island Dams.

The approximate value of work under contract is..	$ 2,720,000 00
Gross amount of the last estimates..... ...	2,634,971 04
Balance	$ 85,028 96

Sections Nos. 5, 6, 7 and 8, under contract with the Gilbert Blasting and Dredging Company, are finished.

The approximate value of work under contract is....	$ 550,000 00
Gross amount of last estimate...	499,903 66
Balance.....	$ 50,096 34

Section No. 10, upper entrance, was executed by Messrs. Jocks, DeLorimier & Co. They have been paid their final estimate, amounting to $439,854.60, which was the cost of the work under this contract.

The contractors for the enlargement of this canal and construction of the Sheik's Island Dams have been paid the following amounts up to November 1, 1899:—

Section 2	Wm. Davis & Sons	$ 922,448 97
" 3	"	553,877 17
" 4	"	723,213 61
" 5	Gilbert Blasting & Dredging Co	138,306 73
Sheik's Island Dam,	Wm. Davis & Sons	429,067 00
Section 6	Gilbert Blasting & Dredging Co.	47,721 37
" 7	"	96,832 88
" 8	"	216,270 21
" 10	Jocks, DeLorimier & Co	439,854 60
	Total	$3,567,592 54

The estimated cost of enlargement of the canal and construction of the Sheik's Island Dams is	$4,837,000 00
The amount expended up to Nov. 1, 1899	4,637,637 11
Balance	$199,362 89

with the addition of $150,000, if the work of improving the upper entrance is to be proceeded with.

FARRAN'S POINT CANAL.

ENLARGEMENT.

The works of enlargement of this canal are under contract with the Canadian Construction Co. of Montreal. The principal works to be executed were entrance piers at both ends of the canal, a masonry lock 800 feet in length. and the widening, deepening and straightening of the prism.

The contractors have so far advanced with their work, which may be said to be practically completed, as to give a safe passage through the canal to vessels drawing 14 feet of water. The work has been executed in a substantial workmanlike manner which does the contractors credit.

The approximate value of work under contract is	$ 750,000 00
Gross amount of progress estimate for Oct., 1899	599,823 35
Balance	$ 150,176 65

Estimated cost of enlargement	$ 830,000 00
Amount expended up to Nov. 1, 1899	656,976 45
Balance	$ 173,023 55

RAPIDE PLAT CANAL.

ENLARGEMENT.

The works of enlargement on this canal are completed, and the canal is ready for the passage of vessels drawing 14 feet of water.

The estimated cost of the enlargement is	$1,940,000 00
Amount expended to Nov. 1, 1899, is	1,876,479 60
Balance	$ 63,520 40

The following statement shows the amount of the last progress estimates and the amounts the contractors have been paid up to November 1, 1899:

	Gross Amt. Oct. Est.	Paid.
Section 1, Poupore & Fraser	$ 910,795 11	$ 909,530 96
" 2, Weddell Dredging Co	223,419 80	223,419 80
" 3, Poupore & Fraser	263,442 10	263,442 10
Total	$1,397,657 01	$1,396,392 86

GALOPS CANAL.

ENLARGEMENT.

For enlargement purposes this canal is divided into three sections, as follows, viz., the Iroquois section, the Cardinal section, and the upper entrance section.

The Iroquois Section extends from Iroquois to Presqu'île. Messrs. Larkin & Sangster are the contractors for this work. The chief works of construction undertaken were the building of crib entrance piers, a masonry lock 800 feet long, and bridge abutments, the cutting of new prism for some distance and the widening of the old prism at the west end. These contractors prosecuted their work vigorously, with the result that the work is now practically completed, and the section of the canal is ready for the passage of vessels drawing 14 feet of water.

The approximate value of work under contract is	$1,200,000 00
Gross amount of progress estimate for October, 1899	1,082,890 23
Balance	$ 117,109 77

Cardinal Section.—This section extends from Presqu'île through Cardinal, a point near to the locks at the upper entrance. Messrs. William Davis & Sons are the contractors. This contract, amongst other things, covered the taking out of a cutting about a mile long and 65 feet deep at the highest point, the building of cribwork with masonry walls thereon through it, &c., the cutting is now taken out down to grade,

there remaining only the dams at each end to be removed, and the cribwork is far advancing, so that it is hoped that this section of the canal will be available for the passage of vessels drawing 14 feet of water early next season.

Approximate value of work under contract is	$1,300,000 00
Gross amount of progress estimate for October, 1899	762,737 08
Balance	$ 537,262 92

Upper entrance enlargement.—Messrs. Murray & Cleveland are the contractors for this section of work. The work is almost completed.

Approximate value of work under contract	$1,470,000 00
Gross amount of progress estimate for October, 1899	1,429,169 24
Balance	$ 40,830 76
Total estimated cost of enlargement	$4,300,600 00
Amount paid up to November 1, 1899	3,662,651 13
Balance	$ 637,948 87

NORTH CHANNEL.

STRAIGHTENING AND DEEPENING.

Mr. M. A. Cleveland is the contractor for this work. The work consists of cutting through earth and rock a channel 300 feet wide with 17 feet of water. The work has so far advanced as to give a clear channel 200 feet wide, so that vessels drawing 14 feet of water can now pass safely through the channel.

Approximate value of work under contract	$ 1,116,000 00
Gross amount of progress estimate for October, 1899	767,937 93
Balance	$ 348,062 07

RIVER REACHES.

IMPROVEMENT OF CHANNEL OF LAKE ST. FRANCIS, ST. RÉGIS BAR, 2½ MILES EAST OF CORNWALL.

Messrs. Manning & McDonald entered into a contract for this work on May 24, 1898. It consists of the cutting and straightening of the channel. The work, though not completed, is sufficiently advanced to enable vessels drawing 14 feet of water to pass with safety.

Approximate value of work under contract	$ 51,399 00
Gross amount of progress estimate for October, 1899	35,627 75
Balance	$ 15,771 25

HAMILTON ISLAND BAR, 10½ MILES EAST OF CORNWALL.

Messrs. Manning & McDonald entered into a contract for this work on May 24, 1898. A channel is now available for the passage of vessels drawing 14 feet of water, but the work is not completed.

Approximate value of work under contract	$	13,823 60
Gross amount of progress estimate for October, 1899		4,921 10
Balance	$	8,902 50

GALOPS RAPIDS IMPROVEMENTS.

The Gilbert Brothers Engineering Company have their special plant employed to clean out, at a certain figure per day, the channel of 200 feet in width and 17 feet deep, which was cut in 1888 and previous years. The work has been prosecuted during the past summer, but is not yet completed.

Estimated cost of forming and cleaning out channel	$	194,000 00
Amount paid up to November 1, 1899		94,800 00
Balance	$	99,200 00

GENERAL REMARKS.

Although the work of construction and enlargement of the chain of canals on the St. Lawrence River are not fully completed, they are in that advanced stage which enables vessels drawing 14 feet of water, to pass between Port Arthur, at the head of Lake Superior, and Montreal.

SESSIONAL PAPER No. 10

CANADIAN GOVERNMENT CANALS.

MEMORANDUM of Expenditure on Construction up to December 1, 1899.

Canal.	Original construction up to June 30, 1899.	Enlargement up to June 30, 1899.	Enlargement from June 30, 1899, up to December 1, 1899.	Total cost of Enlargement up to December 1, 1899.	Total expenditure on Original Construction and Enlargement up to December 1, 1899.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lake St. Francis		26,530 00	14,890 31	41,420 31	41,420 31
Lachine	2,589,532 85	8,197,561 16	34,493 41	8,232,054 47	10,821,587 32
Lake St. Louis		250,066 48	3,497 92	253,564 40	253,564 40
Soulanges	5,098,259 83				5,098,259 83
Beauharnois	1,636,690 26				1,636,690 26
Cornwall	1,945,624 73	4,617,383 27	12,974 86	4,630,358 13	6,575,982 86
Farran's Point	80,041 21	586,111 74	78,554 71	664,666 45	744,707 66
Rapide Plat	426,882 15	1,875,500 92	1,273 03	1,876,774 00	2,303,656 15
Galops	813,732 18	3,385,837 38	344,696 84	3,730,534 22	4,544,266 40
Galops Channel		813,618 54	26,550 00	840,168 54	840,168 54
North Channel		633,316 15	62,860 00	696,176 15	696,176 15
Murray	1,247,470 26				1,247,470 26
St. Lawrence River and Canals	18,442 85	419,416 32	40,661 62	460,077 94	478,520 79
Welland	7,693,824 03	16,077,811 73		16,077,811 73	23,771,635 76
Sault Ste. Marie	3,742,513 69				3,742,513 69
Chambly	637,056 76				637,056 76
Carillon and Grenville	*63,053 64	4,091,306 40	2,854 72	4,094,167 12	4,157,214 76
Trent	2,543,240 47				2,543,240 47
Rideau	4,095,043 87				4,095,043 87
Tay	476,128 73				476,128 73
St. Ours	121,537 65				121,537 65
Culbute (canal abandoned)	379,494 46				379,494 46
Ste. Anne's	134,456 51	1,035,759 12		1,035,759 12	1,170,215 63
St. Peter's	248,762 84	399,784 30		399,784 30	648,547 14
	33,991,788 97	42,410,003 56	623,307 32	43,033,310 88	77,025,099 85

* Construction by Imperial Government not included, records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

CANALS.

OPERATION AND MAINTENANCE.

The canals have been successfully operated throughout the year, no serious delays to traffic having occurred, with the exception of the Lachine Canal to which I refer in its proper place. The necessary repairs and renewals have been executed.

STATEMENT showing the dates of closing and opening canals.

Name of Canal.	Closed.	Opened.	Closed.	Opened.
	1897.	1898.	1898.	1899.
Sault Ste. Marie	14th December	11th April	9th December	26th April.
Lachine	1st December	25th April	1st December	1st May.
Beauharnois	30th November	24th April	1st December	1st May.
Cornwall	8th December	23rd April	9th December	24th April.
Williamsburg	8th December	23rd April	13th December	13th April.
Welland	14th December	20th April	13th December	22nd April.
Chambly	1st December	2nd May	1st December	1st May.
St. Ours	27th November	3rd April	26th November	22nd April.
Ste. Anne's	30th November	11th April	27th November	27th April.
Carillon and Grenville	30th November	30th April	26th November	1st May.
Rideau — at Kingston	23rd November	1st May	23rd November	2nd May.
Rideau — at Ottawa	25th November	1st May	29th November	2nd May.
Trent — on Central Reach	20th November	7th April	17th November	1st May.
Trent — on Lower Reach	24th November	7th April	26th November	21st April.
Murray	3rd December	30th March	6th December	13th April.
	1898.		1899.	
St. Peter's	3rd January	2nd April	7th January	2nd April.

STATEMENT showing the dimensions of the locks of the canals.

—	Existing System.				Under Construction.			
	No. of Locks.	Length.	Width.	Depth of water on mitre sill.	No. of Locks.	Length.	Width.	Depth of water on mitre sill.
		Feet.	Ft.	Ft.		Feet.	Ft.	Ft.
Lachine	5	270	45	14				
Beauharnois	9	200	45	9				
Chambly	9	118-125	22·6·24	7				
St. Ours	1	200	45	7				
St. Anne's	1	200	45	9				
Carillon and Grenville	7	200	45	9				
Trent	13	134	33	5	6	134	33	6
Rideau	49	134	33	5				
Rideau, Perth Branch	2	134	32	5·6				
Murray (no locks)				11				
Cornwall (Old)	5	200	55	9				
Cornwall (New)	5	270	45	14				
	1	270	45	Guard.				
Farran's Point (Old)	1	200	45	9	1	800	45	14
Rapide Plat (Old)	1	200	45	9				
Rapide (New)	1	270	45	14				
	1	270	45	Guard.				
Galops (Old)	2	200	45	9				
Galops (New)	1	270	45	14	1	800	45	14
	1	270	45	Guard.				
Welland (Old)	24	150	45	10·3				
	2	200	45	10·3				
	1	230	45	10·3				
Welland (New)	26	270	45	14				
Welland Feeder	1	150	26·6	9				
	1	200	45	9				
Welland, Port Robinson Branch	2	150	26·6	9				
Welland, Maitland Branch	1	185	45	11				
Sault Ste. Marie	1	900	60	20·3				
Soulanges					4	270	45	14
					1	270	45	Guard.
St. Peter's	1	200	48	18				

NOTE.—The enlarged locks on the St. Lawrence and the Welland canals wil accommodate vessels not exceeding 255 feet in length.

LACHINE CANAL.

OPERATION.

There has been no serious interruption to traffic in this canal during the year. The *Turret Court* struck Blacks bridge causing considerable damage to the structure, the cost of repairs of which was borne by the owners of the steamer, amounting to $3,104.00. A short interruption to traffic in canal only took place. The canal has been satisfactorily operated throughout.

MAINTENANCE.

The superintending engineer's report gives particulars of the repairs executed.

The cost of these repairs for the year ended June 30, 1899, is as follows :

Ordinary repairs under the head of Staff and Repairs	$35,776 90
Special repairs under the head of Income :	
Renewing Blacks Bridge	3,103 99
Total	$38,880 89

BEAUHARNOIS CANAL.

OPERATION.

The traffic was passed through this canal satisfactorily, with the exception of the delay to navigation of 48 hours caused by the steamer *Sir L. Tilley* on June 6 last, breaking the gates at lock No. 12. The accident cost the owner of the boat $2,707.33.

MAINTENANCE.

The following is a statement showing the cost of repairs for the year 1898-99 :

The cost of ordinary repairs was as follows :—

Ordinary repairs under head of Staff and Repairs	$ 13,463 01
Special repairs under head of Income :	
To purchase land for material to repair dyke	1,000 00
Total	$ 14,463 01

CHAMBLY CANAL.

OPERATION.

The traffic on this canal was conducted satisfactorily and without interruption during the year.

MAINTENANCE.

The following is a statement of the necessary repairs executed during the year:

Ordinary repairs under head of Staff and Repairs	$ 11,997 51
Special repairs under head of Income :—	
To continue and complete the drainage works and culverts at St. Johns, P.Q	12,689 02
To build bridge at Ste. Thérèse Island	1,866 40
Double metallic telephone line	700 00
	$ 27,252 93

ST. OURS LOCK.

OPERATION.

This lock was worked without accident during the year.

MAINTENANCE.

The cost of the work of repairs for the year was as follows :—

Ordinary repairs under head of Staff and Repairs	$ 1,494 93
There were no special repairs under the head of Income.	Nil.
Total	$ 1,494 93

STE. ANNE'S LOCK.

OPERATION.

No interruption to traffic occurred on this lock during the year.

MAINTENANCE.

The cost of maintaining the lock in good condition has been as follows :—

Ordinary repairs under head of Staff and Repairs	$ 1,997 96
There were no ordinary repairs under the head of Income	Nil
Total	$ 1,997 96

CARILLON AND GRENVILLE CANALS.

OPERATION.

These canals were operated successfully, without accident, during the year.

MAINTENANCE.

The cost of repairs executed during the year was as follows :—

Ordinary repairs under the head of Staff and Repairs	$11,478 88

There were no special repairs under head of Income.

TRENT CANAL.

OPERATION.

The canal works are in a good state of repair, and no interruption occurred to traffic during the year.

MAINTENANCE.

The cost of repairs for the year was as follows :—

Ordinary repairs under head of Staff and Repairs	$ 6,454 49
Special repairs under head of Income :—	
To construct a dump scow	681 94
To construct three sluices in dam, Hastings.	2,999 41
To remove blasted rock, Hastings..	2,498 44
Totals	$ 12,634 28

RIDEAU CANAL.

OPERATION.

No difficulty has occurred in navigating the canal during the year and the traffic has been worked satisfactorily.

MAINTENANCE.

The cost of maintaining the canal for the year has been as follows :—

Ordinary repairs under the head of Staff and Repairs	$28,199 49
Special repairs under head of Income :—	
To renew and widen bulkhead, Kilmarnock	576 29
Portland cement for foundation, Kilmarnock	124 00
Total	$28,899 78

MURRAY CANAL.

OPERATION.

Vessels passed through the canal during the year without accident of any kind. It was closed to traffic on December 6, 1898, and reopened on April 13, 1899.

MAINTENANCE.

The canal is in good condition and repair. The cost of repairs was as follows :—

Ordinary repairs under head of Staff and Repairs	$ 3,533 68
Special repairs under head of Income	Nil.
Total	$ 3,533 68

CORNWALL CANAL.

OPERATION.

The canal was closed for the season on December 9, 1893, and reopened for traffic on April 24, 1899. This canal was operated during the year without any accident occurring to interfere with navigation.

MAINTENANCE.

Large necessary repairs were made during the year and the canal is now in efficient working condition. The cost of the repairs is as follows :—

Ordinary repairs under head of Staff and Repairs	$ 14,623 90
Special repairs under head of Income :—	
To repair recess platforms	15,960 80
Total	$ 30,584 70

WILLIAMSBURG CANALS.

OPERATION.

These canals were closed to traffic on December 13, 1898, and opened for the season of 1899 on April 13, 1899.

These canals have been operated during the year without accident.

MAINTENANCE.

The canal works are in good condition, the necessary repairs thereto having been executed during the year. The cost of the repairs is as follows :—

Ordinary repairs under head of Staff and Repairs	$10,000 00
Special repairs under head of Income :—	
Combined gate and stone lifter	3,410 00
Building one pair lock gates	4,000 00
Total	$17,410 00

WELLAND CANAL.

OPERATION.

This canal was closed to traffic on December 14, 1898, and reopened on April 24, 1899.

MAINTENANCE.

The works of repairs necessary on this canal were not fully carried out, owing to the pressure brought to bear by the transportation companies and others to have the canal opened for navigation at such an early date.

The cost of repairs during the year was as follows :—

Ordinary repairs under the head of Staff and Repairs	$56,270 60
Special repairs under the head of Income :—	
To renew superstructure, west pier at Pt. Dalhousie	16,872 15
To renew fender works of bridges in new canal	8,205 13
To renew bridge over Welland Raceway	1,482 12
To improve the feeder back ditches	784 77
To renew Dunnville dam and bridge	80 10
To remove slides	2,675 57
Total	$86,370 44

ST. PETER'S CANAL.

OPERATION.

This canal was closed to navigation on January 7, 1899, and reopened on April 24, 1899. There have passed through the canal during the year 1,702 vessels.

MAINTENANCE.

Some repairs are required on this canal which have been postponed to next year. The canal, however, generally is in good repair. The cost of repairs during the year amounted to :—

Ordinary repairs under head of Staff and Repairs	$ 456 61
Special repairs under head of Income :	Nil.
Total	$ 456 61

GENERAL OBSERVATIONS RESPECTING GOVERNMENT CANALS.

There will be a 14-foot navigation available next season from Lake Erie to Montreal. The sections of the Trent Canal under construction will, no doubt, be completed next season, which will be a convenience for the movement of local traffic. The works of enlargement of the Grenville Canal have progressed so slowly that there is little hope of these improvements being made available for navigation for another year at least. The removal of the railway bridge pier from the centre of the prism of the Sault Ste. Marie Canal will greatly facilitate traffic passing through the canal, and obviate risk of accidents to vessels.

No capital expenditure has been made during the past year on the Welland, Rideau, Carillon, Chambly, Beauharnois, Ste. Anne's or St. Ours Canals. Supplies

and materials for the several canals continue to be purchased, for the most part, by competition, and books are kept on the canals showing the receipts and issues of materials and supplies.

Cost of maintenance and operation of the canal system for the year ended June 30, 1899	$ 633,315 61
Net revenue of canals after deducting refunds	369,044 38
Excess of cost of maintenance and operation over revenue	$ 264,271 23

RAILWAY SUBSIDIES.

Subsidies to railways were granted at the last session of Parliament, but as I have before mentioned, under the terms of the Subsidy Act of the previous session it is not possible to show clearly the amount of cash subidy granted, as the amount of subsidy payable will, in several cases, be based upon the cost of each road. For the same reason, I am unable to give the amount of each subsidy available, but I shall, as heretofore, show the amount actually paid ; also the number of miles of railway for which subsidy granted per mile was available on the 1st July, 1898, and the number of miles of railway for which cash subsidy per mile was granted, built up to the 30th of June, 1899. There will also be found the amount of subsidy paid up to the 1st of November, 1899.

There also appears a statement of the cash subsidy per annum paid up to the 30th of June, 1899, with the number of miles built ; also a statement showing the railways which have been granted aid in land.

Amount of cash subsidy per mile paid up to June 30, 1899	$ 18,858,592.16
Number of miles of railway on which cash subsidy per mile was paid up to June 30, 1899	5,863·71
Amount of subsidy paid up to November 1, 1899	$ 19,010,785.27
Cash subidy per annum paid up to June 30, 1899	$ 1,766,000.00
Number of miles built on cash subsidy per annum up to June 30, 1899	252
Number of miles of railway to which aid in land has been authorized	2,937·21
Number of acres of land, the grant of which in aid of railways has been authorized	39,725,130

The foregoing statements do not include the grants in cash and land to the Canadian Pacific Railway, the Canada Central Railway and the Esquimalt and Nanaimo Railway.

These roads received in cash as follows :—

Canadian Pacific Railway	$ 25,000,000
Canada Central Railway	1,525,250
Esquimalt and Nanaimo Railway	750,000
	$ 27,275,250

In land as follows :—

	Acres.
Canadian Pacific Railway	25,000,000
Esquimalt and Nanaimo Railway	1,900,000
Total	26,900,000

CANAL STATISTICS.

These statistics are for the season of 1898; they have been prepared by Mr. R. Devlin, the officer in charge of the Canal Statistics office.

TABLES showing the tons of freight passing through each canal, the tolls collected, and the number of trips of vessels passing through each canal, for the year ending December 31, 1898 :—

Name of Canal.	Tons of Traffic passing through.	Tolls collected.	Number of trips of vessels passing through.
Lachine, Beauharnois, Cornwall, Williamsburg — St. Lawrence Canals	1,439,134	$ 90,854 93	11,548
Welland	1,140,077	168,598 07	2,384
Chambly	271,336	19,326 06	2,341
Ste. Anne's, Carillon, Grenville — Ottawa River Canals	549,986	36,920 62	2,401
Rideau	54,946	4,794 01	2,367
Murray	15,543	684 01	677
Trent	27,676	1,094 63	2,363
St. Peter's	64,490	2,876 32	1,692
*Sault Ste. Marie	3,055,287	Free.	3,675

* This canal was opened for traffic on 9th September, 1895.

RAILWAY STATISTICS.

Great difficulty has been experienced, year by year, in getting out the Annual Report of the department, owing to many of the railway companies failing to make the returns required by law and taking no notice whatever of the communications addressed to them from time to time, urging them to forward their returns. I suggest that in future legal proceedings be taken to compel the delinquent railway companies to comply with the law; the costs of the suits to be collected from them.

SESSIONAL PAPER No. 10

TABLE showing the growth of Railways from year to year, since the opening of the first line in 1836.

Year.	Miles in Operation.	Year.	Miles in Operation.
1835	0	1868	2,278
1836	16	1869	2,524
1837	16	1870	2,617
1838	16	1871	2,695
1839	16	1872	2,899
1840	16	1873	3,613
1841	16	1874	3,832
1842	16	1875	4,331
1843	16	1876	4,804
1844	16	1877	5,218
1845	16	1878	5,782
1846	16	1879	6,126
1847	54	1880	6,858
1848	54	1881	7,194
1849	54	1882	7,331
1850	66	1883	8,697
1851	159	1884	9,577
1852	205	1885	10,275
1853	506	1886	10,773
1854	764	1887	11,793
1855	877	1888	12,184
1856	1,414	1889	12,585
1857	1,444	1890	13,151
1858	1,863	1891	13,838
1859	1,994	1892	14,564
1860	2,065	1893	15,005
1861	2,146	1894	15,627
1862	2,189	1895	15,977
1863	2,189	1896	16,270
1864	2,189	1897	16,550
1865	2,240	1898	16,718
1866	2,278	1899	17,250
1867	2,278		

FATAL ACCIDENTS for Year ended June 30, 1899.

	Passengers Killed.	Employees Killed.	Others Killed.	Total Killed.
Falling from cars or engines	2	17	6	25
Getting on or off trains in motion	2	9	13	24
At work making up trains	.....	13	.....	13
Putting heads or arms out of windows	.....	.....	.....	.....
Coupling cars	.....	10	.....	10
Collisions and derailments	12	18	1	31
Striking bridges	.....	1	.....	1
Walking or being on track	.....	25	88	113
Explosions	.....	2	.....	2
Other causes	4	24	37	65
Total	20	119	145	284

The summary of tables for the years ended June 30, 1898, and June 30, 1899, is as follows, viz. :—

—	Comparative Statement.	
	June 30, 1898.	June 30, 1899.
Miles of railway completed (track laid)	16,870	17,358
" sidings	2,248	2,402
" iron rails in main line	248	178
" steel "	16,622	17,180
" " " double track	553	562
Capital paid (including the four following items	$941,297,037	$964,699,784
Government (Dominion and Provincial) bonuses paid	$161,136,218	$165,534,900
" " " loans paid	$21,569,149	$20,468,245
" (Provincial only) subscription to shares paid)	$300,000	$300,000
Municipal aid paid	$15,660,668	$15,740,668
Miles in operation	16,718	17,250
Gross earnings	$59,715,105	$62,243,784
Working expenses	$39,137,549	$40,706,217
Net earnings	$20,577,556	$21,537,567
Passengers carried	18,444,049	19,133,365
Freight carried (tons)	28,785,903	31,211,753
Train mileage	50,658,283	52,215,207
Passengers killed	5	20
Number of elevators	108	163
" guarded level crossings—public roads	171	197
" unguarded " "	11,646	11,813
" overhead bridges	432	430
" level crossings of other railways	243	276
" junctions with other railways	349	347
" " branch lines	227	234
" engines owned	2,026	2,142
" " hired	86	75
" sleepers and parlour cars owned	188	231
" " " hired	38	37
" first class cars owned	1,176	1,170
" " hired	38	69
" second class and immigrant cars owned	623	621
" " " hired	5	19
" baggage, mail and express cars owned	647	639
" " " hired	21	29
" refrigerator cars owned	398	665
" " hired	122	122
" cattle and box freight car owned	35,459	38,839
" " " hired	3,361	3,112
" platform cars owned	15,864	15,434
" " hired	442	377
" coal and dump cars owned	5,181	5,540
" " hired	.....	42
" conductors vans owned	1,017	1,008
" " hired	7	5
" tool cars owned	202	910*
" " hired	3	8
" snow ploughs owned	292	302
" " hired	2	2
" flangers owned	154	186
" " hired	1	1

* Including steam shovels, pile drivers, water tank cars, store cars, gravel cars, boarding cars, &c.

I have the honour to be, sir, your obedient servant,

COLLINGWOOD SCHREIBER,

Deputy Minister and Chief Engineer of Railways and Canals.

The Honourable A. G. BLAIR,

Minister of Railways and Canals.

No. 1

RAILWAYS

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE GENERAL MANAGER,
MONCTON, N.B., November 7, 1899.

SIR,—I have the honour to submit the following report on the working of the Intercolonial Railway during the fiscal year ended June 30, 1899.

I inclose the reports of the Chief Engineer and the Mechanical Superintendent, and the following statements prepared by the Chief Accountant and Treasurer :—

No. 1. Capital Account.
2. Revenue Account.
3. Locomotive Power.
4. Car Expenses.
5. Maintenance of Way and Works.
6. Station Expenses.
7. General Charges.
8. General Stores Account.
9. General Balance.
10. Comparative Statement of Averages.
11. Special Votes.

The length of railway in operation during the year was 1,314·67 miles. Of this 1,145·46 was owned by the Government, the balance 169·21 was operated under lease.

CAPITAL ACCOUNT.

The total cost of road and equipment on June 30, 1898, by last report, was $55,668,913.95.

The additions during the year were as follows :—

Increased accommodation at Halifax	$63,945 04
" " at Mulgrave	981 29
" " at Moncton	20,000 00
" " at St. John	195,534 59
" " at Levis	13,886 46
" " various points	4,909 26
Extension to deep water at North Sydney,	21,258 68
To increase the strength of iron bridges	49,990 39
Land damages Oxford and New Glasgow and Cape Breton divisions	426 26
To build an elevator at St. John	17,358 96
" " at Halifax	41,203 83
To dredge at Pictou wharf	999 75
" at Pictou Landing wharf	26 80
To provide a station house and siding at Humphreys	1,015 99
To build bridge over the rock cut north of Elm Tree River	899 57

Passenger and freight shed at Richmond	$	1,500 00
To provide new machinery and appliances at Moncton shops		5,053 66
Electric light apparatus for steamer *Mulgrave*		3,000 15
Rolling stock		619,999 26
Rolling stock fittings, freight cars		20,000 00
	$	1,081,989 94
Deduct Indiantown Branch, credit		60 00
	$	1,081,929 94
Making the total cost on the 30th June, 1899		56,750,843 89

Increased accommodation at Halifax.—Some dredging was done. A wharf 600 feet long and 160 feet broad was built of creosoted piles and southern pitch pine timber. A warehouse 525 feet long and 126 feet broad was built on this wharf. Railway tracks were laid in the warehouse on each side of it, also on the approaches to the wharf.

Increased accommodation at Mulgrave.—A cribwork retaining wall was built, some filling in was done, and additional sidings were laid.

Increased accommodation at Moncton.—This was for completing the work of building a passenger station and rearranging the yard; for plumbing, fitting for electric light, asphalt platforms, sidings, grading and sewers.

Increased accommodation at St. John.—This is for the purchase of property at St. John harbour on which to build a large wharf for export and import traffic. On the wharf there will a warehouse for freight. The whole work is under contract and is progressing.

Increased accommodation at Levis.—This is for the purchase of land to enlarge the railway yard there.

Increased accommodation at various points.—This expenditure was made at Antigonish, moving freight shed, extending sidings, rearranging and improving the yard; at Jubilee, building a station and freight house; at Ross Road, for land and for building a freight shed and platform; at College Bridge, for additional land; and at Sylvester for an extension of platform.

Extension to deep water at North Sydney.—This is a continuation of the work commenced last year of extending the railway to the harbour, and constructing a wharf 265 feet long and 58 feet wide, with a warehouse on it 80 feet long and 30 feet wide. The wharf and warehouse are in use.

To increase the strength of iron bridges.—Eight new steel bridges were purchased, and the eight spans which they replaced were added to other bridges to increase their strength, so that a total of eighteen spans of bridging were permanently strengthened.

Land damages Oxford and New Glasgow and Cape Breton divisions.—This is for land taken and for legal services in connection with land.

To build an elevator at St. John.—This work is under contract, the greater part of the timber is on the ground and the foundation is partly built.

To build an elevator at Halifax.—The work is under contract and is progressing. The expenditure is for timber and for payments to the contractors. The city of Halifax contributed in land and money $49,907 to the railway for this work.

To dredge at Pictou wharf.—This work was done by a dredge of the Public Works Department, but was not completed at the close of the year.

To dredge at Pictou Landing wharf.—No work was done during the year except to prepare a plan. There was a good deal of difficulty in getting a dredge.

To provide a station house and siding at Humphreys.—This is the cost of construct ing the siding.

To build bridge over the rock cut north of Elm Tree River.—This work is completed, an iron bridge placed on concrete abutments being provided to carry the road over the railway.

Passenger and freight shed at Richmond.—This is a new building 62 feet by 24 feet, and it is in use.

To provide new machinery and appliances at Moncton Shops.—This is for special machines and tools and the fitting of them up.

Electric light apparatus for steamer "Mulgrave".—An engine and dynamo, a search light and other lights were fitted on board the steamer; also lamps on the wharfs which are lighted by the dynamo in the steamer.

Rolling Stock.—This is for the purchase of locomotives, sleeping and dining cars, passenger cars for day use, baggage cars, postal cars and freight cars, snow ploughs and a flanger required in consequence of the extension of the railway and the increase of business.

Rolling stock fittings for freight cars.—This is for the purchase of air-brake apparatus for freight cars, and for applying the same to cars. Three hundred and fifty cars were so equipped during the year, making a total of 1,868 equipped.

REVENUE ACCOUNT.

The gross earnings and working expenses for the year compare as follows:—

Gross earnings	$3,738,331 44
Working expenses	3,465,686 21
Surplus	$ 272,645 23

The gross earnings compare as follows with those of the previous year:—

In 1898-99	$ 3,738,331 44
In 1897-98	3,117,669 85
Increase	$ 620,661 59

The earnings from passenger traffic compare as follows:—

In 1898-99	$ 1,167,453 16
In 1897-98	1,053,864 64
Increase	$ 113,588 52

The earnings from freight traffic compare as follows:—

In 1898-99	$ 2,348,096 58
In 1897-98	1,857,740 06
Increase	$ 490,356 52

The earnings from mails and express freight compare as follows :—

In 1898–99	$	222,781 70
In 1897–88		206,065 15
Increase	$	16,716 5

The earnings by mile of railway compare as follows :—

In 1898–99	$	2,843 55
In 1897–98		2,594 53
Increase	$	249 02

The earnings by train mile compare as follows :—

	cents.
In 1898–99	76·57
In 1897–98	78·82

The number of passengers carried compares as follows :—

In 1898–99	1,603,095
In 1897–98	1,528,444
Increase	74,651

The increase was in both local and through passengers.

The weight of freight carried compares as follows :—

	Tons.
In 1898–99	1,750,761
In 1897–98	1,434,576
Increase	316,185

The increase was in both local and through freight.

The following is a comparative statement of a few of the chief articles of freight, showing the quantity carried in this and in the previous year :—

Articles.	1897–98.	1898–99.	Increase.	Decrease.
Barrels of flour and meal	987,408	1,157,250	169,842	
Bushels of grain	1,551,372	2,595,353	1,043,981	
Lumber in superficial feet	254,093,816	306,554,031	52,460,215	
Head of live stock	89,301	109,821	20,520	
Coal in tons	369,949	494,206	124,257	
Manufactured goods in tons	319,608	399,527	79,919	
Cords of firewood	29,896	58,960	29,064	
All other articles in tons	234,278	198,571		35,707

There was an increase over last year in the quantity of the following articles carried : Flour and meal, grain, lumber, firewood, live stock, coal, extract of hemlock bark, clay, stone, sand, ore, lime and cement, gypsum, iron and other metals, butter and cheese, hay and straw, fresh dried and salted fish, oysters, sugar, fresh and salted pork, hides, leather, dry goods, hardware, groceries ; and a decrease in the quantity of the following : Bricks, potatoes, turnips, beets, carrots, canned lobsters, molasses, fresh and salted beef.

WORKING EXPENSES.

The working expenses compare as follows with the previous year :—

In 1898–99	$3,465,686 21
In 1897–98	3,257,648 51
Increase	$ 208,037 70

The averages compare with those of last year as follows :—

	cents.
Per mile run by engines :—	
In 1898–99	58·02
In 1897–98	66·87
Per mile run by trains :—	
In 1898–99	70·99
In 1897–98	82·37
Expenditure per mile of railway :—	
In 1898–99	$ 2,636 16
In 1897–98	2,711 02

The rent payable to the Drummond County Railway Company and to the Grand Trunk Railway Company is not included in the above, as it would disturb the comparison with previous years ; no corresponding charge relating to the cost of any portion of the railway having ever before been included in the working expenses.

The permanent way and structures received necessary repairs, and all the works of the railway are in good order.

The number of ties renewed was 490,368.

Ninety miles of track were reballasted.

Eight and two-third miles of new sidings were laid at various places.

The bridges received necessary repairs, and seven wooden bridges were taken out of the track and seven steel bridges substituted.

The fences received necessary repairs, and sixty and a half miles of new fences were erected.

The snow sheds and snow fences were repaired, and eight hundred and sixty rods of new snow fences were erected.

The wharfs at various places received necessary repairs.

The buildings on all parts of the line received necessary repairs.

The rolling stock received necessary repairs and is in good order.

One locomotive was purchased, two were rebuilt in the railway shops, and one hundred and eleven received heavy repairs.

The freight cars were repaired, and two hundred and four were rebuilt.

STORES.

The value of stores purchased was	$1,103,202 43
The value of stores used was	1,336,057 85
The value of old material sold was	98,852 32

The value of stores on hand at the end of the year was :—

Ordinary stores, including fuel	$ 352,299 87
Iron and steel rails and fastenings	179,613 91
Old material for sale	21,263 94
Total	$ 553,177 72

GENERAL.

There was a good deal of trouble with snow in the latter part of the winter of 1898–99, and the cost of clearing snow was over seventy thousand dollars.

The water tanks at St. Charles Junction and at Canaan were accidently destroyed by fire in January, 1899.

On January 25, 1899, there were three washouts of the track on the eastern part of the line, and on April 20, 1899, there was one on the western part of the line; in all these cases there was a little delay to but no stoppage of the traffic, and the damages were repaired soon after.

I have the honour to be, sir,
Your most obedient servant,

D. POTTINGER,
General Manager Government Railways.

COLLINGWOOD SCHREIBER, Esq., C.M.G.
Deputy Minister and Chief Engineer Railways and Canals.

No. 1.—INTERCOLONIAL RAILWAY.

DR. CAPITAL ACCOUNT, Year ended June 30, 1899. CR.

1898.		$ cts.	$ cts.	1898.		$ cts.
June 30.	To cost of Intercolonial Railway to date	48,397,445 15		June 30.	By Dominion of Canada	55,668,913 95
	" Eastern Extension Railway to date	1,324,042 81				
	" Oxford and New Glasgow Railway to date	1,950,820 60				
	" Cape Breton Railway to date	3,875,640 47				
	" Cape Breton and Oxford and New Glasgow Railways to date	57,501 89				
	" Ferry Service at Strait of Canso to date	63,463 03				
1899.			55,668,913 95			
June 30.	Expenditure for current year:—					
	Increased accommodation, Moncton	20,000 00				
	" " St. John	195,534 59				
	" " Lévis	13,886 46				
	" " Halifax	63,945 04				
	" " Mulgrave	981 29				
	" " at various places	4,909 26				
	Extension to deep water, North Sydney	21,258 98				
	To increase strength of iron bridges	49,990 39				
	Land and damages (O. & N. G. & C. B. Rys.)	426 26				
	Elevator at St. John	17,358 96				
	" Halifax	41,203 83				
	Rolling Stock	619,999 26				
	Station and siding at Humphreys	1,015 99				
	To build bridge over rock cut, north Elm Tree River	899 57				
	Rolling Stock fittings for freight cars	20,006 00				
	Passenger and freight shed at Richmond	1,500 00				
	Electric light apparatus ss. *Mulgrave*	3,000 15				
	To dredge Pictou Landing wharf	26 80				
	" " wharf	999 75				
	To provide new machinery, Moncton shops	5,053 66				
	CR.	1,081,989 94				
				1899.		
	By Indiantown Branch	60 00				
			1,081,929 94	June 30.	By Dominion of Canada	1,081,929 94
			56,750,843 89			56,750,843 89

E. & O. E.
MONCTON, N. B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 2.—INTERCOLONIAL RAILWAY.

DR. REVENUE ACCOUNT, Year ended June 30, 1899. CR.

Previous Year.	Expenditure.		Year ended June 30, 1899.	Previous Year.	Earnings.	Year ended June 30, 1899.
$ cts.			$ cts.	$ cts.		$ cts.
1,031,630 81	Locomotive power,	Abst. No. 1.	1,100,190 62	1,053,864 64	Passenger traffic	1,167,453 16
733,366 18	Car expenses	" 2.	731,266 31	1,857,740 06	Freight traffic	2,348,096 58
861,727 62	Maintenance way & works	" 3.	849,322 51	206,065 15	Mails and sundries	222,781 70
400,164 67	Station expenses	" 4.	453,971 00			
209,547 59	General charges	" 5.	258,039 66			
21,211 64	Car mileage		72,896 11			
3,257,648 51			3,465,686 21			
70,000 00	Rental of leased lines		210,000 00			
3,327,648 51			3,675,686 21	3,117,669 85		3,738,331 44
	Balance		62,645 23	209,978 66	Balance	
3,327,648 51			3,738,331 44	3,327,648 51		3,738,331 44

E. & O. E.

MONCTON, N.B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 3.—INTERCOLONIAL RAILWAY.

LOCOMOTIVE POWER. (Abstract No. 1.)

Previous Year.		Year ended June 30, 1899.
$ cts.		$ cts.
13,816 55	Mech'l. supt's salary, clerks, office and travelling expenses	13,168 13
276,117 52	Wages of drivers, firemen and cleaners	317,748 69
388,267 88	Fuel	467,480 30
31,424 28	Oil, tallow and waste and small stores	29,846 39
276,068 39	Repairs to engines, tenders and engine tools	221,150 55
29,371 80	Water, including pump and tank repairs	32,325 07
16,564 39	Miscellaneous	18,471 49
1,031,630 81		1,100,190 62

E. & O. E.

MONCTON, N. B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 4.—INTERCOLONIAL RAILWA *I*.

Car Expenses. (Abstract No. 2.)

Previous Year.	——	Year ended June 30, 1899.
$ cts.		$ cts.
86,371 77	Repairs to passenger cars	74,687 97
22,276 39	Repairs to postal, express and baggage cars	12,964 51
232,118 81	Repairs to freight cars and vans	172,634 33
6,308 67	Repairs to snow ploughs and flangers	5,090 40
265,557 31	Wages of conductors, train baggagemasters and brakemen	317,994 42
17,213 63	Oil and waste for packing	13,395 32
71,712 71	Small stores and fuel	91,442 71
31,806 89	Miscellaneous	43,056 65
733,366 18		731,266 31

E. & O. E.

T. WILLIAMS,

Moncton, N.B., June 30, 1899.

Chief Accountant and Treasurer.

No. 5.—INTERCOLONIAL RAILWAY.

Maintenance of Way and Works.—(Abstract No. 3.)

Previous Year.	——	Year ended June 30, 1899.
$ cts.		$ cts.
7,854 32	Chief and asst. engineers' salaries, clerks, office and travelling expenses	10,041 95
404,230 28	Wages in repairing roadway, fences, semaphores, including new sidings laid in	425,872 93
67,139 13	Rails and fastenings, including new sidings laid in	38,624 71
143,932 70	Ties	99,163 35
99,540 05	Timber, lumber, &c., for repairs to bridges, cattle guards, snow sheds, fences, &c.	111,067 44
9,443 16	Repairs to wharfs	6,562 33
56,234 47	Repairs to buildings and platforms, including extensions and additions to same	69,404 53
11,495 07	Repairs to tools	14,516 00
58,370 90	Clearing snow and ice	70,104 71
3,487 54	Miscellaneous	3,964 56
861,727 62		849,322 51

E. & O. E.

T. WILLIAMS,

Moncton, N.B., June 30, 1899.

Chief Accountant and Treasurer.

No. 6.—INTERCOLONIAL RAILWAY.

STATION EXPENSES.—(Abstract No. 4)

Previous Year.	——	Year ended June 30, 1899.
$ cts.		$ cts.
313,414 89	Salaries and wages of station masters, agents, clerks, telegraph operators, station baggage-masters, yard-masters, switchmen and labourers	365,429 78
86,749 79	Fuel, oil and light, stationery, ticket and other incidental expenses	88,541 22
400,164 67		453,971 00

E. & O. E.
MONCTON, N.B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 7.—INTERCOLONIAL RAILWAY.

GENERAL CHARGES.—(Abstract No. 5.)

Previous Year.	——	Year ended June 30, 1899.
$ cts.		$ cts.
93,772 74	General manager, district superintendents, train despatchers, general freight agent, general passenger agent's salaries, clerks, office and travelling expenses	109,200 96
30,905 52	Chief accountant and treasurer, traffic auditor, paymaster, cashier's salaries, clerks, office and travelling expenses	33,820 42
8,348 66	Damages to men, animals and goods	14,871 25
24,513 00	Ferry service	28,712 42
3,213 34	Telegraph expenses, not including pay to operators	5,184 30
26,630 79	Miscellaneous, printing, advertising, &c	27,483 77
22,163 54	Agency expenses	38,766 54
209,547 59		258,039 66

E. & O. E.,
MONCTON, N.B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 8.—INTERCOLONIAL RAILWAY.

DR. GENERAL STORES ACCOUNT—Year ended June 30, 1899. CR.

1898.		$ cts.	$ cts.	1899.		$ cts.	$ cts.
June 30.	To Balance		468,462 20	June 30.	By Issues during year	1,336,057 85	
1899.					Sales, material, fuel, &c., to other railways, &c	23,875 29	
June 30.	To Purchases during the year	1,103,202 43			Sales, old material	98,852 32	
	Charges from other departments	385,015 41					1,458,785 46
	Labour, etc	43,499 80			By Balance :—		
	Staff pay rolls	11,783 34					
			1,543,500 98		Ordinary stores, including fuel	352,299 87	
					Iron and steel rails and fastenings	179,613 91	
					Old material for sale	21,263 94	
							553,177 72
			2,011,963 18				2,011,963 18

E. & O. E.
MONCTON, N.B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 9.—INTERCOLONIAL RAILWAY.

DR. GENERAL BALANCE, Year ended June 30, 1899. CR.

		$ cts.
To Cash		1,167 70
Stations		67,824 87
General Stores—		
Ordinary stores, including fuel	$352,299 87	
Iron and steel rails and fastenings	179,613 91	
Old material for sale	21,263 94	
		553,177 72
Dept. Accounts—		
Post Office	$ 38,428 23	
Public Works	74 55	
Marine and Fisheries	409 06	
Militia and Defence	3,477 05	
		42,388 89
Canadian Pacific Railway rolling stock		22,446 90
Dominion Atlantic Railway—traffic	$ 962 09	
" " —general	494 07	
		1,456 16
Canada Eastern Railway—traffic	$ 5,891 09	
" " —general	5,659 17	
		11,550 26
Canadian Pacific Railway—general	$ 11,241 20	
" " (N. B. D.)—general	3,428 56	
		14,669 76
Grand Trunk Railway—traffic	$ 1,366 74	
" " —general	6,517 40	
		7,884 14
Rents		4,018 85
Unclaimed freight		77 24
Quebec Central Railway		4,280 12
N. B. and P. E. I. Railway		17 90
Caraquet Railway		750 16
Kent Northern Railway		62 56
Moncton and Buctouche Railway		73 05
Bay Chaleur Railway		2,065 27
Elgin and Havelock Railway		3 78
Boston and Maine Railway		27 75
Salisbury and Harvey Railway		0 65
Great Eastern Fast Freight Line		2 43
Swift Refrigerator Line		5 35
Michigan Central Railway		9 66
Pennsylvania Railway		0 69
Central Vermont Railway		9 02
Nova Scotia Central Railway		1 81

	$ cts.
By Dominion of Canada	821,128 28
Suspense	4,222 74
Chatham Railway	0 07
Canadian Pacific Railway—traffic	6,386 01
Wagner Palace Car Company	661 42
Canada Coals and Railway Company	57 66
Central Railway of New Brunswick	72 08
Temiscouata Railway	14 64
Prince Edward Island Railway	497 06
Charlottetown Steam Navigation Company	8 10
National Despatch Line	5 87
Canada Atlantic and P. Line	847 67
Coldbrook Rolling Mills Company (new account)	247 30

Tobique Valley Railway		2,739 25
Canada Atlantic Railway		176 40
New York Central and Hudson River Railway		3 56
Sherbrook Tank Line		1 21
Maine Central Railway		2 19
Detroit, Grand Haven and Mil. Railway		13 22
National Car Company		7 34
United Counties Railway		6 00
Lehigh Valley Railway		0 83
Galveston, Harrisburg and S. A. Railway		0 63
Southern Despatch Lumber Line		0 85
Pittsburg, Cincinnati, C. and St. Louis Railway		2 66
Duluth, South Shore and Atlantic Railway		0 55
Newfoundland Railway		443 06
Montreal and Atlantic Railway		0 76
Vermont and Province Line		0 57
Cincinnati, Hamilton and Dayton Railway		2 57
St. Louis and Cairo Short Line		0 49
Drummond County Railway		12,965 90
Western Counties Railway—General	15,893 35	
" " " —Traffic	64 57	
		15,957 92
Springhill and Parrsboro Railway		3,161 99
Halifax and Cape Breton Railway		1,151 42
Elgin Branch Railway		726 10
St. Martin's and Upham Railway		15 13
New York and New England Railway		2 57
Chicago and West Michigan Railway		0 72
Cleveland, Cin., Chic. and St. L. Railway		14 54
Banger and Aroostook Railway		0 36
Indiana, Illinois and Iowa Railway		5 00
Toronto, Hamilton and Buffalo Railway		1 60
Canadian Express Company		4,800 00
Allan Steamship Line		1,892 13
Acadia Coal Company		642 38
Intercolonial Coal Company		1,270 90
Cumberland Railway and Coal Company		209 10
Dominion Coal Company		90 56
I. C. R. Employees' R. and I. Association		204 99
Halifax Cotton Company Siding		5,801 97
Western Union Telegraph Company		724 88
Steamer "Admiral"		1,642 85
Car "Ottawa"		264 17
Car "Victoria"		372 31
Nova Scotia Steel Company		11 08
St. François Bridge Company		49 59
Great North-western Telegraph Company		21 48
Baldwin Locomotive Works		181 10
Schooner "Soudan" and owners		139 01
Town of Fraserville		48 13

No. 9.—INTERCOLONIAL RAILWAY—*Continued.*

DR. GENERAL BALANCE, Year ended June 30, 1899. CR.

		$ cts.		$ cts.
To SS. "Gallia"		24 54		
Record Foundry and Machine Company		64 30		
Polson Iron Works		273 25		
Town of Dartmouth		32,000 00		
St. John Street Railway Company		31 00		
Ontario Car and Foundry Company		1,276 00		
Remittances destroyed		788 81		
Schooner "Mary Jane"		71 30		
Coldbrook Rolling Mills Company		1,967 41		
SS. "Mayflower"		53 38		
Union Bearing Company		928 18		
Stations—				
Nauwigewauk	$ 3 00			
Glengarry	5 00			
Bloomfield	25 21			
Coal Branch	65 84			
Weldford	55 00			
Ste. Luce	80 00			
Bic	22 00			
St. Arsène	107 12			
Dalhousie	19 69			
Valley	6 65			
Iona	72 71			
Nappan	40 00			
Kent Junction	28 38			
Isle Verte	25 00			
Gloucester Junction	78 87			
Campbellton (freight)	25 00			
Derby Junction	231 04			
		890 51		
Individual accounts		6,035 60		
Total		834,148 90	Total	834,148 90

E. & O. E.
MONCTON, N. B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 10.—INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT of Averages, Year ended June 30, 1899.

——	1898.	1899.
Mileage of railway	1,201·63	1,314·67
Engine mileage	4,871,387	5,974,170
Train mileage	3,955,009	4,881,695
Car mileage	43,189,745	53,422,606
Receipts per engine mile ..... Cents	64·00	62·57
Receipts per mile of railway ..... Dollars	2,594 53	2,843 55
Percentage of passenger earnings to gross earnings	33·80	31·23
" freight " "	59·59	62·81
" other " "	6·61	5·96
Expenses per engine mile :—		
Drivers, firemen and cleaners' wages ..... Cents	5·67	5·32
Fuel ..... "	7·97	7·83
Oil, tallow, waste and small stores ..... "	·65	·50
Repairs to engines ..... "	5·67	3·70
Water and tank repairs ..... "	·60	·54
Miscellaneous ..... "	·34	·31
Total	20·90	18·20
Mechanical superintendent's salary, office and travelling expenses	·28	·22
Total	21·18	18·42
Locomotive power per engine mile ..... Cents	21·18	18·42
Car expenses " ..... "	15·05	12·24
Maintenance way and works per engine mile ..... "	17·69	14·22
Station expenses " ..... "	8·21	7·60
General charges " ..... "	4·30	4·32
Car mileage " ..... "	·44	1·22
Total	66·87	58·02
Rental of leased lines	1·44	3·51
Total per engine mile	68·31	61·53
Locomotive power per train mile ..... Cents	26·08	22·53
Car expenses " ..... "	18·54	14·98
Maintenance way and works per train mile ..... "	21·79	17·40
Station expenses " ..... "	10·12	9·30
General charges " ..... "	5·30	5·29
Car mileage " ..... "	·54	1·49
Total	82·37	70·99
Rental of leased lines	1·17	4·30
Total per train mile	84 14	75·29
Working expenses per mile of railway :—		
Ordinary ..... Dollars	2,711 02	2,636 16
Rental of leased lines ..... "	58 25	159 74
	2,769 27	2,795 90

E. & O. E

MONCTON, N.B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 11.—INTERCOLONIAL RAILWAY.

SPECIAL VOTES—(Abstract No. 26).

4 months ended June 30, 1898.	Rental of Leased Lines.	Year ended June 30, 1899.
$ cts.		$ cts.
46,666 68	Rent of Grand Trunk Railway—Chaudière Curve to Chaudière, and Ste. Rosalie to Montreal, including the Victoria Bridge and terminals at Montreal....	140,000 00
23,333 32	Rent of Drummond County Railway—Chaudière to Ste. Rosalie and the Nicolet Branch..	70,000 00
70,000 00	Operated as part of the Intercolonial Railway.	210,000 00

E. & O. E.,
MONCTON, N. B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE CHIEF ENGINEER,
MONCTON, N.B., July 27, 1899.

SIR,—I have the honour to submit the report of the engineering department for year ending June 30, 1899.

TRACK.

During the year, one mile of track laid with old four and quarter inch steel rails, weighing 58 pounds to the yard, was taken up and replaced with new four and a half inch rails, weighing 67 pounds to the yard,

Three miles of track laid with 67 pound rails, which had become worn at the ends, were taken up, cut, and relaid.

TIES.

During the year, 490,368 ordinary ties, and 247 sets of switch ties were renewed.

BALLASTING.

152,973 cubic yarks of ballast were distributed on the various divisions of the line throughout the past year.

SEMAPHORES AND SWITCHES.

New distant semaphore signals were erected at the following stations: Halifax (4), St. John (2), Norton, Penobsquis, Belledune, Charlo, Millstream, Cedar Hall, Moosepark (2), Foresdale (2), Maddington Falls (2), St. Leonard (2), Mitchell (2), St. Cyrille (2), St. Germain (2), St. Eugene (2), St. Edward (2), Ste. Rosalie.

New station signals were provided for the following stations: Kent Junction, Chatham Junction, Derby Junction, Beaver Brook, Bartibogue, Mitchell, Carmel, St. Germain and St. Edward.

One electric semaphore signal was put up at Truro.

All other semaphore, switches and station signals throughout the line, have been overhauled, repaired and painted where necessary.

SIDINGS.

During the year, eight and two third miles of additional siding accommodation has been provided at various points along the line*.

FENCING.

Sixty and one half miles of new barbed wire, woven wire and Page wire fencing were erected at different points of the line during the past year. Extensive repairs were also made to existing fences on the different divisions of the line. 600 feet of picket fence was erected at Halifax.

SNOW SHEDS AND SNOW FENCES.

During the year 14,189 feet of new snow fencing was erected, and heavy repairs were made to snow sheds and snow fences where found necessary thoughout the line. 560 feet of temporary snow fencing was put up on the Eastern Extension division.

*NOTE, This includes 5,000 feet laid in Moncton yard, and 4,670 feet laid down at the Deep Water Terminus, Halifax, in connection with increased accommodation provided at these places.

WHARFS AND TRESTLES.

At Pier No 4, deep water terminus, Halifax, the coal trestle was raised, and the planking, hatches and doors overhauled and repaired. Necessary repairs were also made to the cribwork in front of shed.

At Pier No. 5, deep water terminus, 20 new piles were driven, and the planking repaired.

At Richmond, piers 6, 7, and 8 were overhauled and repaired where found necessary.

Al Mulgrave, 6 new fenders were provided, and the sheathing of corner of wharf renewed. A wing 40 feet long 10 feet by 8 feet was built from the cribwork to the shore to strengthen cribwork and protect new siding from being damaged by heavy seas. 80 feet of the crib on the shore side of transfer dock was renewed.

At Pictou Landing, 351 feet by 21 feet of the north side of west wharf was renewed from half tide up to accommodate shipping.

At Point Tupper, repairs were made to the wharf where found necessary.

At Pictou, heavy repairs were made to the old station and freight house wharfs.

At Spring Hill Junction, additional bents were placed between the existing bents of coal trestle.

At Amherst and Dorchester, the trestles were overhauled and repaired.

At St. John, heavy repairs were made to the wharf at the deep water terminus.

At Point du Chene, 100 square feet of the wharf which was in a very bad state, was taken down and renewed. This work is not quite completed.

At Newcastle, extensive repairs were made to the wharf at this place for the better accommodation of shipping.

At Rimouski, necessary repairs were made to the approaches to wharf.

At Rivière du Loup, the wharf was overhauled and repaired.

At St. Charles, the coal shed and trestle were overhauled and repaired.

At Levis, the wharf was overhauled, and repaired where found necessary.

BUILDINGS AND PLATFORMS.

At North Street Station, Halifax, large repairs were made to the glass in roof of train shed; necessary repairs were also made to platform, water closets, &c.

At No. 1 brick freight shed, deep water terminus, necessary repairs were made to the floor, and a thorough systen of drainage made with roof of building and connected with the sewer beneath the shed.

At Richmond, two sections of the roof of round house which gave way, were renewed, six new smoke jacks and hoods were provided, and repairs made to floor and engine pits.

The roof of tinsmith's shop was reshingled.

New stringers were provided for the pits in machine shop, and the planking repaired where necessary.

The cattle pens were overhauled and repaired.

The coal sheds at the deep water terminus and at Richmond, were overhauled and repaired, and a new floor was laid in the building used by the Dominion Atlantic Railway as an oil store.

At Millview, a new flag station and platform were provided.

At Bedford, a hardwood floor was laid in the station master's office.

At Windsor Junction, a new foundation was placed under the freight shed, and one side of the roof was reshingled.

At Elmsdale, necessary repairs were made to the passenger and loading platforms.

At Stewiacke, new sills were placed under the station building, and an addition of 35 feet was made to the freight house. An extension of 60 feet was made to the passenger platform, and 30 feet to the freight platform. A new cattle pen was also provided.

At Hilden, the roof of station was reshingled, and a storm door provided.

At Truro, a hardwood floor was laid in the ladies waiting room. The blacksmith shop overhauled and repaired. Number of the timbers of engine pits were renewed, and six new smoke jacks and hoods were placed on the engine house. New floors were laid in the oil room and shunter's room.

At West River, necessary repairs were made to the doors and windows of freight shed.

At Riversdale, the roofs of coal shed and tank house were reshingled.

At Glengarry, the roof of coal shed was reshingled, and four storm sashes were provided for the station.

At New Glasgow, portions of the passenger and freight platforms were renewed. and the roofs of freight shed and baggage room were overhauled, repaired and painted, The trimmings of station building were also painted.

At Stellarton, the roof of engine shed was overhauled and repaired, and other necessary repairs made to the building.

A number of storm sashes and a storm door were provided for the dwelling apartments of station. Necessary repairs were made to the station master's office and freight platform.

At Lourdes flag station, the platform was renewed, and the interior of station repaired.

At Pictou Landing, a number of rafters in the engine shed were renewed and other repairs made to roof.

At Trenton, necessary repairs were made to the doors of waiting room and freight shed.

At Piedmont, repairs were made to the roof of kitchen.

At Avondale, the platform was renewed.

At Marshy Hope, the roof of station was painted, the platform repaired and a storm door provided.

At Tracadie, the interior walls of station master's office, waiting room, dwelling apartments and roof of station were painted.

At Monastery, the freight shed was painted.

At Harbour au Bouche, a porch was provided at the rear of the station for the station master's use.

At Mulgrave, the freight shed was overhauled, repaired and painted. The roof of ice house was reshingled and the building repaired and painted. The roof of engine shed was overhauled, and recoated with tar and pitch.

Necessary repairs were made to all stations and platforms between Point Tupper and Sydney.

At Westville, the loading platform was overhauled and a new top put on.

At Pictou, repairs were made to the freight shed on wharf. A building was erected for the storage of ice, and the engine shed was overhauled and repaired where found necessary.

At Scotch Hill, the freight room of station was converted into a waiting room.

At Meadowville, a new cattle pen was provided, and the station building overhauled and repaired.

At Denmark, Tatamagouche and Oxford, new tops were placed on the loading platforms.

At Malagash, a freight shed was provided.

At Belmont and Folleigh, the roofs of station buildings and freight houses were overhauled, repaired and painted.

At Oxford Junction, the coal shed was overhauled and repaired. A new Sparham roof was put on roof of baggage room, and the roof of engine shed overhauled and repaired.

At Westchester, the roof of kitchen was raised, the station master's office enlarged, hardwood floors laid in the office and waiting room and the platforms overhauled and repaired. One side of the freight shed roof was reshingled. The exterior and interior woodwork of station was painted. The freight shed was also painted.

At Greenville, a loading platform 100 feet by 10 was provided.

At Thomson, the station building and freight shed were raised, new sills placed underneath and general repairs made to station. The new woodwork of station and freight house was painted.

At Spring Hill Junction, the roof of baggage room and freight shed were overhauled and repaired, and covered with Sparham roofing. New sills were placed under the station building. Necessary repairs were made to the passenger platform. The exterior walls of station building, freight house and baggage room were painted. The station master's office and waiting room were also painted.

At Athol, new sills were placed under the station and the building overhauled and repaired. The passenger platform was renewed.

At Maccan, the roof of station building was reshingled.

At Nappan, 100 feet of top of loading platform was renewed.

At Amherst, new down spouts were provided for the station building, freight house and restaurant. New sills were placed under the restaurant, the floor repaired, a water closet provided and the building painted. The passenger platform was renewed.

At Aulac, the interior walls of station building, office and waiting room were painted.

At Sackville, an extension of 100 by 12 feet was made to the passenger platform, and a new cattle pen was provided.

At Upper Dorchester, a loading platform with approaches was provided.

At Memramcook, the roof of station building was overhauled and repaired.

At Calhouns, the platform was renewed.

At Point du Chene, the round house roof was overhauled, repaired and covered with Sparham roofing. The roof of freight shed was reshingled.

At Moncton, the car inspector's buildings (2) were moved from the north to the south side of the tracks, and an addition of 24 feet was made to one end of the buildings for the shunters use.

The track blacksmith's shop, carpenters' shop and storehouse, were moved from the east to the west end of the yard near the Y. Necessary repairs were made to the buildings after removal.

A portion of the south side of roof of machine shop was recovered with shingles, and necessary repairs made to the roof of round house.

At Anagance, the passenger platform was overhauled and repaired.

At Penobsquis, the platform was renewed.

At Sussex, the roofs of engine shed, turntable shed and a part of the roof of station building were reshingled.

At Apohaqui, the passenger and freight platforms were overhauled and repaired where necessary.

At Norton, the station and loading platforms were renewed.

At Bloomfield, the station platform was renewed.

At Hampton and Nauwigewauk, one half of the roofs of station buildings were reshingled.

At Jubilee, a new station building was erected. A passenger platform 374 feet long was provided.

At Model Farm, the station platform was renewed.

At Quispamsis, the platform was overhauled and repaired.

At Rothesay, the roofs of station building, verandah and coal shed were reshingled and the platform repaired.

At Torryburn and Brookville, the roofs of station building were reshingled.

At Coldbrook, the station and freight house roofs were reshingled.

At St. John, the roof of round house was overhauled and repaired. One new engine pit was provided, and all the other pits were overhauled and repaired. New timbers were placed on top of each pit.

Necessary repairs were made to the stores building and coal shed. Two new section houses were provided for the section men. The freight loading platform was overhauled and repaired. The doors and windows of the local freight shed, C.P.R. freight shed, flour shed and English goods warehouse, were overhauled and repaired. New

hardwood floors were laid in the main hall, parlour and sitting room of station master's dwelling apartments, and other necessary repairs made where required. Extensive repairs were made to the sky-light of train shed.

Large repairs were made to all passenger and freight platforms between Moncton and Chatham Junction. At the latter station, a wooden box drain 800 feet long was laid from the station to the brook. Necessary repairs were made to the car house and pump house. A new hand car house was provided for the section men.

At Derby Junction, the station platform was overhauled and repaired.

At Newcastle, repairs were made to the station and freight house platforms. The floor of round house was overhauled and repaired. Necessary repairs were made to the coal shed and coal boxes.

At Millerton, the station platform received repairs.

At Indiantown, the roof of station was reshingled, and the floor of engine shed repaired where necessary.

At Bathurst, the platform was renewed.

At Nash's Creek, the roof of station was overhauled, repaired and painted.

At New Mills, the roofs of station building and freight houses received necessary repairs, and were painted.

At Charlo, the roof of freight house was reshingled.

At Dalhousie, the station building and freight house were overhauled, repaired and painted. Necessary repairs were made to dwelling apartments of station building.

At Dalhousie Junction, an extension of 175 feet was made to the station platform.

At Campbellton, a bathroom was provided for the station master, and the dwelling apartments in station received general repairs. The station master's office was also overhauled and repaired. A hardwood floor was laid in the locomotive foreman's dwelling apartments and the dining-room sheathed. An extension of 30 feet by 20 feet was made to the ice-house. The roofs of station building and ice-house were overhauled, repaired and painted. The district superintendent's dwelling house was overhauled and received general repairs.

Necessary repairs were also made to the machine shop and round house, and three terra cotta smoke jacks and 15 hoods were provided for the latter building.

The roof of blacksmith shop was reshingled. The station and loading platforms were renewed.

At Metapedia, the dwelling apartments of agent were overhauled and repaired, and a new hardwood floor put down. Necessary repairs were also made to the waiting room and office. The exterior walls of station building, freight house and section foreman's dwelling were overhauled, repaired and painted. A hardwood floor was laid down in the latter. An extension of 300 feet was made to the passenger platform.

At Assametquaghan, the roof of kitchen was reshingled and painted, the roof of station building was also overhauled, repaired and painted.

At Amqui, a new storm door was provided for the station, and the windows overhauled and repaired.

At Cedar Hall, the upper part of station building was converted into dwelling apartments for the agent; four storm sashes were provided.

At Sayabec, the station building was overhauled and repaired, and the station master's office sheathed.

At Little Metis, an extension of 100 feet was made to the station platform.

At St. Octave, a new floor was laid in the agent's kitchen.

All station and other platforms between Jacquet River and St. Octave received necessary repairs.

At Ste. Luce, and Rimouski, the station platforms were repaired.

At McKenzie Siding, a flag station and platform were provided.

At St. Fabien, a new engine shed was erected.

At St. Arsène, a kitchen was provided for the use of the station master.

At Rivière du Loup, the station platform was overhauled and repaired where necessary.

At St. Alexandre, the roof of station was reshingled, a hardwood floor was laid in the station and the platform renewed.

At Ste. Hélène, the station and freight platforms were overhauled and repaired.

At St. Paschal, necessary repairs were made to the freight shed and platform.

At St. Philip de Néri and River Ouelle, the station platforms were repaired.

At Ste. Anne, the freight shed received necessary repairs. The station platform was also overhauled and repaired.

At Ste. Louise, Montmagny and St. François, the station platforms were renewed.

At St. Pierre, the roof of station building was overhauled and repaired.

At St. Charles, the roof of station was reshingled, and repairs made to the freight shed and station platform. A new hardwood floor was laid in the station.

At Harlaka Jûnction, a hardwood floor was laid in the station.

At Chaudière Junction and at Lévis, the roofs of station buildings were overhauled and repaired where necessary.

At Chaudière, the interior walls of telegraph office were sheathed and a water closet provided.

At St. Nicholas, the roof of station building was painted, and a water closet provided.

At St. Appolinaire, the roof of station was painted. The interior of tank building was sheathed with matched lumber and the walls filled with sawdust. The tank tub was raised three feet, and a cedar foundation provided.

At St. Croix, the roof of station was painted.

At Rivière du Chêne, the station building and tank house were painted. The interior walls of tank house were sheathed and filled with sawdust, the tank tub raised two feet, and a cedar foundation provided. A water closet was provided.

At Kingsburg Junction, the walls and roof of station were painted and a water closet provided.

At Moose Park, the interior walls and roof of station were overhauled, repaired and painted. A platform 134 feet long and 12 feet wide was erected at this station.

At Forestdale, a platform 265 feet long and 12 feet wide was erected. The tank building was raised three feet and new flooring provided for same. The station building was raised two feet and a cedar foundation placed underneath. New floors were laid in the station, and the exterior walls of station house and tank building overhauled, repaired and painted. A water closet was provided for this station.

At Maddington Falls, the station building was raised two feet and a cedar foundation placed underneath. The roof of station was overhauled, repaired and painted. A platform 100 feet long and 12 feet wide was erected, and a water closet provided.

At Aston Junction, the roof of station building was overhauled, repaired and painted. The station building was raised two feet and a foundation of cedar provided. A platform 100 feet long and 6 feet wide was erected and a water closet provided.

At St. Leonard Junction, the station building was moved from the Nicolet Branch and placed on the main line. A cedar foundation was provided for the building, and the roof overhauled and painted. Three platforms, 115 feet long by 15 feet wide, 111 feet long by 8 feet wide, 176 feet long by 6 feet wide respectively, were erected at this station.

At Mitchell, a platform 133 feet long and 12 feet wide was erected, and a water closet provided.

At Carmel, the station building was moved from the old site and placed on the main line and a new cedar foundation provided for the building. Two platforms, one 50 feet long by 12 feet wide, and the other 38 feet long and 8 feet wide were erected at this place.

At St. Cyrille, the freight shed was extended 16 feet and the exterior walls shingled, and the building painted. The roof of station was also overhauled, repaired and painted. Two platforms, 120 feet long by 12 feet wide, and the other 128 feet long by 8 feet wide were erected. A water closet was provided.

A Drummondville, the roofs of station building and freight shed were overhauled, repaired and painted. The tank building was raised two feet. The interior walls of engine house were sheathed and filled with sawdust. Two platforms 278 feet long by 12 feet wide and 150 feet long by 8 feet wide respectfully, were erected at this station.

At St. Germain, the roof of station building was overhauled, repaired and painted. A platform 149 feet long by 12 feet wide, was erected and a water closet provided.

At St. Eugène, the roof of station building was overhauled, repaired and painted, and a water closet provided.

At Bagot, a platform 75 feet long and 6 feet wide was erected and a water closet provided.

At Ste. Rosalie, the interior walls of the telegraph office were covered with heavy paper and sheathed. A water closet was provided at this station.

At Nicolet, the exterior walls of station building and freight shed were shingled all round and painted. The engine house roof was reshingled, and the interior walls sheathed and filled with sawdust. Two platforms, one 80 feet long by 12 feet wide and the other 50 feet long by 8 feet wide were erected. A water closet was provided at this station.

At Ste. Monique, a platform 200 feet long and 12 feet wide was erected.

Hand car houses for the section men were provided at the following stations between Chaudière and Ste. Rosalie:—Chaudière, St. Nicholas, St. Appolinaire, St. Croix, Rivière du Chêne, Kingsburg Junction and Moosepark.

BRIDGES AND CULVERTS.

At Richmond, a cedar box drain 250 feet long was built from the round house to the harbour.

Necessary repairs were made to the wooden beam culverts on the Cotton Factory Siding.

At Lydia Brook near Truro, two trestle bents were put in, brush protection was provided for the abutments of bridge, and a large quantity of concrete placed under masonry of bridge.

A cage was provided at Stewiacke for the protection of the section men and others when working on the bridge.

A number of hard pine ties were renewed on Enfield Bridge.

At West River, four wooden farm crossing bridges of 23 feet span, were renewed with old rail girders.

At Doyle's Dump, a cribwork 150 feet long and 4 feet high, was constructed out of old timber and ties.

A highway bridge at Brookfield of 22 feet span and 13 feet wide, was renewed.

Near Elmsdale, one abutment of a 20 feet span was rebuilt.

At Barney's Brook, the paving of an arch culvert was renewed, and concrete three inches deep placed over the whole water way. A sill wall and apron were placed at the upper end to keep the water from getting under.

At Pine Tree, a temporary bent was placed under the west end of the bridge and three new corbels provided.

At Little Gut and Merigomish, a casing of cement was placed around the foot of abutments which had been damaged by frost and water.

At Avondale, a covered drain 35 feet long was provided, to drain the station grounds, and prevent water from overflowing the track.

Thirty feet rolled beam girders, with cedar abutments, were put in at Baxter's Trestle, McDonald's Trestle and Coulton's Trestle bridges.

Double stringers of 12 by 12 hemlock, were provided for the 20 feet beam culvert at Brierly Brook Station.

At McKinnon's Cove, the old trestle bridge was partly filled in and a 5 feet by 6 feet cedar box culvert was put in. This opening is found amply sufficient to vent the tide and surface water at this place,

At the big timber trestle at Tracadie road, near Mulgrave, additional bents and straining beams were put in between the existing bents of bridge.

At West River Bridge, Horne's Brook Bridge and River John Bridge, a number of hard pine ties were renewed.

A new cedar culvert was put in at Brown's Point to replace one which had broken down.

At Jamesville, a crossing was provided under the railway bridge.

At Nappan, a new floor was laid on the overhead bridge.

At Fowlie's Creek, a new cedar culvert 3 ft. 6 in. by 3 ft. by 66 ft. long was put in. New hard pine ties were placed on the two girder bridges built of old rails, on Dorchester grade.

The abutments of Harris' Bridge, near Millstream, were repaired, and a standard top put on.

New hard pine tops were placed on the following bridges: Pollet River and McCully's, near Torryburn,

Necessary repairs were made to a number of culverts between Moncton and St. John.

At Coal Branch Bridge, a number of the hard pine ties were renewed.

One cedar culvert was renewed, and several overhauled and repaired between Moncton and Jacquet River, on northern division No. 1.

At Metapedia, rip rap was placed around the piers of bridge to prevent them from scouring. A new sidewalk was placed on the bridge.

A number of hard pine ties were renewed on the Tobegote Bridge.

Several of the wooden beam and masonry culverts between Jacquet River and Ste. Flavie, northern division No. 2, were overhauled and repaired where necessary.

Necessary repairs were made during the past year to Boyer bridge.

Eight stone box culverts between Rivière du Loup and Levis were renewed during the past year, and four other received extensive repairs.

A number of wooden beam culverts were also overhauled and repaired.

At St. Leonard's Bridge, 250 hard pine ties were renewed, and two stone pedestals repaired.

A new standard hard pine top with guard rails was placed on White River bridge, and the flooring painted.

Drummondville and Mitchell bridges were each raised four feet, and the approaches graded at either end.

Black River Bridge was raised one foot, and the approaches graded.

The flooring of the bridges in the vicinity of the following stations was painted.—Ste. Rosalie, Moosepark, St. Appolinaire, St. Croix, Kingsburg Junction and Mitchell; also the flooring of Terrebonne bridge near Chaudière and the bridge over the St. François River.

The following bridges were overhauled, scraped and painted two coats.

Bic	1	span	20	feet.
Ste. Luce	1	"	23	"
Rimouski	4	"	50	"
St. Anaclet	1	"	23	"
Tartague	1	"	40	"
Metis	4	"	100	"
Sayabec	1	"	28	"
"	1	"	34	"
Indian Brook	3	"	50	"
Otter Brook	1	"	28	"
Adam's bridge	3	"	100	"
Doyles	1	"	31	"
McKinnon's	2	"	76	"
Clarkes Brook	1	"	60	"
Kain's Brook	1	"	19	"
Gilmour's	1	"	60	"
Moffat's mill	8	"	60	"
Millstream	4	"	100	"
Charlo River	3	"	50	"
Morton's mill race	1	"	30	"

Louison Brook	1	span	60 feet.
Belledune River	2	"	60 "
Red Pine River	3	"	40 "
Upper Nelson	1	"	30 "
Barnaby River, (2nd crossing)	1	"	80 "
Barnaby River (3rd crossing	1	"	80 "
South Coal branch	3	"	40 "
St. John (draw span)	2	"	50 "
Brookville	1	"	49 "
Lawlor's Lake	1	"	60 "
Torryburn	1	"	30 "
Rothesay	1	"	31 "
Trout Creek	3	"	85 "
Anagance	1	"	30 "
Moncton (west)	1	"	41 "
Missequash River	1	"	100 "
La Planche	1	"	100 "
Folleigh Lake	1	"	10 "
Folleigh River	6	"	100 "
Debert	2	"	100 "
Elmsdale	1	"	150 "
Enfield	1	"	112 "
Beaver River	4	"	19 "
Rawdon River	3	"	26 "
Sackville River (Windsor branch)	3	"	33 "
Glengarry	1	"	23 "
Sutherlands River	1	"	160 "
Grant's Brook	2	"	22 & 34 "
Murphy's mill pond	1	"	28 "
Pomquet	1	"	85 "
"	1	"	60 "
Pirate Cove	1	"	60 "
Coal road under crossing	1	"	34 "
Freshwater Creek	1	"	34 "
Sydney River	1	"	100 "
Campbell's Brook	1	"	54 "
Leach's Creek	3	"	100 "
Ball's Creek	1	"	35 "

One 70 feet and one 34 feet deck plate girder bridge, was put in over the mill race and road, St. François River near Drummondville.

One 24 feet beam bridge was put in near Drummondville.

GENERAL.

The boat landing stages at the deep water terminus, Halifax, were overhauled and repaired.

At Amherst, a sewer 1,100 feet long, from 8 to 16 feet deep, was dug to carry off the water which accumulates in the yard during the spring freshets. A new public road crossing was also provided at this station.

At Metapedia, a large warehouse scale was placed in the freight shed.

The track scales located at different points along the line have been overhauled from time to time, and put in repair.

A large number of cattle guards were renewed throughout the line during the past year, and repairs made to others where necessary.

At Mulgrave, a considerable amount of dredging was done in the dock at that place, by dredge belonging to the Public Works Department, to facilitate the working of the transfer barge.

CAPITAL ACCOUNT.

INCREASED ACCOMMODATION AT MONCTON.

The work required in connection with the finishing of the new station has been done. The grounds about the station laid out, and approaches made. The re-arrangement of the tracks in the yard has been completed.

EXTENSION TO DEEP WATER, NORTH SYDNEY, C.B.

This extension is about ·6 of a mile long, and is an extension of the North Sydney Branch to deep water, where a crib wharf 265 by 58 feet with creosoted sheathing was built. On the wharf, a freight house 30 by 80 feet was placed and to protect the road to the wharf, a crib breastwork about 250 feet long was also built. Considerable dredging was done both for the foundation of the wharf and for the docks on either side. Two good berths at the sides of the wharf are now provided, and one at the end for short vessels. The work was done by contract with the exception of the dredging, which was done by the clam shell dredge belonging to the Track Department.

INCREASED ACCOMMODATION AT ST. JOHN.

In connection with this vote, the land required has either been bought, expropriated, or in course of expropriation.

A temporary trestle was built to carry the line of the St. John Bridge and Railway Company, and the work of moving the permanent line to the new location was commenced, and is now being carried on. This work is being done by contract.

The wharf known as the Long Wharf, is being removed, and the dredging required in connection with the new wharf and docks has been going on night and day since the contract was let. The excavating the rock for the site of the elevator is about half done.

ELEVATOR AT ST. JOHN.

A contract has been let for this work, and the contractor has finished a part of the concrete foundation. The timber is nearly all on the ground, and a mill for framing and planing the timber, &c., has been erected on the ground. The site of the elevator is on the "Harris Property," purchased some years ago.

TO INCREASE THE STRENGTH OF IRON BRIDGES

On this account, seven Warren through girder bridges 108 feet over all were built by the Hamilton Bridge Works Co., Ltd., under contract, and one deck plate girder 65 feet over all, by the Dominion Bridge Company, Ltd.

The seven through spans were to replace seven old lattice girders, and were erected at the following places :—

3 spans at Salmon River, near Truro.
2 " North River "
2 " Isgoinish River, near Belmont.

By the terms of the contract, the bridge company erected the bridges. The work of removing the old spans, and the necessary false work was done by the railway department. The old spans were used to double up deck spans of the same length and were used at the following bridges :—

6 spans at Folleigh bridge, near East Mines.
1 span at Little Forks, near Athol.

The work on the Folleigh bridge is not quite completed. The work of removing, transporting and bracing these bridges was done by the railway department.

The plate girder span was placed at Memramcook River, near Calhoun's Station. The old span is on hand, and will probably be used on the P.E.I. Railway. It was necessary to strengthen the stone abutments at Calhoun's.

New standard tops of long-leaf yellow pine were put on Folleigh, one span, Little Forks and Memramcook River bridges.

A third girder was placed in centre of two 40-feet spans, between Truro and Folleigh Stations.

Temporary wooden bents were placed under Barnaby River bridge, 80-feet span; Weschester bridge, 60-feet span; Sodom bridge, 50 feet span; Debert bridge, 100-feet span; Mud Creek, 50-feet span; Gordon's Brook bridge, 40-feet span; Clark's Brook, 60-feet span, and Gilmour's Brook, 60-feet span.

The floor system of East River bridge near New Glasgow—4 spans of 83 feet—was strengthened with the old floor beams from the bridges at Salmon River and North River, near Truro. The remaining iron floor beams from the old bridges are being used for beam culverts, having spans of about 14 feet. It is intended to put close floors of old rails over these beams on open culverts, of 12 to 15-feet spans, and carry the ballast across the full width of the roadway, thus closing what might be dangerous openings in the track, and making the roadbed continuous.

From the above it will be seen that 18 spans were permanently strengthened and 8 temporarily.

INCREASED ACCOMMODATION AT LÉVIS.

No work has been done this year, and only a part of the vote was expended in purchasing the land required.

INCREASED ACCOMMODATION AT HALIFAX.

Chargeable to this account, a crosoted pile wharf about 600 feet by 160 feet, with a warehouse 525 feet by 126 feet, was built by contract. The necessary dredging in the docks was done by a dredge belonging to the Public Works Department, and necessary sidings to the wharf laid down.

At North Street, the rock was excavated, and additional siding room provided.

At Richmond, the coal trestle was extended 75 feet, and an additional coal chute built.

ELEVATOR AT HALIFAX.

The land required for the elevator and tracks on the west side of Water Street has been acquired, and the houses thereon sold or removed. The earth and rock excavation for foundation was done by contract. The chimney and power house are completed and also the foundation for elevater. The walls of the building are now up about 45 feet.

TO IMPROVE THE ACCOMMODATION AT MULGRAVE.

A crib retaining wall and extra siding room was provided on this account.

To build bridge over rock cut north of Elm Tree River, new concrete abutments were built and approaches made on the railway property. An old rail bow-string bridge of 40 feet span was constructed and erected by contract. The work is completed.

INCREASED ACCOMMODATION AT VARIOUS PLACES.

At Antigonish, freight shed was moved, platform provided and necessary grading done. Increased siding accommodation was also provided.

At Ross Road, extra land required for the extension of station yard was purchased, and a freight house 30 by 20 feet was built by contract.

At Sylvester, the loading platform was extended 40 feet.

At Jubilee, a new station and freight house combined was built. Dimensions of station, 30 feet by 16 feet, and ell, 17 by 24 feet. In the building, dwelling apartments were provided for the agent.

At Richmond, a new station and freight house combined, 62 feet by 24 feet was erected. The work was done by contract.

Dredging at Pictou wharf. The amount voted on this account, $1,000.00, was expended in dredging.

I have the honour to be, sir,
Your obedient servant,

WM. B. MACKENZIE,
Chief Engineer.

D. POTTINGER, Esq.,
General Manager,
Canadian Government Railways,
Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE MECHANICAL SUPERINTENDENT,
MONCTON, N.B., September 26, 1899.

SIR,—I beg to submit for your information the following statements prepared by the mechanical accountant:—

A.—Statement showing the number of locomotives and of the various classes of cars.

B.—Statement showing the locomotive and car mileage, and the number of passenger and freight cars hauled per mile run by engine.

C.—Abstract of locomotive returns.

D.—Statement of the cost of locomotive power for each month during the year.

E.—General statement of the expenses of the mechanical department during the year.

The following is a summary of the principal work done:—

DRAWING OFFICE.

Designed arrangement for rebuilding four Mogul engines with detailed drawings. Further details for rebuilding engines Nos. 188 and 189. General arrangement of postal and baggage cars, with detailed drawings. General arrangement of second class colonist cars with detailed drawings; detail drawings for first class cars; detail drawings for new 60,000 lb. box and freight cars; 82 additional drawings for locomotives, car repair, and general work; new baggage truck for stations; new front to rotary snow plough; new ice storage arrangement for refrigerator cars; re-adjustment of shop machine pulleys at Richmond.

Specifications for passenger cars.

Register of locomotive repairs and water service kept.

Specifications and special drawings supplied to stores for ordering on, and all material so ordered, checked and tested.

MONCTON LOCOMOTIVE SHOPS.

One new engine No. 167 was purchased from the Canadian Locomotive Works, and charged to revenue. One passenger locomotive No. 159 was rebuilt with new boiler complete. All boiler mountings, sight feed lubricators and injectors new; 2 new driving axles; new axle boxes and spring gear; 2 new main rods; 4 new crank pins; 2 new engine front frames; new half saddle and cylinders, new pistons and glands, balance

valves, cross-heads and guides complete; new metallic packing; one new W. A. brake, new cab and C. I. running boards, new pilot, new engine truck, new smoke stack, new sand box and pipe; new ash pan and grates. Engine and tender painted and varnished. One freight locomotive, No 142, was rebuilt with a second-hand repaired boiler; new half-saddle cylinders. Tubes pieced; 4 new driving tires, 2 new side rods, new cross-heads and guides, new American balance valves, new pistons and glands; 2 new engine front frames. Old springs set up with all new gear. New cab, new pilot, new smoke stack. Engine and tender painted and varnished. One shunting engine No. 188, was rebuilt with a new boiler complete. All boiler mountings new, sight feed lubricator. One new driving box. Westinghouse A. B. new, new steam heater. New dry steam and exhaust pipes. New smoke stacks. New tender frame. Engine and tender painted.

Seventy-two locomotives received heavy repairs, and 84 had specific repairs. The following new parts being supplied:—One new inside fire box, 5 new half saddle cylinders, 66 new driving wheels, 35 new driving tires, 27 new driving axles, 14 new truck axles, one new engine truck, 2 new main rods, 63 new crank pins, 2 new Westinghouse air brakes, 7 new cabs, 23 new tender frames, 19 new pilots, 1,757 new tubes put in locomotive boilers, 4 new tender tanks complete. 96 boilers were tested, 57 fireboxes were patched, 9,587 tubes were pieced.

One hundred and seventy-three pairs of driving tires were turned, and 219 truck wheels were retired.

Eighty-four locomotives were repainted and varnished. Five new pilot snow ploughs were constructed. One rotary plough was repaired.

MONCTON BRASS FOUNDRY.

Output:—85,015 lbs brass castings, and 143,405 lbs. brass bearings.

MONCTON CAR SHOP.

One hundred new platform cars of 60,000 lbs. capacity were purchased to replace an equal number of 20,000 lbs. cars and charged to revenue.

Three steam shovel cars were built new complete, and one new snow plough.

Ninety freight cars were rebuilt, and 10 cars converted.

The following received heavy repairs:—Governor General's car *Victoria*, 3 parlours, 17 sleepers, 8 second class sleepers, 63 first class cars, 54 second class cars, 8 postal cars, 26 baggage cars, 21 vans, 1 snow plough, 674 freight cars.

The following received light repairs:—10 parlours, 7 sleepers, 58 first-class cars, 45 second-class cars, 13 postal cars, 18 baggage cars, 36 vans, 9 second class sleeping cars, 2,491 freight cars, 5 snow ploughs, one flanger car.

The following were repainted or stained and varnished:—One sleeper, 27 first class cars, 32 second class cars, 9 baggage cars, 3 postal cars, one second class sleeper.

The following were renovated and varnished:—14 sleeepers, 2 parlours, 49 first class cars, 25 second class cars, 22 baggage cars, 26 postal cars, 7 second class sleepers.

Special work was done as follows:—

Fifty-nine new trucks were built.

Nine hundred and eighty-five pair of steel tired wheels were turned.

Two hundred and fifty-four new axles turned.

One thousand six hundred and sixty-seven old axles were trued up.

Two thousand eight hundred and fifty-three new wheels pressed on.

Three thousand and seventy-two old wheels were pressed off.

One thousand three hundred and seventy-nine old wheels were pressed on.

A large amount of work was done to freight and baggage trucks, chairs, safes, ticket cases, footboards, and other articles for out-stations, also large quantities of lumber prepared at the machines for engineer department.

RIVIÈRE DU LOUP SHOPS.

Twenty-seven locomotives received heavy repairs, and 39 had specific repairs, the following new parts being supplied :—4 new crank pins, one new half saddle cylinder, 18 new driving tires, one new engine truck, 2 new cabs, 5 new pilots, 4 new tender frames, one boiler received new half side sheets, 1029 new tubes were put in locomotive boilers, 2 locomotives were equipped with new steam heaters.

Sixty-four locomotives were tested, and 8 fire-boxes patched.

Fifty-five pair of driving tires turned, 92 pair of engine truck tires, and 86 car truck tires were turned.

Eighteen engines and tenders were repainted and varnished.

RICHMOND SHOPS.

Eleven locomotives received heavy repairs, 50 had specific, and one had medium repairs, the following new parts being supplied :—One new driving box, one boiler had new half side sheets; 8 new driving tires.

Twelve locomotives and 3 stationary boilers were tested, 4 fire boxes patched, one set of tubes repaired, 3 tender tanks patched.

Twenty-six pair of driving tires were turned, and 13 engines and tenders were repainted and varnished.

WATER SERVICE.

Alton.—Repaired tank pipe.

Amherst.—Water crane repaired.

Antigonish.—Four joints 7 in. galvanized pipe, repaired tank pipe. Took up 500 ft. of galvanized pipe and shipped to Point Tupper.

Armours Road.—Repaired hand pump.

Assametquaghan.—Cleaned out reservoir, and repaired tank pipe.

Bathurst.—Tested boiler, one new lubricator for steam pump, new lubricator and pipe to steam gauge, and new tank stove.

Bayfield Road.—Repaired tank pipe.

Belledune.—Put in 1¼ in. blow off cock in boiler, repaired tank pipe.

Beaver Brook.—New steam gauge, new lubricator for steam pump.

Bagot.—New tank 17,000 gallons, new boiler No. 32, new tank pipe, and repaired duplex steam pump.

Boisdale.—Four new sails in wind mill.

Calhouns.—One new No. 16 globe stove.

Campbellton.—Put in two 6 in. water gates, one 6 in. tee, one 6 in. sleeve, cleaned out reservoir and painted it, put in 100 feet of 1½ in. pipe for washing ice.

Canaan.—Put in repaired boiler, and repaired steam pump.

Charlo.—Put in a repaired boiler, one new 1¼ in. blow-off cock, 12 lengths and 3 elbows 7 in. galvanized pipe.

Causapscal.—Repaired tank pipe.

Elmsdale.—Put in new boiler No. 33, new boiler base and grate.

Drummondville.—New tank pipe, put connection under tank for washing out engines.

Forrestdale.—New tank pipe.

Hampton.—Repaired reservoir, new chain on tank valve.

Hadlow.—New packing in water piston, new valves and springs, cleaned out reservoir and repaired steam pump, and put in 1,000 feet 4 in. galvanized pipe.

Tatamagouche—One new No. 16 globe stove.

Trois Pistoles.—Rebuilt reservoir.

Jacquet River.—Cleaned out reservoir and ditched to spring.

West Bay Road.—Two new sails in windmill, raised tank and rivetted the hoops, painted tank, new tank pipe.

Metapedia.—Cleaned out reservoir.

Moncton.—Put in new hydrant, and repaired water cranes.

Millerton.—Cleaned and repaired reservior, and rebuilt fence around reservoir.

New Glasgow.—New 4 in. water gate, new spindle in crane.

West River.—Cleaned out reservoir.

Petitcodiac.—Put in and repaired boiler.

Point Tupper.—Repaired windmill, raised tank 3½ feet, repaired tank and trestle, painted tank trestle and windmill tower, new tank pipe.

Pictou.—Repaired water pipe, and put in a new 2-in. ball cock.

L'Islet.—Put new tubes in boiler, new steam pipe to pump.

Sacré Cœur.—New trestle and joists under tank, cut and rivetted hoops. Painted tank.

Rivière du Loup.—Built well in river 4 feet higher, put new tubes in boiler.

Rivière John.—Repaired windmill.

Rivière du Chêne.—Put in new steam pump and new boiler No. 31, 170 feet of 3 in. galvanized pipe, and 35 feet 2½ in. galvanized pipe.

Springhill Junction.—Cleaned out reservoir.

St. Fabien.—Put in boiler No. 3, new tube sheet and tubes, put in a repaired steam pump.

Ste. Luce.—Repaired windmill pump.

St. Pierre.—Cleaned out well.

Ste. Flavie.—Cleaned out reservoir, and repaired water pipe.

Millstream.—Cleaned out reservoir.

Cedar Hall.—Cleaned out reservoir and repaired water pipe.

Dalhousie.—Repaired reservoir.

St. Charles.—Put in boiler and steam pump.

Stellarton.—One new No. 16 globe stove, put in 525 feet of 3-in. galvanized pipe.

McKinnons Harbour.—Raised tank 3½ feet, cut and rivetted the hoops, new trestle, repaired wind milltower new sills, painted tank and windmill tower.

West Bay Road.—Tank raised 3½ feet, new trestle, hoops cut and rivetted, repaired windmill tower, painted tank, windmill and tower.

St. Appolinaire—Tested boiler No. 30, repaired tank valve and raised the tank two feet.

TURNTABLE REPAIRS.

Rivière du Loup.—Two new trucks.

Ste. Flavie—Three new patches, 38 rivets and 12 bolts put in arm; four new straps; two new stirrups and one long bolt put in truck.

Mulgrave.—Trucks repaired; 8 new centre bolts; foundation under race rail repaired; circle trued.

Antigonish.—Trucks repaired and strengthened; new set of centre bolts; 2 new wheels and 2 new turned bolts 15 in. long; table strengthened.

I have the honour to be, sir,
Your obedient servant,

G. R. JOUGHINS,
Mechanical Superintendent.

D. POTTINGER, Esq.,
General Manager Government Railways,
Moncton, N.B.

A.—INTERCOLONIAL RAILWAY.

STAEMENT showing the number of Locomotives and of the Various Classes of Cars, and other Rolling Stock on July 1, 1898, and on June 30, 1899.

—	Locomotives.	The Various Classes of Cars.																Snow Ploughs and Flangers.				
		First Class Sleepers.	Second Class Sleepers.	Parlour Cars.	Dining Cars.	First Class Passenger.	Second Class Passenger.	Postal and Smoking.	Express and Baggage.	Box and Refrigerator.	Platform, 10, 15, 20 and 30 tons.	Hoppers, 6 tons.	Gondolas, 20 tons.	Coal Cars, 20 tons.	Cattle.	Vans.	Total.	Snow Ploughs.	Wing Ploughs.	Flangers.	Steam Ploughs.	Total.
On hand, July, 1898, serviceable	208	15	7	5	....	92	94	24	39	2,069	2,152	979	238	697	101	98	6,610	44	10	21	2	77
Condemned July 1, 1898	....	....	....	....	....	....	....	....	....	2	167	20	91	50	2	1	333	....	....	....	....	....
Total	208	15	7	5	....	92	94	24	39	2,071	2,319	999	329	747	103	99	6,943	44	10	21	2	77
Received during the year on capital account	19	8	....	....	4	3	....	1	3	250	....	....	....	....	....	....	269	5	....	1	....	6
Total	227	23	7	5	4	95	94	25	42	2,321	2,319	999	329	747	103	99	7,212	49	10	22	2	83
Condemned July 1, 1898	....	....	....	....	....	....	....	....	....	2	167	20	91	50	2	1	333	....	....	....	....	....
" during the year	3	....	....	....	....	2	....	....	....	45	100	75	86	85	8	....	401	....	....	....	....	....
Total condemned	3	....	....	....	....	2	....	....	....	47	267	95	177	135	10	1	734	....	....	....	....	....
Less rebuilt	3	....	....	....	....	2	....	....	....	2	131	59	....	12	....	....	207	....	....	....	....	....
To be rebuilt	....	....	....	....	....	....	....	....	....	45	136	36	177	123	10	1	528	....	....	....	....	....
Add serviceable and repairing	227	23	7	5	4	95	94	25	42	2,276	2,183	663	152	624	93	98	6,684	49	10	22	2	83
Total	227	23	7	5	4	95	94	25	42	2,321	2,319	999	327	747	103	99	7,212	49	10	22	2	83

MONCTON, June 30, 1899.

JOHN SUTTON,
Mechanical Accountant.

B.—INTERCOLONIAL RAILWAY.

STATEMENT of Locomotive and Car Mileage, Year ended June 30, 1899.

Months.	Locomotive Mileage.		Car Mileage.				Snow Ploughs.	Average Passenger	Freight.
	Passenger.	Freight.	Passenger.	Express, Postal and Baggage.	Freight.	Total.			
1898—July	136,616	246,713	708,413	329,186	3,018,703	4,056,302	17	7·55	13·19
August	142,876	239,328	743,920	326,640	2,954,086	4,024,646	19	7·55	12·34
September	142,553	266,864	772,589	337,771	3,328,026	4,438,386		7·77	12·47
October	125,075	288,017	619,379	322,655	3,694,951	4,636,985	378	7·52	12·82
November	124,812	303,958	582,179	303,451	3,909,990	4,795,620	774	7·09	12·86
December	133,340	307,401	615,771	311,734	3,818,897	4,746,402	4,948	6·96	12·42
1899—January	131,243	268,737	584,339	288,298	3,071,487	3,944,124	11,447	6·65	11·43
February	121,079	256,634	533,375	260,656	3,037,553	3,831,584	21,897	6·56	11·84
March	134,951	304,062	611,333	292,596	3,865,573	4,769,502	33,064	6·18	12·71
April	124,382	287,209	599,081	286,825	4,197,119	5,083,025	257	7·18	14·61
May	138,476	273,059	658,542	318,335	3,691,057	4,667,934	945	7·04	13 54
June	133,366	250,944	657,138	317,699	3,453,259	4,428,096	158	7·30	13·76
Total	1,588,769	3,292,926	7,686,059	3,695,846	42,040,701	53,422,606	73,904	7·16	12·77

MONCTON, June 30, 1899.

JOHN SUTTON,
Mechanical Accountant.

C.—INTERCOLONIAL RAILWAY.

ABSTRACT of Locomotive Returns for Year Ended June 30, 1899.

Months.	Hours in Steam.	Locomotive Mileage.	CONSUMPTION.				AVERAGE CONSUMPTION PER 100 MILES.				
			Tons of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.	Miles run to 1 hour in Steam.	Pounds of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.
1898—July	43,483	468,371	13,742	23,248	16,374	9,478	10·77	6,572	4·96	3·49	2·02
August	43,422	468,710	13,711	22,880	16,509	9,445	10·79	6,553	4·88	3·52	2·02
September	45,626	495,313	15,327	22,013	15,870	8,906	10·86	6,931	4·44	3·20	1·80
October	45,544	495,347	15,944	21,366	14,595	8,939	10·88	7,210	4·31	2·95	1·80
November	48,278	515,062	17,027	22,866	14,403	9,525	10·67	7,405	4·44	2·79	1·85
December	51,137	532,465	18,990	25,197	15,723	10,248	10·41	7,989	4·73	2·90	1·92
1899—January	47,333	492,217	17,480	23,960	14,353	9,150	10·40	7,955	4·87	2·89	1·86
February	46,354	468,224	17,071	23,316	14,987	8,865	10·10	8,167	4·98	3·20	1·89
March	56,041	551,816	19,946	28,874	18,384	10,391	9·85	8,097	5·23	3·33	1·88
April	48,180	504,152	16,904	28,333	17,810	10,667	10·46	7,511	5·62	3·53	2·12
May	47,391	504,820	14,964	22,907	13,364	10,015	10·65	6,640	4·54	2·65	1·98
June	45,520	477,673	14,202	16,735	9,055	7,709	10·05	6,660	3·50	1·90	1·82
	568,309	5,974,170	195,308	281,695	181,427	114,338	10·51	7,323	4·72	3·04	1·91

JOHN SUTTON,
Mechanical Accountant.

MONCTON, June 30, 1899.

STATEMENT of the Cost of Locomotive Power for each Month, July 1, 1898, to June 30, 1899.

Months.	Miles run by Engines.	Mechanical Superintendent's Salary, Clerks and Office Expenses.	Engine-men's Wages.	Fuel.	Oil Waste	Repairs to Engines, Tenders, and Tools.	Water.	Engine Houses and Turntables.	Total.	Average per 100 Miles.							
										Mech'l Supt., Salary.	Wages.	Fuel.	Oil and Waste.	Repairs.	Water.	Engine Houses & Turntables.	Total.
1898.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.								
July	468,371	1,005 01	25,625 59	37,456 49	3,216 72	22,221 59	1,652 07	736 89	91,914 36	·21	5·47	8·00	·69	4·74	·35	·16	19·62
August	468,710	1,041 90	25,863 19	32,188 15	3,112 75	27,848 53	3,092 39	1,106 10	94,253 01	·22	5·52	6·87	·66	5·94	·66	·24	20·11
September	495,313	1,121 40	26,375 84	36,836 13	2,984 75	21,596 36	3,869 63	971 45	93,755 56	·23	5·32	7·43	·60	4·36	·78	·20	18·92
October	495,347	1,085 81	25,755 85	37,243 60	2,760 99	26,600 93	2,217 43	1,526 22	97,190 83	·24	5·61	8·11	·60	5·79	·48	·33	21·16
November	515,062	1,008 88	26,426 23	39,368 19	2,343 59	17,057 41	2,947 34	1,520 47	90,672 11	·20	5·13	7·64	·45	3·31	·57	·30	17·60
December	532,465	1,004 23	27,416 74	44,860 41	2,755 27	12,510 10	3,681 74	1,473 24	93,701 73	·19	5·15	8·42	·52	2·35	·69	·28	17·60
1899.																	
January	492,217	1,041 71	26,481 57	42,277 04	2,630 47	16,596 77	1,926 32	2,428 40	93,382 28	·21	5·38	8·59	·54	3·37	....	·49	18·97
February	468,224	1,190 61	24,352 81	40,773 59	2,550 61	12,692 57	5,482 51	2,382 64	89,425 64	·25	5·20	8·71	·54	2·71	1·17	·51	19·09
March	551,816	1,060 76	28,955 22	47,096 05	1,693 87	11,695 41	1,014 62	2,746 03	94,261 96	·19	5·25	8·53	·31	2·12	·18	·50	17·08
April	504,152	1,117 47	26,998 29	41,359 91	3,181 73	20,647 03	2,308 40	1,707 28	97,320 11	·22	5·36	8·19	·63	4·10	·46	·34	19 30
May	504,820	1,260 20	27,298 21	34,779 00	786 13	12,327 06	1,932 34	652 96	79,035 90	·25	5·41	6·89	·16	2·44	·38	·13	15·66
June	477,673	1,230 15	26,199 15	33,241 74	1,829 51	19,356 79	2,199 98	1,219 81	85,277 13	·26	5·48	6 96	·38	4·05	·46	·26	17·85
Total	5,974,170	13,168 13	317,748 69	467,480 30	29,846 39	221,150 55	32,325 07	18,471 49	1,100,190 62	·22	5·32	7·83	·50	3·70	·54	·31	18·42

MONCTON, June 30, 1899.

JOHN SUTTON,
Mechanical Accountant.

E.—INTERCOLONIAL RAILWAY.

GENERAL STATEMENT of the Expenses of the Mechanical Department, year ended June 30, 1899.

The miles run by trains	4,881,695
" engines	5,974,170
" cars	53,422,606
" snow ploughs	73,904
	$ cts.
Cost of locomotive power	1,100,190 62
Cost of car repairs :—	
Repairs to passenger cars	74,687 97
" postal, express and baggage	12,964 51
" freight cars and vans	172,634 33
" snow ploughs and flangers	5,090 40
Oil and waste for packing	13,395 32
	278,772 53
The cost of locomotive power :—	
Per 100 miles run by trains	22·54
" " engines	18·42
" " cars and ploughs	2·06
The cost of repairs to cars and ploughs :—	
Per 100 miles run by trains	5·44
" " engines	4·44
" " cars and ploughs	0·50
The cost of oil and waste for packing :—	
Per 100 miles run by trains	0·27
" " engines	0·22
" " cars and ploughs	0·02½
The cost of repairs to cars per 100 miles run by them :—	
Passenger	0·97
Postal, express and baggage	0·35
Freight cars and vans	0·41
Ploughs and flangers	6·89

JOHN SUTTON,
Mechanical Accountant.

MONCTON, June 30, 1899.

INTERCOLONIAL RAILWAY

RETURN OF ACCIDENTS AND CASUALTIES

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1898.						
July 5..	24·20	15	Freight	J. B. Pollock	D. Yould	201
" 5..	24·20	15	"	"	"	201
" 5..	24·20	15	"	"	"	201
" 5..	24·20	15	"	"	"	201
" 8..	16·00		Extra pilot	J. Colcombe	O. Halle	28
" 9..	21·10		Ballast		J. Bruce	192
" 9..	21·10		"		"	192
" 11..	16·52	13	Accommodation	F. Davison	W. A. Lovett	147
" 16..	5·50		Ballast	V. Roy	J. Dussault	254
" 17..	9·30		Special	A. Roy	Geo. Lamoth	14
" 19..	21·30	40	Freight	D. D. Brownell	J. Williamson	110
" 20..	24·00		Special	B. McLellan	L. Starratt	40
" 21..	10·15				M. Tobin	191
" 25..	15·15		Shunter		Geo. Currie	124
Aug. 8..	16·00		"	J. Lovett	"	124
					J. Walsh	93
" 20..	17·20	6	Freight	J. Day	J. T. Smith	137
" 23..	14·10	1	Express	W. Rainnie	J. H. Hunter	63
" 23..	14·10	1	"	"	"	63
" 23..	14·15		Special	I. L. Barnhill	M. White	101
Sept. 3..		40	Accommodation	M. Andre	John Gilker	80
" 5..	4·45		Special	H. Barreau	W. Fraser	111
" 5..	8·30	83	Accommodation	John Coffey	W. Hicks	110
" 8..	19·30	94	D. A. Ry. Acc	— Ritchie	— Mosher	19
" 8..	7·10		Special	J. C. Gillespie	N. Copeland	178
" 13..	10·20	39	Freight	D. Brownell	J. Williamson	111
" 13..	10·20	39	"	"	"	111
" 14..	17·00				S. Watson	123
" 17..	16·00		Special	S. Bernier	J. E. Smith	15
" 20..	1·00		"	I. L. Barnhill	R. Kennedy	208
" 21..	19·30		"	A. Davidson	Geo. W. Anderson	138
" 28..	5·30		"	W. W. Gordon	Jas. Sproull	117
" 28..	5·30		"	"	"	117
" 28..	5·30		"	A. McLeod	M. O'Brien	4
" 28..	5·30		"	"	"	4
" 28..	5·30		"	"	"	4
" 28..	5 30		"	"	"	4
" 28..	5·30		"	"	"	4
" 28..	5·30		"	W. W. Gordon	Jas. Sproull	117
" 28..	5·30		"	"	"	117

SESSIONAL PAPER No. 10

RAILWAY.

line of the Intercolonial Railway during the Year ended June 30, 1899.

Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Near Maccan...	J. B. Pollock....	Employee ..	Run off of No. 15 train....	Slightly injured.	
" ...	F. A. Fowlie ...	" ..	" "	" ..	
" ...	J. H. Murray...	" ..	" "	" ..	
" ...	Saml. Doyle...	Passenger ..	" "	" ..	
Near Lévis	— Lemieux (boy)	Neither.....	Attempting to board train when in motion.	Considerably injured.	
One-half mile E. of Moose Park.	H. E. Dumond..	Employee ..	While unloading ballast from cars, cable broke.	Fatal	Accidental.
" ..	E. R. Lockhart..	" ..	" " ..	Leg broken.. ...	
Windsor Junct..	Mrs. Logan (age 72).	Neither.....	Attempting to cross track..	Head cut and hip bruised.	
Carmel Pit	J. Boisvert	Employee ..	While shunting.....	Finger smashed.	
Ste. Flavie.. ...	Jos. Sirois ...	" ..	While coupling	Hand injured...	
Eel River.....	Thos. McGovern	Passenger ..	Got off train, and when leaving station fell into cattle guard.	Considerably injured; since died.	No inquest.
Salt Springs	H. Morgan	Employee ..	Jumped off flat car...	Sprained ankle..	
D. W. terminus, Halifax.	E. Fahie.....	" ..	While loading freight, rough shunting.	Head and side injured.	
Halifax	Thos. Fenerty...	" ..	While coupling.	Hand injured...	
Halifax. ...	H. Henderson (boy).	Neither...	Attempting to jump on car in motion.	Leg cut off.....	
Dunsinane.....	Wm. Capson....	Employee ..	While loading barrel of coal	Foot injured ...	
Near Palmer's Pond.	Alfred Bishop...	Neither.....	Crossing track in team, struck by engine.	Fatal	Accidental.
" ..	Miss Josie Stiles	"	" " ..	"	"
Springhill Junct.	E. Mattatall....	Employee ..	While shunting	Finger injured..	
Near Assametquaghan.	John Caill.....	Passenger ..	Fell or jumped off train when in motion.	Very slightly injured.	
Rogersville	M. Haley.....	Employee ..	While shunting	Hand injured...	
College Bridge..	Rev. Father Langelier.	Passenger ..	Attempting to board train in motion, fell on platform.	Knee caps fractured.	
Rockingham	F. Power (boy)..	" ..	Jumped off train in motion.	Hand cut off ...	
Folleigh	D. Ferguson....	Employee ..	Hand trolley struck by engine.	Slightly injured.	
Hamilton's Siding.	Jas. McMillan..	Neither.. ..	Crossing track in team	Not seriously injured.	
" ..	Mrs. McMillan..	"	" "	Badly skaken up.	
Moncton..	Edw. Stewart...	Employee ..	Crossing track in front of engine.	Slightly injured.	
Sayabec	V. LeBrun	" ..	While coupling.....	Hand injured...	
Thomson	J. W. Brown ...	" ..	Slipped and fell while shunting.	Side injured	
Moncton..	Thos. A. Buckley	" ..	Foot caught in frog while shunting; leg cut off close to body.	Fatal....	No inquest.
Near Acadia Siding, Westville.	Jas. Sproull.....	" ..	McLeod's Special and Gordon's Working Train colliding.	"	Accidental.
" ..	J. R. McKenzie.	" ..	" " ..	"	"
" ..	M. O'Brien.....	" ..	" " ..	"	"
" ..	W.D. Henderson	" ..	" " ..	"	"
" ..	Martin Cameron	Passenger ..	" " ..	"	"
" ..	John McDonald.	" ..	" " ..	"	"
" ..	Clifford McMillan.	" ..	" " ..	Leg broken and scratched.	
" ..	Wm. McKenzie.	" ..	" " ..	Slightly injured.	
" ..	Jas. Culton.....	" ..	" " ..	" ..	

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1898.						
Sept. 28..	5·30	.....	Special.	W. W. Gordon	Jas. Sproull	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.. . .	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.. ...	"	"	"	117
" 28..	5·30	....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.. ...	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.. ..	"	"	"	117
" 28..	5·30	.. ..	"	"	"	117
" 28..	5·30	....	"	"	"	117
" 28..	5·30	.. ....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.....	"	"	"	117
" 28..	5·30	.. ....	"	"	"	117
Oct. 8..	6·00	.....	"	W. Papineau.....	C. Mercier..	193
" 9..	22·25	.....	"	J. A. Davidson	E. Hayward..... ...	177
" 9..	22·25	.....	"	"	"	177
" 9..	22·25	.....	"	"	"	177
" 11..	16·05	152	Express	B. Walker..	J. Miller	197
" 12..	5·00	5	Freight.....	Jas. Daley.....	J. T. Smith...	137
" 15..	3·30	.....	Special.....	A. Desjardins.....	T. Matheson.. . .	179
" 21..	11·00	... .	....		J. W. Boyd....	27
" 27..	10·00	.....	Shunter	G. Malcolm.....	M. Tobin.... ...	191
Nov. 2..	17·00	.....	....		Geo. Cameron	197
" 6..	19·20	.....	. . ..		M. F. O'Brien. ...	127
" 8..	23·00	.....	....		... .	.....
" 9..	16·10	.....	Ballast.....	J. Roy.....	J. Dussault.....	1
" 10..	17·35	22	Accommodation....	D. McIntosh	J. H. Campbell.....	49
" 17..	8·30	.....	....	....	J. Moore..	59
" 19..	9·30	....	Special..	J. B. Crockett	J. McAulay	54
" 21..	9·00	.....	"	A. Mitchell.....	D. Turpinet	101
" 23..	12·25	.....	Working	H. P. Brand.....	F. Whitney.	55
" 28..	7·00	5	Freight.....	Jas. Daly	J. T. Smith	137
" 28..	21·40	....	Special.....	C. Gillespie.....	N. Copeland.....	178
Dec. 2 .	5·10	39	Freight	D. Brownell	O. McGinity	110

SESSIONAL PAPER No. 10

RAILWAY.

line of the Intercolonial Railway during the Year ended June 30, 1899—*Continued.*

Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accidents.	Extent of Injury.	Verdict of Coroner's Jury.
Near Acadia siding, Westville.	H. Fleming.....	Passenger...	McLeod's special and Gordon's working train colliding.	Considerably injured.	
" ..	J. Blackwood...	" ..	" " ..	" ..	
" ..	Geo. Burton....	" ..	" " ..	Slightly injured.	
" ..	D. McKay.....	" ..	" " ..	" ..	
" ..	J. Bain.....	" ..	" " ..	" ..	
" ..	John Baxter....	" ..	" " ..	" ..	
" ..	John Flinn.....	" ..	" " ..	" ..	
" ..	Jas. Flinn.....	" ..	" " ..	" ..	
" ..	J. McDonald...	" ..	" " ..	" ..	
" ..	T. Gregory.....	" ..	" " ..	" ..	
" ..	A. McDonald...	" ..	" " ..	" ..	
" ..	W. McLeod.....	" ..	" " ..	" ..	
" ..	O. McLeod.....	" ..	" " ..	" ..	
" ..	Jas. Fleming ...	" ..	" " ..	" ..	
" ..	Jos. McCormack	" ..	" " ..	" ..	
" ..	E. Riley.....	" ..	" " ..	" ..	
" ..	H. R. Fleming..	" ..	" " ..	" ..	
" ..	Jas. Fleming ...	" ..	" " ..	" ..	
" ..	W. W. Gordon .	Employee...	" " ..	" ..	
" ..	G. Crawford....	" ..	" " ..	" ..	
" ..	M. McGillivray.	" ..	" " ..	" ..	
L'Islet.....	W. Lacombe....	" .	While coupling.....	Hand badly crushed.	
Hodgson's siding	E. Hayward....	" ..	Run off of train. Caused by tie placed across the track.	Considerably injured.	
" ..	Geo. L. Smith..	" ..	" " ..	Slightly injured.	
" ..	J. Harvey	" ..	" " ..	" ..	
2½ miles west of L'Islet.	Adelard Belanger.	Neither.....	Walking on track, struck by engine.	Fatally injured .	Accidental.
Petitcodiac.....	J. Connor.....	Passenger...	Attempting to cross between cars while train was moving.	Foot injured....	
Metapedia	Nicolas Caron ..	Employee...	Fell from car while shunting.	Fatal	"
Truro Yard	Henry Marr....	" ..	While shunting.	Hand slightly injured.	
D. W. Terminus, Halifax.	Stephen Hubly .	" ..	Struck by train of cars on trestle.	Fatally injured .	No inquest.
Between Levis and Pt. Levis.	J. McBride.....	Neither.....	Struck by engine	Slightly injured.	
Moncton Yard..	J. H. Cochrane..	Employee...	Fell off gondola loaded with shingles.	Head badly injured.	
Truro Yard.....	C. J. Carter	" ..	Stepping off van	Sprained ankle ..	
Drummondville.	T Sinjohn.....	" ..	While coupling	Finger cut off...	
2½ miles west Pictou Ldg.	Campbell McArthur.	Neither.....	Supposed to have been struck by train.	Fatal	Accidental.
Pt. du Chene....	P. B. White....	Employee...	Fell from steps of engine when it was standing still.	Expired immediately.	No inquest.
Amherst..	W. C. Price	" ..	While coupling.....	Fingers smashed	
Trenton.....	J. H. Shaw.....	" ..	"	" ..	
St. John Yard..	James Brady ...	" ..	Coupling engine to car of ashes.	Hand smashed..	
Salisbury.....	Wm. Capson....	" .	While shunting.....	Hand badly injured.	
Ferrona Jct.....	J. W. McKenzie	" ..	"	" ..	
Gloucester Jct..	D. Brownell....	" ..	"	Considerably injured.	

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1898.						
Dec. 2..	7·27	1	Express	R. G. Duncan	B. Cook	149
" 2..	9·45	....	Shunter	F. Fenerty	G. Currie	89
" 6..	21·30	.....	"	J. McEachern	W. Lovett	190
" 14..	5·00	.....	Special	N. Hopper.	R. Kennedy	160
" 24..	17·00	33	Express	F. Derouin	G. Cloutier	158
1899.						
Jan. 5..	21·50	.....	.....	.....	.....	.....
" 11..	24·55	159	Express	J. Boutillette	W. Kelly	6
" 11..	24·55	150	"	"	"	6
" 12..	8·20	.....	.....	.....	R. James	100
" 26..	2·30	.....	Special	G. Sears	J. Donald	17
" 26..	17·00	.....	"	F. Cote	G. Begin	113
Feb. 10..	9·53	33	Express	E. McKenna	C. Sawyer	173
" 19..	3·00	.....	Special	J. R, Fisher	R. Kennedy	8
" 21 .	22·40	.....	"	F. Cote	M. Houston	195
" 28..	17·15	15	Freight	J. Hughes	C. McArthy	201
Mar. 3..	5·45	.....	.....	.....	.....	.....
" 3..	7·30		No engine on train ; no employee near at time.			.....
" 4..	7·15	87	Accommodation	W. Foster	J. Ferguson	186
" 16..	5·43	.....	Special	A. Therriault	A. Berube L. Tardif.	204 223
" 18..	16·00	.....	Shunter	.....	H. Como	188
" 23..	14·03	46	Accommodation	H. Aubin	L. Sheedy	103
" 28..	1·00	15	Freight	J. Hughes	C. McCarthy	201
" 30..	5·40	.....	Special	W. W. Gordon.	A. Probart	87
" 31..	16·00	49	Freight	J. Dionne	A. Goulet	211
31..	20·00	35	Accommodation	D. R. Hunter	D. Pineo	141

SESSIONAL PAPER No. 10

RAILWAY.

line of the Intercolonial Railway during the year ended June 30, 1899—*Continued.*

Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Near 3 Mile House, Halifax	A. Sweeney.....	Neither.....	Crossing track with team..	Leg broken	
Young Street, Halifax.	Philip Howe....	Employee...	Caught between car and upright under sugar refinery chute.	Fatal	No inquest.
D. W. Terminus, Halifax.	J. McEachern..	" ..	While backing into elevator siding knocked off top of car by overhead crane.	Feet crushed and head injured.	
Sandy Cove.....	J. Simpson.....	" ..	While shunting.....	Foot slightly injured.	
¼ mile west St. Hyacinthe.	Adela Gosselin..	Neither.....	Struck by train.....	Right leg cut off.	
King St. Crossing Truro, N.S.	Nicolas (Indian)	" ..	Found on track. Supposed to have been struck by No. 26 train.	Shoulder broken, otherwise injured.	
Near St. Hyacinthe.	Frank St. Cyr..	Employee...	Collision G. T. R. special and I.C.R. train No. 150.	Head slightly injured.	
. " ..	John Lynch	" ..	" " ..	Head and arm slightlyinjured	
St. John Yard..	J. A. Darrah....	" ..	While shunting..	End of finger cut off.	
St. John.....	Ambrose Cormier.	" ..	Fell off engine while running alarm line over train.	Foot considerably injured.	
Ste. Rosalie....	E. Cote.....	" ..	While uncoupling engine..	Finger cut off ..	
2 miles west Trois Pistoles.	Louis Bonnefois.	Neither....	Fell from train in motion .	Slightly injured.	
Stellarton	Everett Crowe..	Employee...	While coupling	Hand crushed...	
Chaudière	T. Sinjohn.....	" ..	Struck by G. T. R. coal chute and thrown off car.	Slightly injured.	
Truro	Miss Cook.....	" ..	Attempting to board train in motion.	Leg crushed, amputation necessary.	
Hadlow	L. Langlais.....	" ..	Supposed to have been run over by train.	Fatal	Accidental.
Richmond Yard	Thomas Dancy..	Neither.....	Fell while carrying lump of coal from car.	Leg badly broken	
Near Brown's Point.	Mrs. Margaret M. Ryan.	Passenger ..	Died in seat of car.....	Death instantaneous.	Natural cause.
¼ 3 miles W. of St. Arsene.	C. Levesque....	Employee ..	Slipped on cow-catcher while special was pulling train out of snow.	Arm badly crushed.	
St. John Yard..	Chr'stoph'r Riley	Neither....	Run over by cars moved by engine No. 188.	Fatal	No inquest.
1 mile E. of St. Pierre.	A. Laberge.....	Temporary Employee.	Caught by snow plough and dragged to Montmagny.	One leg cut off, other badly injured.	
Springhill Jct..	J. T. Byran.....	Neither. ...	Stealing ride between box cars.	Foot crushed between drawbars.	
Between Stellarton & the mines. Asphalt platf'm.	Geo. Bain	"	Fell from train in motion..	Legs badly crushed. Since died.	Accidental.
Montmagny	Jos. Nadeau....	Employee...	Fell in van of Dionne's train	Considerably injured.	
Lansdowne crossing, 1½ miles E. of Campbellton.	Mrs. W. Parker.	Neither.....	Sleigh struck by train.	Fatal	"

63 VICTORIA, A. 1900

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the line

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1899.						
April 8..	6·10		Extra pilot	A. Vachon	D. Boucher	96
" 8..	19·20		Shunter		T. Wilkins	23
" 13..	18·15		Special	A. Frechette	G. Bégin	38
" 21..	10·50	56	Freight	J. Holmes	A. Dunbar	26
" 21..	18·30		Special	M. C. Daley	G. Morrison	149
" 22.						
May 1..	24·20		Mail Special	V. Carmel	D. Gallan	85
" 1..	18·15		Special	M. C. Daley	P. McKenna	227
" 17..	18·55	147	Accommodation	A. Legace	Jas. Fohy	136
" 25..						
" 27..	17·25		Special	A. Gamache	T. Henry	180
" 30..	6·00		Extra pilot	A. Vachon	G. Cloutier	96
June 2..	17·35		Special	E. Herritt	J. Stewart	40
" 4..	22·50		Special	J. Swetnam	W. J. Coffey	183
" 7..	15·14	35	Accommodation	P. Heine	O. McGinity	140
" 14..	15·35			— Hawker	— Howe (Q. C. Ry.)	14
" 14..	21·00		Special	S. Bernier	T. Matheson	211
" 16.	17·30		Special	M. Narville	R. Jamieson	28
" 19..	18·36	149	Accommodation	L. N. Letarte	J. Belleau R. Mitchell	114 61
" 20..	1·15		Special	W. Power	O. Power	60
" 26..	14·00		Special	E. Herritt	J. Starratt	35
" 27..	10·30			A. Wade	R. James	189

GENERAL MANAGER'S OFFICE,
September 28, 1899.

SESSIONAL PAPER No. 10

RAILWAY.

of the Intercolonial Railway during the Year ended June 30, 1899—*Concluded.*

Place of Accident.	Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Levis Yard	Jos. Proulx	Employee	While coupling	Hand injured	
St. John	Allen French	"	"	Finger smashed	
Chaudière Jct.	Jos. Charrier	"	Uncoupling car	Finger injured	
Lourdes Platform.	D. Stewart	Neither	Jumped fr'm train in motion	General shaking up.	
Petitcodiac	A. Stronach	Employee	Coupling cars	Thumb and part of finger taken off.	
Moncton Station	Geo. Cole	"	Fell from electric light pole	Seriously injured	
Rimouski	Jos. Martin	"	Squeezed between cars by draw-bars.	Slightly injured.	
Moncton	W. Furze	"	Making up train	Sprained ankle.	
Victoria Bridge	S. Stephen	Neither	Struck by train	Face cut and head injured.	
Campbellton	John McKenny	"	Supposed to have jumped from train while intoxicated.	Jaw broken and head injured.	
Price's Siding	Chas. Fournier	Employee	Jammed between cars while shunting.	Back and shoulder seriously injured.	
Near Levis	Julien Charrier	Neither	Struck by shunting engine	Slightly injured.	
Tatamagouche	W. McKean	Employee	Wheel of van ran over foot.	Toes badly bruised.	
Kent Junction	T. Anderson	"	Coupling cars	Collar bone brokn, arm and side injured.	
5 miles west of Newcastle.	Unknown man	Neither	Walking on track, struck by engine.	Fatal	Accidental.
Levis Yard	Ival Marins	"	Struck by Quebec Central engine.	"	"
Sayabec Mills	W. Rosseau	Employee	While shunting. Fell in ditch.	Arm injured	
Forrestdale	F. St. Cyr	"	While coupling	Thumb and fingers jammed	
¼ mile W. of Drum'ondv'lle	A. Dumont	"	Fell from top of train in motion.	3 ribs broken, internal injuries.	
Pt. Tupper	D. J. Bryden	"	While coupling	2 ribs broken. Other bruises.	
Scotsburn ballast pit.	J. J. Murray	"	Working in ballast pit; earth fell on him.	Head and face cut.	
Ballast Wharf, St. John.	W. McClusky (boy).	Neither	Trying to jump on rear of shunting engine.	Foot crushed, amputation necessary.	

WINDSOR BRANCH RAILWAY,
OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
MONCTON, N. B., November 16, 1899.

SIR,—I have the honour to submit the following statements showing the results of the working of the Windsor Branch Railway for the year ended June 30, 1899.

No. 1. Revenue account.
2. Maintenance of way and works.
3. General balance.
4. Statement of earnings.

I also send you the report of the chief engineer on the maintenance and condition of the permanent way and works.

This line, 32 miles in length, was operated during the year by the Dominion Atlantic Railway Company on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings, the balance, one-third, being paid over to the Government, the latter maintaining the line.

The gross earnings accruing to the Government were	$42,474 03
The expenses of maintenance	12,873 09
Net earnings	$29,600 94

There was an increase in earnings when compared with last year as follows:—

Earnings in 1898-99	$42,474 03
Earnings in 1897-98	37,226 64
Increase	$ 5,247 39

The earnings from passenger traffic increased $503.34, and the earnings from freight traffic increased $4,744.04.

There was a decrease in the cost of maintenance as follows:—

In 1897-98	$18,181 63
In 1898-99	12,873 09
Decrease	$ 5,308 54

Nine thousand and forty-two ties were renewed during the year.
Considerable ballasting was done.
A number of new sidings were laid, and some were extended.
Considerable repairs were done to bridges and buildings.
The permanent way and works are in good order.

I have the honour to be, sir,
Your obedient servant,

D. POTTINGER,
General Manager, Government Railways.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer, Railways and Canals,
Ottawa, Ont.

INTERCOLONIAL RAILWAY,
CHIEF ENGINEER'S OFFICE,
MONCTON, N. B., July 27, 1899.

SIR,—I have the honour to submit herewith, the report of the maintenance of the Windsor Branch, for the year ending June 30, 1899.

TRACK.

During the year, 200 feet of new four and a quarter steel rails were laid in track to replace a like quantity that had become worn and not fit for the main line.

TIES.

Nine thousand and forty-two ordinary ties, and seven sets of switch ties were renewed during the year.

BALLASTING.

Four thousand one hundred cubic yards of ballast and ashes, were used on different parts of the branch throughout the year.

SEMAPHORES AND SWITCHES.

A number of new switches were provided during the year, and all others overhauled and repaired where found necessary.

SIDINGS.

During the year 2,839 feet of additional siding accommodation was provided.

FENCING.

Necessary repairs were made to fencing throughout the branch during the past year.

BUILDINGS AND PLATFORMS.

At Windsor Junction, the platform was overhauled and repaired.

At Ellershouse, the exterior walls of station building were overhauled, repaired and painted. A new door was provided for the freight shed.

At Newport, the freight platform was renewed, the station platform overhauled and repaired, and two new doors and windows placed in station.

At South Uniacke, the platform was renewed.

At Windsor, the interior and exterior walls of station were overhauled, repaired and painted. Hardwood floors were laid in the waiting rooms and station master's office, and glass repaired in the station where necessary.

The engine shed was overhauled and repaired, and provided with new window sashes.

BRIDGES AND CULVERTS.

The tops of four small bridges between Windsor Junction and Windsor were renewed with hard pine ties.

At St. Croix Bridge, the masonry was overhauled, repaired and pointed.

At Jordan Bridge, the abutments were overhauled and repaired where found necessary.

The girders of Sackville Bridge, were overhauled, scraped and painted.

Necessary repairs were made to a number of wooden culverts on the branch between Windsor Junction and Windsor.

I have the honour to be, sir,
Your obedient servant,

WM. B. MACKENZIE,
Chief Engineer.

D. POTTINGER, Esq.
General Manager, Government Railways,
Moncton, N. B.

No. 1.—WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT, Year ended June 30, 1899.

Previous Year.	Expenditure.	Year ended June 30, 1899.	Previous Year.	Earnings.	Year ended June 30, 1899.
$ cts.		$ cts.	$ cts.		$ cts.
18,181 63	Maintenance way and works	12,873 09	15,165 23	Passenger traffic	15,668 57
			20,909 58	Freight traffic	25,653 62
19,045 01	Balance	29,600 94	1,151 83	Mails	1,151 84
37,226 64		42,474 03	37,226 64		42,474 03

E. & O. E.,
MONCTON, N. B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 2.—WINDSOR BRANCH RAILWAY.

MAINTENANCE of Way and Works, Year ending June 30, 1899.

Previous Year.	Details.	Year ended June 30, 1899.
$ cts.		$ cts.
7,736 99	Repairs of track	8,475 34
462 86	Rails and fastenings	285 10
7,013 44	Ties	1,308 50
366 65	Bridges	701 76
67 15	Signals	30 67
575 57	Culverts, cattle guards, etc	238 74
.....	Wharf at Windsor	13 00
309 90	Buildings and platforms	815 13
11 80	Hand cars and trollies	6 21
243 20	Removing snow and ice	319 72
124 00	Tools and repairs of same	149 70
263 34	Fencing	55 15
429 42	Accountant's office and expenses	461 78
577 31	Miscellaneous	12 29
18,181 63		12,873 09

E. & O. E.,
MONCTON, N.B., June 30, 1899.

T. WILLIAMS,
Chief Accountant and Treasurer.

No. 3.—WINDSOR BRANCH RAILWAY.

DR. GENERAL BALANCE, Year ended June 30, 1899. CR.

1899.	$ cts.	1899.		$ cts.
30 June... To stores...	453 40	30 June ..	By Dominion account.....	453 40

E. & O. E.

T. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., June 30, 1899.

No. 4.—WINDSOR BRANCH RAILWAY.

MONTHLY STATEMENT of Receipts, one-third earnings.

Month.	Passenger Traffic.	Freight Traffic.	Mails.	Totals.
	$ cts.	$ cts.	$ cts.	$ cts.
1898—July...	1,641 92	1,605 09	96 91	3,343 92
August...	2,190 25	1,590 87	96 91	3,878 03
September ..	2,704 17	2,883 27	96 90	5,684 34
October	1,701 99	3,147 44	96 91	4,946 34
November	1,138 97	3,092 24	96 90	4,328 11
December	1,006 94	2,331 49	96 91	3,435 34
1899—January.	719 94	2,197 78	94 45	3,012 17
February	588 72	1,800 81	94 45	2,483 98
March	804 35	1,700 66	94 46	2,599 47
April	801 50	1,955 71	95 68	2,852 89
May	1,139 43	1,809 15	95 68	3,044 26
June	1,230 39	1,539 11	95 68	2,865 18
Totals.	15,668 57	25,653 62	1,151 84	42,474 03

E. & O. E.

T. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., June 30, 1899.

PRINCE EDWARD ISLAND RAILWAY,
OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
MONCTON, N. B., November 7, 1899.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway, for the fiscal year ended June 30, 1899

I also inclose the report of the superintendent, including statements of the various accounts.

The mileage of railway in operation was the same as last year, 210 miles.

There was expended on capital account a sum amounting to $22,000 for works at North Wiltshire and Colville for the purpose of straightening the main line, and for the purchase of a wharf at Mount Stewart, and the construction of additional rolling stock, making the total cost of the railway on June 30, 1899, $3,790,107.26.

The working expenses for the year were	$218,053 01
The gross earnings were	165,012 03
Deficiency	$ 53,040 98

The deficiency was $19,427.15 less than last year.

There was an increase of earnings over the previous year of $6,061.42 ; this increase was in both passenger and freight traffic.

There was an increase in the number of passengers carried and also in the quantity of freight.

There was an increase over last year in the quantity carried of flour and meal, mackerel, oysters, canned fish and meat, lumber, coal, live stock, fresh meat, butter and cheese, eggs and general merchandise ; and a decrease in grain, potatoes, salt, salted meat and starch.

The buildings and bridges on all parts of the line received necessary repairs.

One first class passenger car, one combined postal and first class smoking car, one refrigerator car and four platform cars were rebuilt in the workshops of the railway.

The necessary repairs were made and the rolling stock is in a state of efficiency.

I have the honour to be, sir,
Your obedient servant,

D. POTTINGER,
General Manager, Government Railways.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer, Railways and Canals,
Ottawa, Ont.

PRINCE EDWARD ISLAND RAILWAY,
SUPERINTENDENT'S OFFICE,
CHARLOTTETOWN, P.E.I., August 12, 1899.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway, for the fiscal year ended June 30, 1899.

I also inclose the following statements prepared by the accountant and auditor, and the mechanical accountant and storekeeper :—

No. 1. Capital account.
2. Revenue account.
3. Locomotive power (abstract No. 1).
4. Car expenses (abstract No. 2).
5. Maintenance of way and works (abstract No. 3).
6. Station expenses (abstract No. 4).
7. General charges (abstract No. 5).
8. General stores account.
9. General balance.
10. Comparative statement of averages.
A. Monthly statement of the cost of locomotive power.
B. Statement of performance and consumption of locomotives.
C. Monthly statement of car mileage.
D. Statement showing number of locomotives, cars, snow ploughs and flangers.
E. Comparative statement of the expenses of the mechanical department.

The mileage of railway in operation was the same as the preceding year, 210 miles.

CAPITAL ACCOUNT.

The total expenditure to June 30, 1898, was	$3,768,107	26
The additions during the year were as follows :—		
Purchase of wharf at Mount Stewart from the Provincial Government of P. E. Island	3,500	00
Additional rolling stock	3,500	00
Reducing curves and shortening the line between North Wiltshire and Colville	15,000	00
Making the total cost on June 30, 1899	$3,790,107	26

Purchase of wharf at Mount Stewart.—This was for the purpose of promoting the interests of the railway in increasing the traffic at this port. A track 900 feet in length was laid to the wharf last year.

Additional rolling stock.—This is the cost of seven new double deck stock cars, built for the purpose of handling the increased traffic in live hogs and sheep.

Reducing curves and shortening the line near North Wiltshire. About 60,000 cubic yards of earth were placed in an embankment, a cast iron culvert 150 feet in length and 42 inches in diameter was put in and the balance of the right of way was paid for. The work at this point was completed and the new line open for traffic, and used since November 21, 1898.

REVENUE ACCOUNT.

The earnings from passengers and freight show an increase, as compared with the previous year, notwithstanding the partial failure of the crops ; the improvement in the live stock trade, and the increased output from the cheese factories and creameries appear to have more than made good, in general, the losses sustained in other branches of the farming industry.

The gross earnings and working expenses for the year compare as follows :

Gross earnings	$ 165,012 03
Working expenses	218,053 01
Deficit	$ 53,040 98

The gross earnings compare with the previous year as follows :—

In 1898–99	$ 165,012 03
1897–98	158,950 61
Increase	$ 6,061 42

The earnings from passenger traffic compare as follows :—

In 1898–99	$ 65,383 11
1897–98	63,734 61
Increase	$ 1,648 50

The earning from freight traffic compare as follows :—

In 1898-99	$ 79,888 52
1897-98	75,845 60
Increase	$ 4,042 92

The earnings from mails and sundries compare as follows :—

In 1898-99	$ 19,740 40
1897-98	19,370 40
Increase	$ 370 00

The number of passengers carried compare as follows :—

In 1898-99	129,667
1897-98	126,510
Increase	3,157

The weight of freight carried compares as follows :—

	Tons.
In 1898-99	57,968
1897-98	57,539
Increase	429

WORKING EXPENSES.

The working expenses compare as follows with the previous year :—

In 1898-99	$ 218,053 01
1897-98	231,418 74
Decrease	$ 13,365 73

The averages compare with the previous year as follows :—

	Cents.
Per mile run by engines :—	
In 1898-99	64·74
1897-98	70 68
Per mile run by trains :—	
In 1898-99	82·80
1897-98	91·51
Per mile of railway :—	
In 1898-99	$1,038 35
1897-98	1,101 99

TRACK.

There are now 151½ miles of track laid with steel rails, 50 lbs. to the yard ; and 58½ miles old iron rails of 40 lbs. to the yard.

The latter require to be replaced with steel.

During the year 3,420 old iron rails (selected) were replaced in the track, taking the place of those condemned.

SIDINGS.

At Wellington the spur was lengthened 300 feet, and made a through siding.

At Pisquid the siding was lengthened 100 feet.

TIES.

There were renewed during the year 54,000 ordinary ties, 21 sets switch ties and 22 head-blocks and frames, besides 1,625 culled ties were used in yards and sidings.

BALLASTING.

During the year 24,220 cubic yards of ballast were distributed where most needed

FENCING.

Twelve and three-quarter miles of old fence were replaced by 60,720 feet of woven wire with posts and battens, and 6,600 feet with barbed wire, 13,200 feet of snow fence was rebuilt, general repairs to both snow and ordinary fence were made all along the line, and a large quantity of material was used.

One hundred farmers' gates, made of woven wire, were replaced.

BUILDINGS, PLATFORMS, ETC.

At Tignish the waiting room was painted.

At Alberton the freight shed had one side of the roof reshingled and one new door put in, and the agent's dwelling was painted and papered inside.

At O'Leary one side of the station building roof was reshingled.

At Coleman a combined waiting room and freight shed was built, and about 500 yards of earth were used to grade around the building.

At Ellerslie a new floor was put down in waiting room and a small kitchen was built.

At Summerside the walls and ceiling of the general waiting room were sheathed and painted, and a spruce floor was laid. The wharf freight shed was raised 3 feet 6 inches, foundation rebuilt with hemlock timber and floor relaid with hemlock plank.

At Emerald the waiting room and office were painted.

At Kinkora the station platform was rebuilt.

At Bradalbane the waiting room and office were painted.

At Hunter River the foundation and supports of the water tank were renewed and a new section tool house was built. The agent's dwelling was painted with two coats of paint outside, and the ticket office was painted inside.

At North Wiltshire the station was given two coats of paint outside, and the office and waiting room were painted.

At Charlottetown 7,000 feet of hemlock plank were used to repair engine house floor, the floor of the machine shop was partly relaid with plank and a room fitted up for the upholsterer. A concrete foundation and a hardwood floor were put in the superintendent's office, the wood work painted and the walls papered. The accountant's office was thoroughly renovated, a new floor put down and the walls sheathed. A coal shed for forge coal and a tool room in machine shop were built. An iron house and wood shed were rebuilt, a stationary engine coal shed was repaired, and a floor put down in paint shop, four pits renewed in round house and a new foundation put under the hydraulic press.

At Tracadie the station platform was rebuilt.

At Mount Stewart the station building was raised 3 feet 6 inches, the sills renewed, a new floor put down in freight shed, and all necessary repairs made, the outside of building was given two coats of paint, the office, waiting rooms and agent's dwelling renovated and painted. The station platform was rebuilt with cedar sills and hemlock plank covering.

At Peakes the station building was reshingled.

At St. Peters the agent's dwelling was raised 2 feet 6 inches, the foundation renewed and general repairs made.

At Souris the freight shed and engine house roofs were partly reshingled.

At Cardigan 1,000 cubic yards of earth were used to grade around the station building.

Stock pens were erected at the following places: Wellington, Port Hill, Emerald and St. Peters.

Fourteen water tanks were rebuilt.

A semaphore was rebuilt at Royalty Junction, and one at Summerside.

WHARFS AND BREASTWORKS.

At Summerside 500 tons of stone, 8 cars of brush, 60 tons of hemlock timber, and 300 cubic yards of ballast were used in repairing the wharf.

At Charlottetown 100 tons of stone, 40 tons of hemlock timber, 25 piles, 3 mooring posts, 25 cubic yards of ballast and 5 cars of brush were used in repairing the wharf and breastwork.

At Georgetown 30 tons of timber, 2 cars of brush and 60 tons of stone were used to repair the wharf.

At Morell 120 feet of breastwork were built at the bridge, which required 25 tons of timber, 50 tons of stone and 40 cubic yards of earth.

At St. Peter's 800 feet of breastwork were built 7 feet high; to do this it required 200 tons of timber, 25 cars of brush, 40 tons of stone and 300 cubic yards of earth.

At Souris to repair the wharf, 50 tons of stone, 4 cars of brush and 30 tons of timber were used.

BRIDGES AND CULVERTS.

At Morell, in preparation for a steel or iron bridge, 80 creosoted piles (1,380 lineal feet), 24,260 feet hard pine and 6,000 feet of princess pine were used in the construction of the approaches and bents.

At Naufrage the two centre stone piers were strapped with iron rods, and two feet of concrete built around them; in the construction of which sixty barrels of cement, 50 tons of stone and three cars of sand were used.

At Ellerslie the bridge had a new top put on it.

At Hunter River the bridge had a pile bent put under the centre span.

At Clyde two hard pine stringers were added, besides other necessary repairs made.

Several other bridges were repaired more or less.

Rolling Stock.

Following is a summary of the principal work done in the shops of the mechanical department:—

Locomotive Repairs.

Three locomotives, Nos. 3, 5 and 17, were practically rebuilt. New fire boxes were put in two, and the following new parts were supplied each of the above, viz.:—Tubes, piston and piston rods, front tube sheets, smoke boxes, driving axles, driving boxes, front truck boxes, crank pins, rod brasses, driving brasses, eccentrics and eccentric straps, metallic packing, balance valves, tender trucks, cylinder heads, valve motion, cab fronts, dry pipes, throttle valves, stand pipes, cab mountings, ejectors and pop valves.

Five locomotives received heavy repairs and nine locomotives received specific repairs.

The following new parts were supplied and work performed:—500 tubes were pieced, two cab fronts (frames rebolted), six driving wheel tires were turned; two sets locomotive truck wheel tires were turned; 1,600 stay bolts were turned and threaded; 260 car wheels were bored and pressed on axles; two driving axles were turned; 6,928 bolts were forged and threaded; 3,070 pounds of nuts were tapped; six smoke stacks were built; two track and four platform scales were repaired; one tender was rebuilt and four tenders repaired; six smoke jacks for engine house were rebuilt; two old condemned locomotives, (No. 20 and a stationary) were broken up; fourteen driving springs were made and forty springs were repaired.

For the road department 1,200 bolts were forged; 13,577 pounds of iron was forged; seven sets of switch gear were made; two new frogs were made and four repaired, besides a quantity of tools and other small parts were supplied.

Brass Foundry.

Output:—6,676 lbs. brass castings, and 600 brass bearings, and 320 lbs. battery zincs.

Car Shop.

One first class car and one first class smoking and postal car were built.

One first class car was converted into a second class, and one second class and baggage car was converted into a baggage, and one second class car was condemned.

Twenty box cars received thorough repairs, twelve of which had new canvas roofs put on them, and one fitted with standard drawbars.

One cold storage car, and seven stock cars were built.

Two platform cars were rebuilt.

Three fifteen ton coal cars were rebuilt to replace three ten ton coal cars condemned.

Five platform cars received thorough repairs.

Seventeen box cars, and twelve platform cars received general repairs.

One flanger received general repairs.

Three new engine cabs were rebuilt, and four repaired; three new running boards, buffer-beams, seats and boxes were rebuilt, and new trucks were made for one tender.

For the road and traffic departments the following work was done:—

Seven trollies, two semaphores and fourteen Haggis tanks were rebuilt.

Twenty-two loading platforms, seven cattle stages, twelve switch frames, five doors and frames, three pairs of sashes and frames, one freight truck, four kit boxes, four office boxes, one hundred farm gates and five Haggis tank pipe houses were built.

Paint Shop.

Two first-class, three second-class and two postal and baggage cars were painted and varnished.

Six first-class and four postal and baggage cars were cleaned and varnished.

Twenty-one box, one cold storage, seven stock, two platform, three coal and eight hand cars were painted.

The roofs of thirty-four box cars were painted.

Thirty crossing signs, twenty-nine sign boards, twenty switch frames, six semaphores, thirty-six water cans, five copying presses and eleven buildings were painted, and 300 panes of glass were put in.

Eight locomotives were painted and varnished and one locomotive was cleaned and varnished.

STORES.

The value of stores purchased was	$ 64,779 01
The value of stores used was	76,113 11
The value of old material sold was	7,135 65

The value of stores on hand at the end of the year was:—

Ordinary stores	$ 35,220 90
Fuel	1,821 01
Iron and steel rails and fastenings	4,997 89
Old material for sale	42,000 11
Total	$ 84,039 91

GENERAL.

The rolling stock, road bed and buildings have been maintained in a state of efficiency.

I inclose a return also of minor casualties which occurred during the year.

I have the honour to be, sir,
Your obedient servant,

G. A. SHARP,
Superintendent.

D. POTTINGER, Esq.,
General Manager, Government Railways,
Moncton, N.B.

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

DR. CAPITAL ACCOUNT. CR.

1898.		$ cts.	1898.		$ cts.
June 30	To cost of road and equipment to date	3,768,107 26	June 30	By Dominion of Canada	3,768,107 26
1899.			1899.		
June 30	To expenditure, year ended June 30, as follows:		June 30	" "	22,000 00
	Removing curves, main line $15,000 00				
	New stock cars 3,500 00				
	Wharf at Mount Stewart 3,500 00				
		22,000 00			
		3,790,107 26			3,790,107 26

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

DR. REVENUE ACCOUNT for Year ended June 30, 1899. CR.

Previous Year.	Expenditure.	Year ended June 30, 1899.	Previous Year.	Receipts.	Year ended June 30, 1899.
$ cts.		$ cts.	$ cts.		$ cts.
56,520 66	Locomotive power, Abstract No. 1	58,464 56	63,734 61	Passenger traffic	65,383 11
			75,845 60	Freight traffic	79,888 52
38,827 84	Car expenses, Abstract No. 2	38,463 64	19,370 40	Mails and sundries	19,740 40
94,333 51	Maintenance of way and works, Abstract No. 3	80,186 60	158,950 61	Total receipts	165,012 03
			72,468 13	Balance	53,040 98
29,076 53	Station expenses, Abstract No. 4	29,915 87			
12,660 20	General charges, Abstract No. 5	11,022 34			
231,418 74	Totals	218,053 01	231,418 74	Totals	218,053 01

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

Locomotive Power—(Abstract No. 1).

Previous Year.	Details.	Year ended June 30, 1899.
$ cts.		$ cts.
619 66	Mechanical superintendent's salary, clerks, office and travelling expenses	617 83
18,164 92	Wages of drivers, firemen and cleaners	18,732 54
14,514 29	Fuel	14,935 67
2,055 16	Oil, tallow, waste and small stores	2,257 61
19,033 40	Repairs to engines, tenders and engine tools	19,712 91
556 41	Water, including pump and tank repairs	639 20
1,576 82	Miscellaneous	1,568 80
56,520 66	Totals	58,464 56

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1899.

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

Car Expenses—(Abstract No. 2).

Previous Year.	Details.	Year ended June 30, 1899.
$ cts.		$ cts.
7,885 15	Repairs to passenger cars	7,663 96
2,109 06	" postal and baggage cars	3,557 28
7,838 66	" freight cars and vans	5,728 66
1,059 60	" snow ploughs and flangers	347 43
15,700 30	Wages of conductors, train baggage-masters and brakesmen	16,815 85
798 25	Oil and waste for packing	770 24
2,545 33	Small stores and fuel	2,728 69
891 49	Miscellaneous	851 53
38,827 84		38,463 64

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1899.

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Previous Year.	Details.	Year ended June 30, 1899.
$ cts.		$ cts.
295 64	Engineer's salary, clerks, office and travelling expenses	292 47
39,337 62	Wages in repairing roadway, fences and semaphores	39,726 59
1,721 81	Rails, chairs and spikes	2,407 62
17,394 37	Ties	17,887 56
9,461 29	Timber and lumber for repairs to bridges, cattle guards, &c	7,401 80
2,313 19	Repairs to wharfs	2,464 12
5,479 72	" buildings and platforms	6,604 55
1,047 97	" tools	1,108 58
2,221 72	Clearing ice and snow	2,243 51
79,273 33	Totals	80,136 80

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

No. 6.—PRINCE EDWARD ISLAND RAILWAY.

STATION EXPENSES—(Abstract No. 4.)

Previous Year.	Details.	Year ended June 30, 1899.
$ cts.		$ cts.
22,458 30	Salaries and wages of station masters, agents, clerks, telegraph operators, station baggage-masters, yard masters, switchmen, watchmen and labourers	22,864 90
6,618 23	Fuel oil light, stationery and other incidental expenses	7,050 97
29,076 53	Totals	29,915 87

W. T. HUGGAN.
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

General Charges—(Abstract No. 5).

Previous Year.	Details.	Year ended June 30, 1899.
$ cts.		$ cts.
4,439 93	Superintendents' and train despatchers' salaries, clerks, office and travelling expenses	4,524 41
4,814 61	Accountant and auditor's, paymaster's and cashier's salaries, clerks, office and travelling expenses	5,077 24
697 85	Advertising	481 35
2,202 01	Damages to men, animals and goods	227 30
323 69	Telegraph expenses (not including pay to operators)	365 66
182 11	Miscellaneous	346 38
12,660 20	Totals	11,022 34

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., June 30, 1899.

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of General Stores Account, Year ended June 30, 1899.

1898.	Dr.	$ cts.	$ cts
June 30...	To balance brought forward		91,094 75
1899.			
June 30...	Purchases during the year	64,779 01	
	Charges from other deparments	10,182 45	
	Pay rolls	1,232 46	
			76,193 92
1899.	Cr.		167,288 67
June 30...	By issues during the year		83,248 76
	Balance — Ordinary stores	$31,938 41	
	Balance — Fuel	1,821 01	
	Balance — Rails and fastenings on hand	46,998 00	
	Balance — Old material serviceable	3,282 26	84,039 91

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

No. 9.—PRINCE EDWARD ISLAND RAILWAY.

DR. GENERAL BALANCE. CR.

	$ cts.		$ cts.
General stores	84,039 91	Dominion Account	87,117 29
Cash	1,899 96	Accident Insurance	1,045 58
Stations	1,328 76	Through Ticket Ledger	5,979 07
Post Office Department	3,974 10		
Militia Department	408 15		
Anglo-American Telegraph Co.	46 43		
Judge Weatherbie	30 00		
Sidney Grey	20 00		
Railway extension, Charlottetown	812 83		
Intercolonial Railway	1,505 60		
B. & M. Rattenbury	76 20		
Total	94,141 94	Total	94,141 94

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT OF AVERAGES, for years ended June 30, 1899 and 1898.

Details.	1899.	1898.
Mileage of railway open	210	210
Engine mileage	336,830	327,424
Train mileage	263,335	252,894
Car mileage	1,427,479	1,340,114
Receipts per engine mile.....Cents.	48 99	48 54
" mile of railway.....Dollars.	785 87	756 91
Percentage of passenger earnings to gross receipts	39·62	40·10
" freight " "	48·41	47·71
" other " "	11·97	12·19
Expenses per engine mile :—		
Drivers, firemen and cleaners' wages	5·57	5·55
Fuel	4·43	4·44
Oil, tallow, waste and small stores	·67	·63
Repairs to engines	5·85	5·81
Water and tank repairs	·19	·16
Miscellaneous	·47	·48
	17·18	17·07
Mechanical superintendent's salary, office and travelling expenses	·18	·19
Total.....Cents.	17·36	17·26
Locomotive power, per engine mile	17·36	17·26
Car expenses "	11·42	11·85
Maintenance of way and works "	23·81	28·81
Station expenses	8·88	8·88
General charges	3·27	3·88
Total per engine mile.....Cents.	64·74	70·68
Locomotive power, per train mile	22·20	22·35
Car expenses "	14·61	15·35
Maintenance of way and works "	30·45	37·30
Station expenses	11·36	11·50
General charges	4·18	5·01
Total per train mile.....Cents.	82·80	91·51
Working expenses per mile of railway.....Dollars.	1,038·35	1,101·99

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1899.

A.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

STATEMENT of Cost of Locomotive Power for the Year ended June 30, 1899.

Months.	Miles run by Engines, less Ballasting.	Cost of							Average per Mile Run.						
		Enginemen's Wages.	Fuel.	Oil, Tallow, Waste, &c.	Repairs.	Water, including Tank and Pump Repairs.	Miscellaneous, including Expenses of Office and Engine Houses.	Total.	Enginemen.	Fuel.	Oil, Tallow, &c.	Repairs.	Water.	Miscellaneous.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
1898—July	30,391	1,539 58	1,057 60	208 22	1,169 60	.. ..	148 03	4,123 03	5·07	3·48	0·68	3·85	0·00	0·49	13·57
August	30,026	1,496 21	1,007 86	241 47	1,732 47	1 30	166 73	4,346 04	4·98	3·36	0·80	5·77	0·01	0·55	15·47
September	31,229	1,746 08	1,141 07	238 33	1,541 18	54 98	164 71	4,886 35	5·59	3·65	0·76	4·94	0·18	0·52	15·64
October	29,278	1,693 74	1,267 75	217 36	1,659 23	3 90	153 45	4,995 43	5·78	4·33	0·74	5·67	0·01	0·53	17·06
November	33,080	1,609 03	1,342 98	217 07	1,598 39	119 44	155 22	5,042 13	4·86	4·06	0·66	4·83	0·36	0·47	15·24
December	28,795	1,562 98	1,404 95	232 54	1,777 35	179 14	198 59	5,355 55	5 43	4·88	0·80	6·17	0·62	0·69	18·59
1899—January	23,039	1,525 91	1,089 01	175 97	1,780 63	61 93	224 65	4,858 10	6·62	4·73	0·77	7·72	0·26	0·98	21·08
February	22,517	1,510 45	1,333 51	169 74	2,010 23	2 70	233 92	5,260 55	6·70	5·92	0·76	8 93	0·01	1·04	23·36
March	28,162	1,741 06	1,703 31	219 63	1,927 49	5 90	228 34	5,825 73	6·19	6·05	0·78	6·84	0·02	0·81	20·69
April	23,181	1,394 96	1,150 23	143 66	1,714 14	6 14	205 81	4,614 94	6·02	4·96	0·62	7·39	0·02	0·89	19·90
May	26,556	1,414 24	1,173 61	186 62	1,564 61	6 60	169 21	4,514 89	5·33	4·43	0·70	5·89	0·02	0·63	17·00
June	30,576	1,498 30	1,263 79	7 00	1,237 59	197 17	137 97	4,341 82	4·90	4·14	0·02	4·05	0·64	0·45	14·20
Totals	336,830	18,732 54	14,935 67	2,257 61	19,712 91	639 20	2,186 63	58,464 56	5·56	4·43	0·67	5·86	0·19	0·65	17·36

S. F. HODGSON,
Mechanical Accountant.

B.—PRINCE EDWARD

MECHANICAL

STATEMENT of the Performance and Consumption

Months.	Hours in Steam.	Train Mileage.				Mileage by Engines.			
		Passenger.	Freight and Mixed.	Ballasting.	Piloting.	With Train.	Light.	Shunting.	Total.
1898—July	3,704	11,960	11,744	1,402	382	25,488	81	6,774	32,343
August	3,619	11,803	12,037	1,481	81	25,402	95	6,445	31,942
September	3,993	12,438	11,574	3,257	220	27,489	92	7,140	34,721
October	3,808	10,467	13,044	3,707	46	27,264	87	6,689	34,040
November	3,810	11,055	15,493	2,367	.....	28,915	115	6,957	35,987
December	3,207	10,454	12,618	149	44	23,265	124	5,560	28,949
1899—January	3,071	4,629	12,083	.....	274	16,986	132	5,921	23,039
February	3,166	4,743	11,116	.....	1,562	17,421	82	5,014	22,517
March	3,713	5,458	14,314	.....	1,933	21,705	334	6,123	28,162
April	3,128	3,906	12,709	40	376	17,022	.....	6,199	23,221
May	3,461	5,428	14,751	1,244	120	21,543	194	6,263	28,000
June	4,003	10,452	14,008	2,832	22	27,314	62	6,477	33,853
Totals	42,683	102,793	155,482	16,479	5,060	279,814	1,398	75,562	356,774

SESSIONAL PAPER No. 10

ISLAND RAILWAY.

DEPARTMENT.

of Locomotives for the Year ended June 30, 1899.

Total Mileage.		Average of Cars per Mile run with Train.	Average Mileage.		Consumption.			Consumption per 100 miles run by Engines.		
Cars.	Snow Ploughs.		Miles to one hour in Steam.	Of Cars to one of Engines.	Bushels of Coal.	Pints of Oil.	Pounds of Waste.	Bushels of Coal.	Pints of Oil.	Pounds of Waste.
133,565	.....	5·32	8·73	4·13	16,299	2,665	562	50·39	8·24	1·74
123,005	.....	4·86	8·82	3·85	15,615	2,989	639	48·89	9·36	2·00
141,602	.....	5·19	8·69	4·08	17,417	2,971	667	50·16	8·55	1·92
155,069	.....	5·69	8·94	4·56	19,308	2,610	637	56·72	7·67	1·87
161,154	.....	5·57	9·45	4·48	18,942	2,552	677	52·63	7·09	1·88
126,590	.....	5·45	9·02	4·37	17,889	2,558	613	61·80	8·83	2·12
87,568	136	5·24	7·50	3·80	13,292	1,769	397	57·69	7·68	1·72
82,402	4,981	5·19	7·11	3·66	14,564	1,867	413	64·68	8·29	1·83
110,066	44	5·56	7 58	3·91	17,847	2,390	523	63 37	8·49	1·86
107,162	.....	6·44	7·42	4·61	11,429	1,656	409	49·22	7·13	1·76
136,721	.....	6·38	8·09	4·88	13,485	2,179	497	48·16	7·78	1·77
160,708	.....	5·89	8·45	4·75	14,822	2,486	553	43·78	7·34	1·63
1,525,612	5,161	5·55	8·36	4·28	190,909	28,692	6,587	53·51	8·04	1·85

S. F. HODGSON,
Mechanical Accountant.

C.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

MONTHLY STATEMENT of Car Mileage for Year ended June 30, 1899.

Months.	First Class.	Second Class and Baggage.	Postal and Smoking.	Box and Stock.	Platform.	Total.
1898—July	30,962	22,238	24,935	42,463	12,967	133,565
August	25,822	22,498	22,780	37,820	14,085	123,005
September	27,331	24,208	22,172	42,410	25,481	141,602
October	22,822	24,198	25,557	49,138	33,354	155,069
November	24,226	25,284	28,238	58,237	25,169	161,154
December	21,923	18,417	25,242	49,285	11,723	126,590
1899—January	16,907	16,066	13,195	32,476	8,924	87,568
February	15,651	15,181	11,426	25,723	14,421	82,402
March	18,241	16,781	13,613	43,654	17,777	110,066
April	17,892	15,560	14,060	50,021	9,629	107,162
May	20,619	20,360	21,777	57,083	16,882	136,721
June	26,189	23,532	28,306	50,445	32,236	160,708
Total	268 585	244,323	251,301	538,755	222,648	1,525,612
Less ballasting			14,001	66	84,046	98,113
Balance	268,585	244,323	237,300	538,689	138,602	1,427,499

S. F. HODGSON,
Mechanical Accountant.

D.—PRINCE EDWARD ISLAND RAILWAY.

Mechanical Department.

Statement showing the number of Locomotives, and of the various classes of Cars and other Rolling Stock, on June 30, 1899.

	Classification of Cars.																
	Locomotives.	1st Class.	2nd Class.	Combined 2nd and Baggage.	Postal and Smoking.	Combined Postal & Baggage.	Baggage.	Pay Car.	Vans.	Box Freight.	Refrigerator Car.	Stock.	Platform.	Total.	Snow Ploughs.	Flangers.	Totals.
On hand, serviceable, June 30, 1898	20	17	6	6	1	3	3	1	3	165	....	10	124	339	8	4	12
Condemned, July 1, 1898	1	..	..	..	..	..	..	..	..	..	....	..	1	1	..	3	3
Total	21	17	6	6	1	3	3	1	3	165	....	10	125	340	8	7	15
Transferred as follows:—																	
1st Class to 2nd Class	....	1	1	....	..	....	..	....	....	....	....	....	....	....	....	....	....
Combined 2nd Class and Baggage to Baggage	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....
Total	21	16	7	5	1	3	4	1	3	165	....	10	125	340	8	7	15
Condemned July 1, 1898	1	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....
" during the year	....	....	1	....	....	....	....	....	....	....	....	....	5	6	....	....	....
	1	....	1	....	....	....	....	....	....	....	....	....	6	7	....	....	....
Built and charged to capital	....	....	....	....	....	....	....	....	....	....	....	7	....	7	....	....	....
Rebuilt and charged to renewals	....	1	....	....	1	....	....	....	....	....	1	....	4	7	....	....	....
To be rebuilt	1	....	....	....	....	....	....	....	....	....	....	....	2	2	....	....	....
Serviceable and repairing	20	17	6	5	2	3	4	1	3	165	1	17	123	347	8	7	15
Total	21	17	6	5	2	3	4	1	3	165	1	17	125	349	8	7	15

S. F. HODGSON,
Mechanical Accountant.

E.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

COMPARATIVE STATEMENT of the Expenses of the Mechanical Department for the Year ended June 30, 1899.

—	1898.	1899.
The miles run by trains were	252,894	263,335
" engines were	327,424	336,830
" cars were	1,340,114	1,427,499
" snow-ploughs were	4,947	5,161
	$ cts.	$ cts.
The cost of locomotive power was	56,520 66	58,464,56
" repairs to cars was	19,690 72	16,949 90
" " passenger cars was	7,885 15	7,663 96
" " postal and smoking cars was	2,109 06	3,557 28
" " freight cars and vans was	7,838 66	5,728 66
" labour, oil and waste for packing was	798 25	770 24
" repairs to snow-ploughs and flangers was	1,059 60	347 43
The cost of locomotive power per 100 miles run by trains was	22 35	22 20
" " " " engines was	17 26	17 35
" " " " cars was	4 22	4 09
The cost of repairs to cars per 100 miles run by trains was	7 78	6 43
" " " " engines was	6 01	5 03
" " " " cars was	1 47	1 19
The cost of labour, oil and waste for packing per 100 miles run by trains was	0 31	0 29
" " " " engines was	0 24	0 23
" " " " cars was	0 06	0 05
The repairs to passenger cars per 100 miles run by trains were	3 12	2 91
" postal and smoking cars were	0 83	1 35
" freight cars and vans were	3 09	2 17

S. F. HODGSON,
Mechanical Accountant.

PRINCE EDWARD ISLAND RAILWAY.

RETURN of Accidents and Casualties which have occurred in Canada on the line of the Prince Edward Island Railway during the Year ended June 30, 1899.

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1898.												
Aug. 3.	12.10 p.m	.....	Mixed ..	F. Kelly.....	D. Pound.....	10	Ellerslie	Julius McDonald.	Employee	Fell between tender and car while shunting, died a few hours after (engine passed over one leg).	One leg severed from the body.	Accidental.
Nov. 7	5.15 a.m..	Special.	Freight...	G. Tanton...	J. Dalziel. ...	17	Royalty Jct ..	A. Stetson....	Employee	Sprained ankle while shunting.	....	
" 8	.....	8	Mixed	J. McDonald.	J. Hunter . ..	7	Alberton	J. Howatt....	Employee	Slipped while alighting from engine striking switch.	Side injured.	
Oct. 1	....	12	Express ..	T. K. Stanley.	H. Sutherland	18	On train.....	John McLauchlin	Employee	While unloading a trunk at St. Peters cut his hand with zinc covering.	Died from blood poison, October 30, 1898.	No inquest.

No. 2

CROW'S NEST RAILWAY

MACLEOD, ALTA., N.W.T., October 1, 1899.

SIR,—I have the honour to present my second annual report on the condition of the line and the works on the Crow's Nest Line Railway during the fiscal year of 1898-1899 and up to October 1, 1899.

The railway was given under contract to the Canadian Pacific Railway Company to be constructed and equipped for a subsidy of $11,000 per mile from Lethbridge to Nelson, the total amount of subsidy not exceeding the sum of $3,630,000.

The line to be opened for traffic on or before December 31, 1898, as far as the south end of Kootenay Lake, there providing train transfer facilities, without transhipment, not later than that date, from that point to Nelson, B.C., the service to be kept up until the balance of the road to Nelson was completed and put in operation for public traffic, the contract allowing them until December 31, 1900, to complete it.

The first portion of the contract was completed before the expiration of the time limit, the line was opened for traffic and operated on with a full and satisfactory equipment of rolling stock, with all necessary transfer steamers and barges carrying car-loads of freight unbroken to Nelson, as per contract.

The second division of the contract, which requires that portion of the line from the south end of Kootenay Lake to Nelson, B.C., to be built before December 31, 1900, was not sufficiently revised in its location until this date, to warrant the work being put under contract construction and owing as well to the wet and stormy effects of the past spring and summer weather on the constructed portions of the line, necessitating the holding of all labour to finish and give increased strength to the road-bed, so as to put it beyond all possibility of disturbance from such extraordinary severe rains as has this year been experienced; the consensus of opinion giving a decade to such visitations.

Since my last annual report, the finishing up of the work of construction has been vigorously carried on in the face of trying weather, it being nearly continuous into the month of September. The following are some of the results of the season's work:—

Previous to my last annual report the line and its sidings had rails laid over it from Lethbridge to Kootenay Lake, 26 per cent being of 73 lbs. to the lineal yard, and the balance of 56 and 60 lbs. This year the company have laid steel guard rails around maximum curves which terminated or ran onto bridges and trestles.

Three trestle bridges have been added during the past season to the structures required to pass extreme freshet water, between Pincher and Cowley sidings. In a number of cases extra end bracing of trestles has been done in addition to the standard design requirements, as well as being increased in length where the ends of embankments had suffered from rain, scour and shrinkage.

The concrete to support Howe truss span bridges, as well as where it is used in guard piers and river ice breakers, has shown no weakness or unstable qualities at any point. The bridges yet to be permanently supported with this artificial stone are well advanced; their completion before the end of the season is practically assured.

Permanent riprapping of all concrete structures is now going on, those in the larger rivers having been attended to and now about completed. I am pleased to say that under this year's severe test, have any of the culverts, trestles or bridges failed to do their designed work.

The last of the temporary trestle filling, which is at the east approach of the Elk River bridge, is well advanced and nearing completion.

A commencement has been made at the filling in of permanent trestles. Where some of them are used, the original surface of the depression crossed has had the appear-

ance of natural drainage, but having been severely tested this year and given no sign of drainage being required, the company are filling them in, the desire being to make as much solid embankment as it is possible to build.

Where temporary trestles have been filled, the embankments are being made much wider than is required in the contract, the ballasting as the consolidating goes on being very full. This work is in progress and about completed.

At all points near the Michel Creeks, Elk River and Duck Lake embankments that were likely to be touched by extreme high water, strong riprapping made from the large boulders that have accumulated in coarse gravel cuttings and which were drawn to the work by train service, has been built during the season.

All passenger stations, sectionmen's houses, repair and machine buildings, are well designed and suitable for an enlarged traffic. Elevated coal pocketted chutes and water tanks of 40,000 gallons capacity have been built at terminal points that are much beyond the present needs, in anticipation of an increased traffic.

Large ice houses were erected and filled during the past season. They store ice in quantities that cannot be used should the business of the road increase to four times its present volume.

Additional freight sheds have been built this year to accommodate the fast increasing requirements demanded at established growing centres.

The line is now fully served at the terminal points with the best standard turntables, as well as having auxiliary turning locations served with wyes. Among the appurtenances added during the season are oil buildings, sand houses, well equipped with drying apparatus. Supply railway store buildings and large commodious boarding houses have been put up, all of them being attractive in design and creditable in all respects. The requirements, as specified in the contract for buildings, have been more than filled over this line.

As the rise in the water of Kootenay Lake, in extreme years, has been known to reach 32 feet from its low water stage, the company have driven cluster piles on the upper side of the trestling that carries the line across the south end of the lake to its western terminus, so as to prevent the structural work being reached by any drift wood or floating objectional bodies. This system of protection has been used liberally around the ends and approaches of the transfer slip, which is situated at the main channel of the river discharge, with satisfactory success.

In excess of the stipulated clearing, according to contract, already done, the company have cut down during the past season various areas of timber at several points, over soils that are composed of clay gumbo, which is near and extends across the line of railway. This was done with a view of lessening the severe action of a sudden freshet, by giving the Chinook winds full play to minimize the depth of snow during the winter months, thereby leaving very little to be removed when the melting weather occurred.

In my previous annual report I stated that I was retaining part of the subsidy to cover the cost of flattening slopes should the pitch to which they were taken out to not be sufficient to prevent the sides of cuttings from coming in after being subjected to a yearly test.

The experience in the interim of my annual reports, owing to the severity of rains that this newly constructed railway has been subjected to, has shown the necessity of changing the prism side lines in similar soils where the physical features are different as they are on this long line of prairie and mountain railway. The reducing of slopes and making wider bases in cuttings, now about completed, necessitated during the past season the concentration of almost all available labour at this work, as well as at the road-bed proper, where composed of light prairie or clay gumbo soils. Although the season's work has been an expensive one, carrying on this work, it has resulted in the embankments being strongly consolidated having extra width, better slopes than diagram lines asked for in the contract, with the formation bases liberally covered with ballast and to a much greater depth than specified in their agreement.

Among some of the various soils that the cuttings have been made through, flatter slopes have had to be given to ensure permanent solidity and safety. Between Lethbridge and Macleod the cemented material that had to be blasted owing to its hard and

compact nature has stood well with its sharper slopes than 1½ to 1, the only weakness shown being in the loosened and fractured portions caused by the dynamite when liberating the prism contents, which eroded slightly through the force of the rain storms, the cleaning up of which was satisfactorily completed during the past season.

In all cuttings east of the Crow's Nest station where composed of firm dry compact soil the slopes that were taken out less than the general slope of 1½ to 1, have where they seemed weak been flattened and put beyond doubt as to their security and permanency. At present between Pincher and Cowley stations an outcrop of treacherous clay in the cuttings west of the South Fork of the Old Man River is having a further reduction given to its upper slopes.

West of the Crow's Nest station quite a number of cuttings that classed as being composed of cemented material have shown weaknesses from clay and filtering sand layers cutting into the general mass, which compelled the widening of bases and reducing the slopes as much as is possible to allow without affecting the mountain sides along which these cuttings lay. I may say that this class of work is now practically finished.

Where gumbo or running clay composed the soil that cuttings were made through the study of its action under different climatic changes to secure lasting results to the road-bed, had to be kept up throughout the season. The most obstinate case dealt with was in the Michel Loop where a steam shovel had to be worked all winter and well on to the summer. This cutting was properly drained on top of its slope, had its prism excavated below formation and its base made double the width called for by the terms of the contract, and had good slopes, yet under the continuous rain of the season it required attending to in order to keep its hill slope from being troublesome to the tie bearing supports at the centre line. In other cases cuttings composed of this soil have been successfully treated by having 12-inch sheet piling driven at the foot of the slope on the upper side of the cuttings resulting in a firm bearing for ballast and track; in some places it liberated filtering water below formation thereby lessening the danger of slips or disturbance under the ballast.

Where the soils at formation continued to keep moist, excavations below grade to the depth of three feet have been made and broken stone packed in over the full width of the bottom or base, with satisfactory results.

Since finishing the ballasting of the line. the steam plant with its train service has been at work mainly in cuttings composed of the gumbo soils. Their work has been used in widening cuttings at grade and cutting off the lower slope to formation along river shores, the benefit of this treatment giving the shortest and quickest drainage to freshet water in bad seasons by means of deep cross drains and drain boxes below formation.

In a great many cases where embankments have had to be made with a percentage of the clay soils from the adjoining cuttings, 12-inch sheet piling has been driven at the top of the slope of the low side with successful results.

In the finishing work that has been carried on lately has been the proper sloping and extra widening of gravel cuttings suitable for ballast, in some of them the widening has been all on one side of the centre line with a view of reducing still further the curvature in anticipation of swifter speeds, the material excavated being liberally used to improve earth embankments and give extra lifts to the permanency of the track.

Greater widths than specified by the contract have been given to embankments at points where the original surface in their vicinity has shrunk, cracked or su side caused evidently by the action of subterranean drainage.

In reference to the finish of the cutting slopes, I may say that owing to the good work done this season and the severe weathering they have undergone, that they are now the natural ones necessary for safety and permanency and come within the meaning of the clause governing the pitch.

In the greater part of the finishing work over the shrunken embankments carried on by trains hauling from pits of the best ballast, the lasting and substantial character is assured.

All the prairie fire-guards on both sides of the railway have been reconstructed as well as increased in width.

Lately a survey examination of the mountain spur which is near the junction of the east and south branches of Michel Creek, that forced the using of sharp curvature on the operated line, has been made with a view of benefiting the alignment and its feasibility in point of cost, the principal work to be done being an open cutting composed of mixed soils and rock spurs.

Since the line has been put into operation twelve spur sidings have been laid to lessen the cost of loading commodities at mines, sawmills and stock and hay centres.

Since the branch line was built at Fernie to its mines, two others have been put under construction which will be put into operation before the end of the year. One runs from Cranbrook up the St. Mary's River to the Sullivan and North Star group of mines, and the other from Sparwood to the lately opened coal mines on the south side of the Michel Creek.

Although the line has been in operation less than a year, coal mines at Fernie and Sparwood have been marketing their output and in a short time the newly developed Crow's Nest Lake coal mines will be in a position to ship its mined commodity.

At different points on this railway seven sawmills are working steadily. The developing of mineral mines is being prosecuted with energy at many points near the railway, three of them are already shipping ore to the Nelson and Trail smelters and before the year is out as many more will be sending their output to these smelters. A concentrator of 150 tons capacity per day is now starting to work near Moyie City, another as well as a compressor are in course of erection in the same district.

At Fernie, Cranbrook, Moyie City and Creston the population of these new business centres is established and is fast increasing, Fernie having at present about two thousand people.

The traffic facilities and available rolling stock is ample and if anything in excess of the present requirements.

The completion of all work requiring to be done in accordance with the terms of the first portion of the contract has been vigorously carried on and will be completed before the end of the year.

I have the honour to be,
Your obedient servant,

GEO. R. L. FELLOWES,
Supt. Engr. C. N. L. Ry.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer Railways and Canals,
Ottawa.

No. 3

RAILWAY ROUTE TO THE YUKON

NOTE.—The plan, profile and album of views referred to throughout this and following Reports on Surveys are on file in the Department of Railways and Canals.

OTTAWA, ONT., February 8, 1899.

SIR,—I have the honour to transmit you my report upon the explorations in connection with the western division of the proposed railway route to the Yukon district, carried out under your instructions during the past season.

Accompanying this report are:

1. Plan showing explorations from Dease Lake toward head of Stikine River.
2. Profile from Dease Lake to the Stikine River.
3. Album of photographs.
4. Sketch plan of country adjacent to proposed route from Finlay Rapids to Lake Teslin.

I left Ottawa on June 23, having received my instructions from you the previous day, and arrived at Vancouver on the 28th, travelling via Canadian Pacific Railway.

The interval while waiting for the sailing of Canadian Pacific Steamer *Tartar* for the north, was fully occupied in engaging men for my party, purchasing pack horses, camp outfit and supplies.

The *Tartar* left Vancouver at 2 a.m. on July 8, touched at Victoria en route, and reached Wrangel, Alaska, on the 11th. Close connection was made here with the river steamer *McConnell* of the Canadian Pacific Railway Company's line, which sailed the following morning at day-break, arriving at Glenora on the 13th, where she remained over night, and finally landed us at Telegraph the morning of July 14.

On pages three to fourteen of the album are photographs of some of the charming views and grand scenery on the Stikine River, between Wrangel and Glenora.

The river lies generally in a valley of one to two miles in width, bounded by hills and mountains with many snow capped peaks, while between the river and the foot hills are numerous well wooded bottom-lands. A few glaciers lie close to the river, the most remarkable being the 'Big Glacier,' several miles above the International boundary, of which a number of good views were obtained.

An idea of the difference between high and low water on the Stikine, at a point as near its mouth even as the boundary, may be had by comparing the two views of the North-west Mounted Police station, on page three, one taken on July 12, and the other on the first day of October.

Views 261 and 256, page 11, show the little steamer *Mono* on which we started from Glenora on our return trip, tied up in the beach below Little Cañon—having lost her wheel by reason of snags and low water in the river.

During the very low stage of the river in the latter part of September, the *Mono* was acting as relay, from Glenora to a point some five miles below Little Cañon, to the steamer *Casca* whose draught would not permit of her ascending the river beyond the latter point.

The accident to the *Mono* occurred fortunately near the point of relay, so that the transferring of passengers and cargo to the *Casca* was easily accomplished the following day.

The navigation of the lower Stikine is accompanied with considerable risk and danger even, during the latter part of the season, from snags and low water. During the high water period it becomes a question of the power of steamers plying on the river, to stem the large body of swift water, and make successfully the sharp narrow bends in the channel, while avoiding drifting trees and snags.

We were delayed some time at Telegraph, breaking-in and shoeing the pack horses, hunting for a number of the wilder ones that had got beyond control of the men and strayed among the hills and ravines, and getting things into shape generally for the trip inland. Here I secured as guide, a young Indian who had spent several seasons trapping and shooting on the upper Stikine, and was familiar with that country. He proved a reliable man, and rendered good service throughout the trip.

On the map accompanying my instructions, the railway route proposed for exploration is indicated as following down the Stikine River, from the head waters of the main stream, to the mouth of Tahltan River, ascends this river to its head, and thence proceeds northward by a series of small lakes and streams to Teslin Lake. A branch line to Telegraph and Glenora is also indicated, following the Stikine from the point of diversion of the main line at the Tahltan.

Making Telegraph the initial point of my track survey, and datum for barometric readings, I proceeded up the Stikine River by the pack trail on the right or north bank, leading to Dease Lake, with the intention of following this trail as far as the Tanzilla River, crossing this river as near its mouth as practicable, thence continuing up the Stikine as far as the length of the season would permit.

It was found expedient to change this programme on reaching the Tanzilla, as will be noted later on.

EXAMINATION OF THE STIKINE VALLEY BETWEEN GLENORA AND THE TANZILLA RIVER.

The section between Glenora and Telegraph, while not demanding excessively heavy work, would necessitate a considerable amount of side hill cutting in rock as well as earth, with trestling, if the line were brought into the vicinity of Telegraph Village.

Photos. on pages 15, 16 and 17, are views taken at different points on this section. Nos. 34 and 35 show the cañon through which the First South Forth enters the Stikine from the south, and the terraced banks of that side of the river. In No. 32, at the bend in the river, are seen the high cliffs (ramparts) of basalt that crop out along the right bank for half a mile at this point.

Telegraph Village, on a narrow flat at the mouth of Telegraph Creek, is shown in view 50, while Nos. 41 and 38 are views of the gorge through which this creek flows to the Stikine.

No. 44, page 16, is a view of the banks on the opposite (south) side of the river, and the snow tipped mountain range in the distance.

From Telegraph, following up the Stikine Valley, to the Tanzilla, the river flows through a series of cañon, generally with precipitous walls of basalt, from which terraces reach back to the mountains that hem in the valley. These terraces are more pronounced on the right bank, they lie at various heights, and are cut through by deep cañons carrying tributaries to the main river.

On pages 19 and 20 are views of the cañons between Telegraph and the Tahltan River, and on page 21 views showing the junction of the Stikine and Tahltan Rivers. The steep trail leading down the right bank of the Tahltan, and the bridge over this river at the trail crossing, Nos. 59 and 55, are shown on page 22, as well as the rocky cañon, nearly 200 feet deep, through which this river rushes just before reaching the Stikine (Nos. 60 and 245).

The cañon of the Stikine above the Tahltan is shown in the two pictures, 54 and 244, page 24; while page 23 gives three views of the left wall of this cañon, noted by Dr. Dawson as showing the different series of basaltic flows, and underlying older gravel deposits, through which the river has cut its way.

Photo. 239, page 24, is a view across the valley, a couple of miles above the Tahltan; in it can be seen the basaltic cliffs on the south bank of the river. Photo. 238, page 24, and 61 and 62, page 25, are other views of this valley, between the Tahltan and Tuya rivers.

The next river entering the Stikine Valley is the Tuya. In speaking of this river in his report on the 'Yukon District and Northern British Columbia,' Dr. G. M. Dawson says: 'The Tuya Valley, where it is crossed by the trail, is a great gorge, about 600 feet in depth, cut out through the terrace deposits. The river which is

spanned by a small bridge, is a wild torrent, almost a series of cascades. Its scarped banks show a section of about 400 feet of the terrace deposits.'

The photographs on page 26 are good views of what Dr. Dawson describes in this quotation.

The zig-zag trail up these scarped banks is well shown in photo. No. 66. Nos. 236 and 237, page 25, are views of this same cañon nearer the Stikine.

Some eight miles above the Tuya, the Tanzilla River cuts its way through a deep rocky gorge into the "Great Cañon of the Stikine," which may be said virtually to commence near Telegraph Creek, where photo. 30, page 17, was taken, looking up the river.

Photos. 85 and 86, page 27, are views of this cañon and the Stikine Valley immediately below the Tanzilla mouth. Photos. 87, 95 and 96, views of the cañon at the mouth, and 89 a view of the cañon a short distance above the entrance of the Tanzilla. Photo 91 shows the rock-walled Tanzilla gorge at its mouth.

The photographs I have referred to, give a good idea of the valley of the Stikine River from Glenora to the Tanzilla River.

Although the construction of a railway line over the section from Telegraph to the Tanzilla would not involve continuously heavy work, the crossings of the Tahoton, Tuya and Tanzilla rivers would demand very expensive structures if the line were located on the right bank of the Stikine; while if located on the left bank, a crossing of the Stikine would be necessary, probably above the Tahltan, and so involving also a crossing of this latter river, in the extension of the line to Telegraph and Glenora. In addition, this 'Great Cañon of the Stikine' is reported to extend eastward beyond the Tanzilla, fully 30 miles, and this portion of the Stikine Valley itself to be so difficult of passage, that Indian hunters ascending to the upper river waters, make a long detour, passing around these 30 miles by trails well inland, either north or south.

This part of the river is said to remain open throughout the coldest winters.

My examination of the Stikine Valley up to the Tanzilla River would alone have impelled me to search for some other more practical route. When with this is taken into consideration his 30 remaining miles of cañon extending up the Stikine, making in all some 60 miles from Telegraph, or 48 from the Tahltan, of cañon country, demanding very expensive work on the portion examined, with a probability of the other 30 miles being at least no more favourable for railway construction, I concluded that it was imperative some other and easier route should be looked for and obtained if possible, even though it should prove a radical departure from the one outlined in my instructions.

While at Telegraph I made inquiries regarding trails and possible railway routes to Lake Teslin, of several old residents of the Cassiar District, among them a Government official who had spent a number of years in the Dease Lake country. Later on I met a Hudson Bay official, who for some years had been stationed on Dease Lake, and had travelled across the intervening country to Teslin Lake.

From the information given me by these two officers, as well as from interviews with prospectors who had been up the Tuya River to its head waters, it appeared to me quite probable that a fairly good route could be obtained from the head or south end of Dease Lake to the head of Teslin Lake. This proposed route, as indicated on the sketch plan accompanying this report, would follow the west bank of Dease Lake to Thibert's Creek, ascend this creek to the Tuya watershed, cross the Tuya River at the lower end of the large lake where the river heads, thence across a low flat country to a branch of Fifteen-Mile River, and finally down this branch and river to Teslin Lake. A trail between these two lakes follows approximately the route outlined, over which prospectors have made the trip in seven days during the past winter.

Admitting that these favourable reports are to be relied on in a general way—a view I felt justified in taking—it remained for me to find a feasible route from the head of Dease Lake, south or south-eastward to some point on the Stikine River above the Great Cañon.

The season being too far advanced to allow of my examining the country between Dease and Teslin, and also that between Dease and the Stikine, I decided to proceed with the exploration of the latter section, particularly, as upon the result of this

exploration would depend the possibility even of using the Dease and Teslin section, as a link in the through railway route.

Accordingly, I continued the track survey and barometer readings, begun at Telegraph, to the head of Dease Lake, as this work did not retard the daily progress of the pack train. Here I found my barometer observations gave an altitude for the lake of 2,750 feet above the sea, a difference of ninety feet in excess of that given by Dr. Dawson; however, considering the distance from Telegraph—72 miles—this variation is not out of the way, and I therefore retained the altitude obtained by my barometer.

As noted, the track survey was continued from the vicinity of the mouth of Tanzilla River to Dease Lake, by way of the Government Pack trail, in the Tanzilla Valley. This valley is about a mile in width, and runs nearly N.E. and S.W., its southerly rim or border being formed by the foot hills of a prominent range of mountains, called by the Indians "Ho-tai-luh".

On the north too this valley is hemmed in by mountains extending from Dease Lake about 28 miles in S.W. direction, or to a couple of miles below Riley's, where this range turns north and forms the east rim of the Tuya Valley.

Between Dease and Riley's are four large creeks flowing into the Tanzilla from the north in narrow valleys cut through these mountains. The most easterly one being Eight Mile Creek, a wide rapid stream, lying in a valley of a quarter of a mile in width, that extends apparently a number of miles north-westerly.

From Caribou Camp, 36 miles from Dease Lake, a trail leads to the upper valley of the Tuya, but is reported to be swampy, rocky, and generally a hard one on pack animals.

On pages 29 and 30 of the album, are views in the vicinity of Caribou Camp, on pages 31-34 are views of the Tanzilla Valley, taken between Caribou and Dease Lake. In a number of these the Hotailuh mountains stand out prominently, especially in Nos. 99 and 100, taken at Riley's, where these mountains approach closely to the river, and present a particularly high, barren-topped member, whose height diminishes as we ascend the Tanzilla, until opposite Dease Lake, it has become a long, low ridge. (See photo. top of page 34).

Arrived at the head or south extremity of Dease Lake, I made this the initial point for the explorations to the Stikine River, and thence, following up the river, to a point 111 miles distant from the lake.

For purposes of description the route explored is divided into the following four sections, viz. :—

(*1.*) *Dease Lake—Tanzilla River Section*—15 miles—(Zero to the 15th mile.)
(*2.*) *Gnat Creek Section.*—18 miles—(15th to 33rd mile.)
(*3.*) *Ptarmigan and Moose Creek Section*—26 miles—(33rd to 59th mile.)
(*4.*) *Stikine River Section.*—52 miles—(59th to 111th mile.)

(*1.*) *Dease Lake and Tanzilla River Section.*—(*Zero to the 15th mile.*)

Dr. G. M. Dawson, Director of the Geological Survey of Canada, in his report on the 'Yukon District and Northern British Columbia.' writes as follows (p. 73):—'Dease Lake has an elevation of 2,660 feet above the sea, and lies nearly due north and south on the 130th meridian. It has a total length of twenty-four and a third miles, with an average width of rather less than one mile, being somewhat narrower at the northern, than at the southern end . . . . The country about the lake is everywhere wooded, though trees large enough for lumber are found only in sheltered valleys or on low land. It is not roughly mountainous, though several prominent summits occur. With the exception of these and some other nameless mountains, the country near the lake is merely hilly, or rises in long, light slopes from the shores to undulating wooded uplands, a few hundred feet only above it, which coalesce with the bases of the mountains. Only near the northern end of the lake do the mountains begin to crowd down more closely to the water's edge. The lake is shallow and marshy at both ends, but is elsewhere evidently very deep, though no soundings have been made in it. Rock exposures are infrequent along the margin of the lake, which, when scarped, generally shows only stratified, sandy, clayey and gravelly terrace deposite . . . . .'

From this description of the country bordering on Dease Lake, there are evidently no serious obstacles to railway construction along its west shore, where the proposed route to Teslin Lake would pass.

On page 35 of the album of photographs are views looking down the lake from its head—in No. 224 Mounts McLeod and Sullivan are seen to the left, while in the centre of the picture, faintly outlined, is Beady Mountain. These views give an idea of the topography on the upper or southern portion.

Mining operations in the northern part of the Cassiar district have centred round Dease Lake,—which is connected with Telegraph, at the head of the navigation on the Stikine River, by an excellent pack trail, while Dease River gives a good boat route northward into the Liard River country.

Should a railway route to Teslin be adopted via Dease Lake, this latter would become an important distributing centre—and contribute a large traffic to the road, possessing as it does easy communication with an extensive mining district.

With the initial point of section I at Dease Lake, as previously noted, the projected line starts on the hill-side just west of 'Lake House' (view No. 111, page 35) at a point 20 feet above the lake elevation, and follows the west or left bank of a small stream flowing into Dease Lake, on a rising grade of 28 feet per mile, for $3\frac{1}{4}$ miles, to the summit between the Tanzilla waters, going to the Pacific Ocean, and the Dease waters flowing to the Arctic. This divide is but a narrow low ridge of coarse gravel and old water worn stones, yet it has served to turn the Tanzilla River entirely from its previous course, which, if continued, would have carried the river directly into Dease Lake, whose waters lie 70 feet lower than the river bed at this point.

At this divide lies the big bend of the Tanzilla River, where emerging from among snow tipped mountains on a north-west course, the river swings sharply round to a west bearing, and then more gradually merges into its general south-west course to the Stikine River.

On page 34 of the album, is a view of this big bend of the river, and the wide Tanzilla Valley,—as seen from the hills north of the trail. Glimpses of the river through the trees can be seen along its course,—from the right of the picture towards the centre, where it has swung away from its mountain course leading towards Dease Lake, after cutting through the sharply outlined high gravel ridge, that here forms the eastern spur of the Hotailuh Mountains (photo. 229, page 34).

The Tanzilla Valley turns away from the river, at this bend, and veering to the north, merges into the wide basin of Dease Lake (photo. 222, page 34).

Passing over the divide at the $3\frac{1}{4}$ mile, the line ascends the Tanzilla, on its right or east bank, to the $12\frac{1}{4}$ mile, with a grade of 64 feet per mile to the 8th mile, and thence by one of 50 feet per mile. The line then crosses to the left bank of the river and gradually climbs the bluffs, on a grade of 127 feet per mile to the 15th mile, at the north entrance or lower end of Gnat Creek Valley.

On this section, up to the Tanzilla River crossing, the construction may be generally classed as fairly light earth work, material coarse gravel on the first 4 miles, with finer gravel and gravelly clay on the remainder.

At the $9\frac{1}{2}$ mile, where the river passes through a short narrow cañon-like ravine, with steep sloping banks on the right, and a sharp wedge-shaped mass of basaltic rock on the left (photos. 115, 116 and 221, page 36) a rather heavy side-hill cut will be necessary for about 500 feet, with protection works at the foot of the slopes.

The river crossing will require two spans of 100 feet each, on masonry abutments and centre pier.

From the river crossing to the 15th mile, there will be considerable side-hill work, generally in light gravel, with rock, both loose debris and solid, at spurs of the hills. This rock is basaltic and apparently broken into irregular masses even in the ledges, making it comparatively easy to handle.

The timber on this section is small, poplar, spruce and black pine as a rule, although a considerable quantity of good fair sized spruce was seen on the river flats.

On page 36 are views of the little cañon at the $9\frac{1}{2}$ mile and of the river just above it. The latter view shows some good timber on either side of the river. Photos.

118 and 224, page 37, give views of the upper part of the Tanzilla near the proposed river crossing. Where it is a rapid mountain stream, generally wide and shallow, rushing over a rock-strewn bed, with a grade of 50 to 65 feet per mile, fully double that observed on the lower part of the river.

The alignment of this section will not call for curves in excess of a possible maximum of 10 degrees.

(2.) *Gnat Creek Section.*—(15th to the 33rd mile.)

Entering the valley of Gnat Creek at the 15th mile, the projected line continues its ascent on the previous grade of 127 feet per mile to the 17½ mile, where the valley begins to broaden into the wide mountain-hemmed basin shown in photos. 122, page 37, and 124 and 219, page 38.

Through this basin the line is carried in the general direction of the creek, on a rising grade of 34 feet per mile to the 21st mile, near the upper end of Gnat Lake, thence it rises at the rate of 75 feet per mile to the 25th mile, then at 110 feet per mile up to the 27½ mile. There the basin which had begun to contract into a narrow valley at the 26th mile—(see photo. 130, page 30)—becomes still narrower, and somewhat tortuous in the creek bottom (photos. 131, page 38 and 132, page 39), as well as decidedly steeper, necessitating a grade of 158 feet per mile to the 30th mile, or head of the Creek Valley (photo. 133, page 39), where the stream splits into three small ones. At this point the line touches the margin of a wide treeless plateau, extending a long distance to the south (photo. 134, page 39) and skirting the edge of this plateau, in a south-east direction, follows the base of a series of high, bare hills to the 33rd mile, on a rising grade of 56 feet per mile. Here, with high treeless hills to the north, and rocky mountain sides and cañons on the south, the line attains its maximum elevation —5,300 feet above the sea, or 2,550 feet above Dease Lake.

The first two and a half miles of this section will call for fairly heavy work along the side hills, with occasional cuts through spurs of basaltic rock, and masses of rock debris. Thence to the 26th mile, the work will be light, clay and gravel, with a short cut through a ledge of basalt near the 22½ mile (see photo. 123, page 37) and a few crossings of the main creek and its tributary streams, by ordinary timber trestling. From the 26th to the 30th mile the work will be chiefly on the side hills, entailing considerable loose rock debris, as well as short cuts of solid rock at the little cañon (photo. 131, page 38), and through other spurs, in ascending the upper part of this narrow valley. Here a certain amount of trestling will be required to eliminate too sharp curvature. From the 30th to the 33rd mile the work can be classed as generally light, with the probability, however, of more or less loose rock on the last mile.

This section is practically through a treeless country, although timber of medium size was observed on the lower hill sides, bordering the wide basin portion of the valley to the west. Stunted spruce and poplar are found at spots along the creek, and occasionally on the side hills of the narrow valley.

The curvature on this portion of the line will be light, excepting between the 27th and 30th miles, where a moderate amount of sharp curvature will be required to lessen quantities in construction. This curvature, however, as previously noted, could be kept from becoming excessive by the introduction of trestling, but on account of the total absence of timber in this locality, it would probably be better to put in rather sharp curves during construction with a view of reducing them later on.

(3.) *Ptarmigan and Moose Creek Section.—(33rd to the 59th mile.)*

Leaving the main summit at the 33rd mile, on a falling grade of 50 feet per mile to 39th mile, the projected line reaches the rim of the valley of Ptarmigan Creek by a cañon-like ravine, in which lies a small lake emptying into the creek, passes round the south-east angle of the bare hills lying to the north, and descends along the south-west face of the valley to the head of Ptarmigan Creek. A bleaker and more desolate spot

than the head of this creek could not be found on the entire route, as the view of this point shown by photo. 218, page 39, forcibly testifies.

Turning through a half circle at the head of the creek, the line then descends the valley on benches that lie between the left bank of the creek and the bases of the mountains, on a grade of 157 feet per mile from the 39th to the 49th mile. Passing near the 44th mile, the mouth of a valley half a mile or more in width, that extends northward, between high, bold, rock-faced mountains, for a long distance. (See photos. 137 and 140, page 40.)

At the 49th mile the line crosses over into the valley of Moose Creek, on a falling grade of 33 feet per mile to the 50½ mile, and then begins the ascent of this valley, on the right or north bank of the creek, by a grade of 24 feet per mile to the 57½ mile, opposite Moose Lake, and a further rising grade of 43 feet per mile to the 59th mile. Here the line has reached the head of Moose Creek Valley, forming a low summit on this, its north side, while its south slope merges rapidly into the steep hill sides that here constitute the north walls of the Stikine River Valley.

Photos. 138 and 141, page 40, are views looking down Ptarmigan Creek. The first taken from the upper level of a bench at the 44th mile; the second, taken at the 46½ mile, shows the high mountain with patches of snow near its summit, lying south of the junction of Ptarmigan and Moose Creeks. A view down Moose Creek Valley towards the forks of these creeks is shown in photo 142, page 44, on the same page, photo 143 shows Moose Lake, a small pond at the 57¼ mile; and photo. 144 is a view over the low summit (59th mile) looking south towards the valley of the Stikine, with a glimpse of distant mountains on the far side of the valley.

On this section patches of loose rock will be encountered from the 33rd to the 36th mile; and between the 35th and 36th mile a large accumulation of rock debris occurs at the east angle of the mountains.

The next two miles along the hill side will entail mediumly heavy earth and rock cuttings.

Following down Ptarmigan Creek small deposits of rock debris are met with, but the benches are generally of clay and gravel, with rock near the surface in places.

Several smaller streams are crossed, requiring only ordinary trestling.

On that portion of this section lying in the valley of Moose Creek, the line will need to hug the hill sides pretty closely its whole distance, as the valley itself seems generally wet and boggy.

Masses of gray granite in irregular blocks, crop out occasionally on these slopes, and although this rock is nowhere far from the surface, yet no doubt a line can be obtained practically free from anything in excess of light rock work.

After passing the 40th mile, timber is abundant but is chiefly of small to medium size (see photos. on pages 40 and 41).

Low trestling only will be required for the stream crossings.

Good alignment can be had in general throughout this section, sharp curvature (10 degree to 15 degree curves) being necessary only between the 35th and 36th miles. The loop at the head of Ptarmigan Creek, involving a loss of distance, is introduced in order to keep the grade on this creek below 158 feet per mile (3 per cent).

The explorations to the end of section 3, that have just been noted, fully demonstrate that a practical route can be had from Dease Lake to a point on the Stikine River, above the Great Cañon, and one, too, demanding but a limited amount of construction work classed higher than mediumly heavy.

The portion between the 25th and 49th miles, which contains the severest grades, might possibly be eliminated, by a line striking more directly south towards the Stikine River from the vicinity of the 25th mile, through a valley coming in here from that direction. From the 30th mile too, there is apparently an opportunity of reaching the Stikine by way of the barren plateau, noted as extending south from this point. To decide this matter further explorations would have been demanded, which were not then considered necessary or expedient.

(4) Stikine River Section, 52 miles. (59th to 111th mile).

From the 59th mile the projected line descends, for a mile south, on the east side of a narrow valley through which Beaver Creek flows to the Stikine River, it then turns eastward following down the side hills, that here forms the north walls of the river valley, on an average grade of 143 feet per mile to the 64th mile. These slopes are well timbered, and excepting some short outcrops of gray granite, will not necessitate other than medium work. (Photos. 146 and 217, page 42 of album show views of these side hills).

At the 64th mile the line crosses Jones Creek (photo. 227, page 42) a wide rapid stream carrying a large volume of water, and reaching the level of the river flats, has not fairly entered the Stikine Valley. As compared with this same river valley between Telegraph and the mouth of the Tanzilla, a complete change in its topographical features has taken place. There the Stikine rushes through cañons and deep gorges with towering cliffs of basalt, here it flows quietly in a wide valley, with timbered flats, flanked by wooded banks rising to two hundred feet and more above the water. Beyond these on either side of the valley, the country appears broken and rough, without defined mountain ranges. A few isolated peaks are seen of which, Ben Nevis, shown in photo. 217, is the most prominent. Its southern peak could be seen, even from the river flats, at points many miles up the valley.

The Valley of Jones Creek, which enters the Stikine at the 64th mile, is about a mile wide at this point, and contains a considerable amount of white spruce reaching 18 and 24 inches in diameter. Here we found bushes of red and black currants in profusion, loaded with most delicious fruit. This valley is defined on its east side by three cone shaped mountains, named 'The Three Sisters,' with summits probably 1,200 feet above the river (see photos. 146 and 228, page 42). The crossing of Jones Creek will require two spans of 50 feet on masonry abutments and pier.

The Stikine River has a width of 300 feet opposite the 62nd mile where it first comes into view (photo. 217), flowing rapidly in a single channel. At the 64th mile it is spread out among numerous sand bars, with a bed fully quarter of a mile wide, and retains these conditions for the next two miles (photos 148 and 150, page 43).

From the 64th to the 65th mile the line crosses the south end of Jones' Creek Valley, cuts through a narrow ledge of gray granite at the 65th mile, and skirting one of the minor river channels for half a mile, enters a wide timbered flat (photos. 153 and 226, page 43), on which it continues to the 69¼ mile, passing round the south end of a sharply defined gravel terrace at the 68½ mile. Photos. 152 and 155, page 44, are views of this terrace, the broad flat lying on three sides of it, and the wide sweep of river inclosing them.

At the 69¼ mile (see photo. 154) the line strikes a land slide from the face of a prolongation of this same terrace eastward, extending up the river half a mile.

This mass of earth has evidently slipped bodily from the terrace onto a then existing narrow flat between the terrace and the river, as the river was not apparently blocked by the slide. It then settled into place without a general disturbance of its surface, where the trees are still erect, forming a secondary terrace 30 feet above the river, on this the road-bed could be placed with probable security from further displacement of the mass.

The picture shows a stratum of hard sand on the cut face, a few feet above the water, that has evidently retained its original horizontal position notwithstanding the disturbance.

Passing round the angle of this terrace the line crosses another flat to near the 71st mile, follows a narrow foreshore along the river for a half mile, then enters the flat seen in photo. 225, page 44. Near the 72¼ mile a low outcrop of granite forces the line again close to the river, near which it continues to the 73rd mile. Here the line cuts through a narrow ridge of gravel and sand, and leaving the river takes a nearly direct east course over an extensive flat to the 77¼ mile.

This flat, at its widest part, reaches a mile back from the river to a basaltic outcrop at the foot of the bluffs; it contains a considerable tract of fine white spruce, and

has several good hay meadows. Through its north-west portion a large shallow slough meanders, with quantities of coarse grass along its borders.

Beavers have made this slough by damming a small stream issuing from the hills near the 75th mile

Photos. 158, 159 and 160, page 45, are views of this slough from points on the line. No. 159 shows one of the beaver dams where recent work was evident, and where too the beavers have ingeniously built their dam so as to incorporate a large boulder in the structure.

At the 77¼ mile the line again strikes the river, which for the last 10 miles has run in a single channel of about 300 feet, but now widens, and for the next four miles occupies a bed, often half a mile in width, with numerous channels and many gravel bars, some bare, others covered with a dense growth of willows.

The line now passes over an old mud slide for about a mile in distance. Photo. 162, page 45, gives a general view of this slide, while photos. 163, 164 and 165, page 46, are detail views of the same.

As will be seen from these views, the slide lies in a nearly horizontal body from the cut banks at its head to the water's edge.

These cut banks (photos. 163 and 164) show a shallow deposit of clayey earth overlying a continuous series of hard sand strata that stand with an almost vertical face. From this it may be assumed that no further slip of consequence is likely to occur, except possibly into and along the bottom of the ravine in photo. 164, where the slide appears to have originated.

The main river channel touches the west portion only of this slide, and does not seem to have a marked errosive effect.

The whole mass is evidently solid and compact, and would safely carry the roadbed, which should be placed some distance back from the river edge, in view of a possible cutting of the slide by high water.

For the next half mile the line lies on the slope of the hill sides, which here extend down to a narrow channel of the river, dry except at extreme high water.

The foot of the bank may require light protection works at points on this channel. The line then crosses a mile of flat, containing considerable heavy cottonwood, and at the 79¾ mile cuts through a spur of the hills that reaches to the river. On the angle of this spur a recent earth slip has taken place (photo. 166, page 46), necessitating a short piece of medium heavy cutting.

At the 80th mile an older land slide of about 1,000 feet in length is crossed, as well as a short piece of another slide at the 80½ mile. These both appear settled and compact, and able to safely carry the road bed. On neither of them will more than light earthwork be required.

Photo. 169, page 47, is a view of the first of these slides, as seen from a short distance further up the river. The peculiar 'hummocks' into which the clay was thrown where these slips took place, are shown in photos. 168, 216 and 172. The mounds were originally sharp-edged pyramidal masses of hardened clay, now weathered into smooth cone-shaped forms.

Photo. 173, page 48, shows an angle with vertical faces of hard stratified sand, at the 80th mile, left at the top of the slide, where it broke away, a loamy gravel deposit caps the sand strata.

Photo. 170 is a view up the river from the 80¼ mile, showing the wide sand bars covered with low willows to the right and heavy timber on the main land to the left.

The line now traverses a flat from ten to fifteen chains deep, fairly well timbered with spruce, reaching to the 81½ mile, where a low outcrop of conglomerate is met with. This rock comes to the water's edge, shelves into the river below the water level, and extends along the bank some 500 feet. It lies nearly flat, with several strata of sandstone running horizontally through it, and is, in general, sufficiently low to allow of the road bed being carried on its surface, by making a few shallow cuttings.

Photo. 174 gives a view of this outcrop, reaching from the dark heavy timber, on the left of the picture, to the cut bank along the river edge above.

The line is then taken some 600 feet across the face of this cut bank, on which, at about 25 feet above the water level, appears a belt of stratified sand, resembling that

shown in photo. 173. This stratum of hard sand serves to check any further tendency of the bank to cut away, and would no doubt by its tendency to stand with a practically vertical face, greatly lessen the work in side-cutting, necessary to place the road bed along the face of this bank. Protection works at the foot of the bank slopes will be required here.

Photo. 175, page 49 taken from the trail, gives a better view of this cut bank, than the previous picture, being a half mile nearer.

The horizontal bed of sand just referred to, can be seen, faintly marked across the bank in this view. The flat, partly submerged bed of conglomerate, shows here, near the middle of the river channel, forming a long, shallow rapid.

The line then continues on the slopes and narrow foreshore, passing over a slide of some years since, as evidenced by trees four to six inches in diameter now growing on it, which appears safe, solid and reliable for the roadbed.

Near the 84th mile the line crosses Cottonwood Creek, a shallow, rapid stream with low gravel banks, flowing through a valley half a mile or more in width, that extends a considerable distance northwards.

Rising out of the heavily timbered flat at the mouth of this creek, the line passes over a low gravel terrace lightly timbered, and near the 85th mile cuts through a narrow ridge of sandy gravel, showing rock not far from the surface. At the 85th mile it is carried some 800 feet along the face of a cut bank (photo. 177, page 49), and then over half a mile of old land slide.

The photos. on page 50 give views of this cut bank and slide.

The slide has the same characteristics as those previously described, and like them will safely support the roadbed. At the foot of the cut bank protection works will be needed to guard the slopes during periods of high water.

Photo 179, page 51, gives a partial section of this bank, showing horizontally stratified sand overlaid by coarse gravel and earth.

From this slide the line follows the river closely up to the 88¼ mile, it then crosses a sparsely timbered flat reaching to the 89th mile. From the hill side at this point views 186 and 187, page 52, are taken, looking down the Stikine Valley, and view 188 looking across the river to the plateau and hills on the opposite bank.

At the 89th mile the side hills slope directly to the water's edge, and carry, low down, an outcrop of basalt and sandstone, extending to the 89½ mile. Over this half mile some shallow rock cuttings only will be necessary, as the roadbed can be placed generally on the surface of the outcrop. But at the 89½ mile a high irregular mass of conglomerate is met reaching well out into the water, and necessitating a heavy cut some 200 feet long.

Crossing a short bit of flat the line again strikes an outcrop of conglomerate, extending up the river for half a mile—fortunately its top is nearly flat, not over twenty feet above the water level—and so admitting of the roadbed being carried on its surface with light work in general.

Photo. 214, page 52, gives a view of this outcrop, with the river along its base, looking west down the valley.

The line now follows the river closely to near the 91st mile, then cuts across a bend, on a flat at the foot of high conglomerate cliffs, turns round the east angle of this bluff onto a narrow strip of flat and foreshore, which takes it to the 93rd mile. Here the line strikes a high bluff of conglomerate and sandstone, from 30 to 50 feet above the water at the river edge, requiring about 600 feet of mediumly heavy cutting in two sections of 200 and 400 feet respectively.

Photo. 190, page 53, gives a view of the down-stream face of this bluff. Opposite this point the river runs in a single channel of approximately 200 feet in width.

Emerging from this rock cut, the line is carried near the foot of the bluffs and close to the river for a quarter of a mile, when it turns away from the river, which here bends sharply to the south-east, but still follows the base of the now diminishing bluffs to the 94th mile, then crossing half a mile open, sparsely timbered flat it is again gradually hemmed in between the river and high cliffs of conglomerate, with ample room, however, up to the 95¼ mile.

At the 95½ mile, Schreiber Cañon is crossed. This is a deep ravine with high vertical cliffs of conglomerate at its mouth, changing to steep, partially wooded slopes and cut banks quarter of a mile further up. A small creek runs through the ravine to the river, carrying many boulders of granite, conglomerate and sandstone in its bed.

To reduce the quantities of rock excavation at the cañon mouth the grade of the line rises to it from the 95¼ mile, taking side hill work up to within 500 feet, then a heavy cut will be necessary east and west of the cañon, ten to twelve hundred feet in length, depending in quantity on the grade adopted.

This crossing will require a structure of 75 to 100 feet span.

Photographs 195 and 196, page 54, are views of this cañon, showing the rock walls at its mouth and the cut banks a short distance up the ravine, where the pack trail was made.

At the 96th mile two short cuts through another point of these conglomerate bluffs will be necessary. Thence to the 97th mile the line is carried on a low terrace, overlying this same conglomerate formation, which, however, is now cropping out only at the water level.

At the 97¼ mile the line crosses a river 150 to 180 feet wide, with a rapid current and clear cold water. This unnamed stream I have called Blair River. It issues from among the high mountains to the east-north-east, and from the volume of water discharged into the Stikine must drain a considerable watershed.

The Stikine River from the 64th mile, where the projected line first touches it, has a general course almost due east and west to the 91st mile, thence to the 96½ mile, it flows south-west, then having swung through an arc of 90 degrees, and received the waters of Blair River, it takes an average N. W. and S. E. course to the 111th mile.

Photo. 213, page 54, gives a comprehensive view of this big bend in the Stikine River, with the mouth of Blair River to the left, at the angle of the bend, and in the distance one of the mountains lying to the south of this last river.

Photos. 197, 198 and 199, page 55, give nearer views of the junction of these two rivers.

Photos. 191 and 194, page 53, show the wide flat around which the Stikine makes its big bend, and in the far distance the rugged mountains lying towards the upper waters of Blair River.

On an island opposite the 97th mile were found the only traces of white men seen during our explorations from Dease Lake. Half buried in sand and debris were the remains of a pair of rubber boots, a well-worn rocker-bottom of sheet iron, and a rusty gimblet of the old type. Evidently search for gold has been made in these upper waters of the Stikine, but with what success no one appears to have heard.

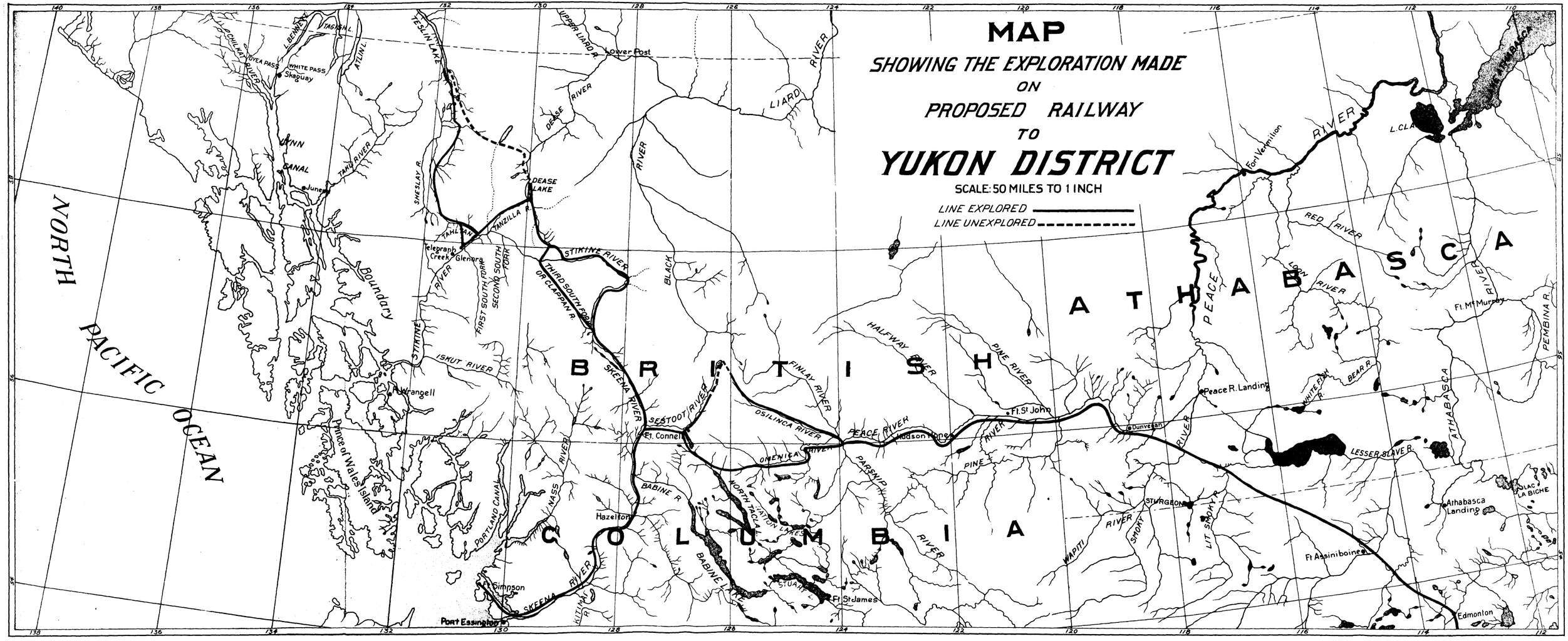
For the crossing of Blair River two spans of 100 feet will be necessary. From here the projected line takes a direct course to the 101st mile, over a wide timbered flat forming the delta of these two rivers. A considerable quantity of excellent timber is to be had here, and any amount of good feed for horses and cattle; the soil too seems generally of good quality.

Between the 97th and 101st mile there are no bluffs on the east or right bank of the Stikine—but on the left bank opposite the 99th mile, the hills forming the south margin of the big-bend plateau, again reach the river, this time in the form of a low rocky ridge, as shown on the photos. 201 and 211, page 56, and bending round to the direction of the river follow it closely up to and beyond the 111th mile—(photos. 201 and 211, page 56.)

At the 101st mile the bluffs that skirt the south and east limit of Blair River Valley reach the right bank of the Stikine with a sharp apex of high red granite cliffs near the river. These bluffs then follow the river closely to near the 106th mile, with similar high granite outcrops at several points.

From the cliffs at the 101st mile photos. 202 and 203, page 56, were taken. The timbered flat over which the line is carried from the 101st to the 102nd mile is shown in 202, while 203 is a view south across the river to a distant mountain with patches of snow or glaciers near its summit.

From the 102nd to the 105th mile the line keeps near the river on narrow flats or low terraces at the foot of the bluffs, without any feature of moment, excepting a short


MAP
SHOWING THE EXPLORATION MADE
ON
PROPOSED RAILWAY
TO
YUKON DISTRICT
SCALE: 50 MILES TO 1 INCH
LINE EXPLORED
LINE UNEXPLORED
NORTH PACIFIC OCEAN
BRITISH COLUMBIA
ATHABASCA
Boundary
Prince of Wales Island
Port Essington
Fort Simpson
Hazelton
Fort Wrangell
Juneau
Shaguay
White Pass
Dease Lake
Telegraph Creek
Glenora
Lower Post
Fort Connell
Fort St James
Fort St John
Peace R. Landing
Dunvegan
Fort Vermilion
Fort McMurray
Fort Assiniboine
Athabasca Landing
Edmonton
Hudson Hope
Stuart L.
Babine Lake
North Tacla Lake
Lesser Slave R.
Lac La Biche
Liard River
Dease River
Upper Liard R.
Tesla Lake
Lynn Canal
Taku River
Stikine River
Third South Fork or Claeppan R.
First South Fork
Second South Fork
Tahltan R.
Tanzilla R.
Black River
Skeena River
Nass River
Portland Canal
Babine R.
Ismut River
Sestoot River
Osilinca River
Finlay River
Halfway River
Pine River
Parsnip River
Peace River
Onenica River
Wapiti River
Smoky River
Lit Smoky R.
Athabasca River
Red River
Lobstick R.
Pembina R.
White Fish R.
Bear R.
L. Cla
Great Slave Lake

cut through the toe of a granite cliff at the 103½ mile. At the 105th mile the line is forced for about 500 feet along the face of a cut gravel bank, necessitating heavy side hill work with protection at the foot of the slopes. Here, at the toe of the cut bank, although the bed of the river is wide, the main channel is contracted and the current very swift. An out-crop of rock just above the water's edge has prevented further encroachment of the river on the banks, and would form a foundation for what protection works are found necessary here.

At the 105¾ mile an outcrop of red granite reaches the water, requiring a side cutting of some 300 feet in length to carry the line through (photos. 205 and 206, page 57).

The projected line then passes on at the base of a high wooded terrace, to the 109¼ mile where it crosses a rapid mountain stream defining the eastern limit of this terrace.

Photos. 206 and 210, page 57, show views of part of this terrace, the first looking up the river towards it, the other looking down the river from a point on it, across the wide timbered flat lying on the opposite side of river, between the 107th and 108th miles.

From the 109¼ to the 111th mile the line is carried at the foot of the wooded bluffs, on low terrace-like narrow flats. At a few points the hill sides, reaching to the river edge, force the line into partial cuttings on their slopes through a generally gravel and clay formation.

The Stikine River from the 97th to the 111th mile has a general width of about 200 feet, increasing to 300 in places.

Photos. 207 and 208, page 58, are the most easterly views taken of the river, 208 looks up the river, nearly in a south direction from bluffs behind the 111th mile, showing in the distance no change in the general topographical features from those of the country recently traversed. My Indian guide stated that for 30 miles and more the river wound through a similar country, and then entered among mountains, reaching finally a low summit, on the other side of which was a large lake discharging to the eastward.

At this point, owing to the lateness of the season, I was forced to discontinue my explorations, and reluctantly leave unanswered for the present, the interesting question, 'To where will the head waters of the Stikine lead?'

Regarding the grades of the projected line over this section, it is sufficient at the present to state that the grades of the river vary from 11½ to 16 feet per mile (with small rapids at a number of points) and the topography of the valley is such that low grades can be obtained in general with light work.

Grades in excess of 26 feet per mile, but not necessarily over 52, could no doubt be advantageously introduced at a number of places on this section to lessen the quantities in construction.

The minor streams crossed do not call for other than ordinary trestling, the more important ones have been considered in the general description.

On this section there is a large amount of good sized timber, spruce and cottonwood, on the river flats. The side-hill timber is smaller, and chiefly poplar, with small pine scattered among the poplar on the higher terraces.

The explorations from the 64th mile have been, in a measure, confined to the right, or north and north-east banks of the Stikine, on which the track survey was made. However, I have taken note, as far as possible, of the conditions obtaining on the opposite banks, where it would seem there are fewer serious obstacles to a railway line, such as rock exposures and mud slides, over the portion between the 64th and 97th miles, than on the right bank. Still it would not be safe to assume that such is really the case. But above the 97th mile the work of construction would be more difficult on the left bank, where the flats are narrower and of less extent, the hill sides generally rocky and steep, and the conditions less favourable than on the right bank.

A more detailed examination of the left bank should be made, between the 68th and 99th miles, in connection with future preliminary instrumental surveys.

It is possible that the most economical location would be obtained by crossing over to the left bank below the 69th mile, and remaining on that side up to the vicinity of the 99th mile, then re-crossing to the right bank. By this change the crossings of Blair

River near the 97th mile, and of the mouth of Schreiber Cañon, about two miles lower down the river, would be eliminated. These would practically offset the crossing of the Stikine at the 99th mile, leaving the lower crossing of the Stikine, below the 69th mile, as the one heavy piece of bridging to be considered in comparing the relative cost of construction on the two sides of the river between the 68th and 99th miles.

In favour of the south bank must also be taken into account a considerable saving in distance by cutting off the big bend of the Stikine below the 99th mile, as the line in this case would keep along the base of the hills at the south margin of this flat.

GENERAL REMARKS COVERING THE WHOLE 111 MILES.

MATERIAL FOR CROSS-TIES.

An abundance of timber suitable for ties can be obtained at a number of points on the first fourteen miles south-east from Dease Lake, and adjacent to the proposed route. But from the 14th to the 40th mile there is no such timber nearer than one or two miles from the line. However, for this portion, ties would doubtless be hauled by construction trains from the nearest source on that portion of the line already built. From the 40th to 59th mile, there is a sufficiency of the timber near the route, and from the 59th to the 111th mile, an abundant supply can be obtained along the proposed line.

TRESTLE AND CULVERT TIMBER.

An ample supply of timber for these purposes can be had on the Stikine River flats, also on those of the Tanzilla River, although the supply on this latter river is much more limited. The timber referred to is spruce, of pine there is none whatever of sizes suitable for construction.

STONE.

Stone for construction purposes (bridge piers, abutments, &c.) can be had within reasonable distance of the site of the proposed crossings.

BALLAST.

Good gravel ballast was found at numerous points along the route.

GRADES.

The grades on the entire distance of 111 miles may be proportioned as follows :—

Level and up to 1 per cent—74 miles, or 67 per cent of the whole distance.

1	per cent	to	2	per cent—	11¾	"	10	"	"	"
2	"		2½	"	7¾	"	7	"	"	"
2½	"		3	"	17½	"	16	"	"	"

APPROXIMATE ESTIMATE OF COST.

An approximate estimate, based on prices in Eastern Canada, of the cost of construction (road-bed and permanent way) of these 211 miles, may be made at the following rates :—

74 miles at $14,000 per mile	$1,036,000
32 " 23,000 "	736,000
5 " 35,000 "	175,000
Steel bridges on masonry abutments and piers	75,000
Total	$2,022,000
Average per mile	$18,216

N.B.—It must be clearly understood that these figures are for similar work in the East. The uncertain prices for labour, transport and supplies in the North-west preclude the possibility of arriving at a definite price for construction in that part of Canada.

As already noted, the explorations were discontinued at a point distant 111 miles from the south end of Dease Lake, being approximately 247 miles from Lake Teslin via the Dease Lake route, and 286 miles via the Tahltan River route; showing some 39 miles in favour of the former route. In addition, it should be specially noted that the route via Dease Lake eliminates entirely that portion of the Stikine River valley known as the "Great Ca on," to which reference has been made in the earlier part of this report.

In conclusion I would state, that during the three months between sailing from Vancouver and returning there, my party covered 1,670 miles of travel by ocean and river steamers, and about 400 by trail.

183 miles of track survey were made in connection with the explorations.

The whole respectfully submitted.

JOHN S. O'DWYER,
M. Can. Soc., C. E.,
Engineer in Charge.

OTTAWA, February 8, 1899.

To COLLINGWOOD SCHREIBER, Esq.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals.

OTTAWA, April, 1899.

SIR,—In compliance with your instructions received on June 19, I left Ottawa for Edmonton on June 20, 1898, where I intended to complete the field outfit required, and arrange my party.

The trip by the Canadian Pacific Railway was very pleasant, and I arrived at Edmonton, on June 24, having suffered no delay.

Immediate steps were then taken to hire competent men and to complete my outfit, and during my stay in this place, I took every occasion afforded me to gather information of the country I was about to explore.

As part of the exploration was to be carried out by water and part by land, particular discrimination had to be exercised in the choice of hands; horses and their outfits had also to be obtained, the purchase of which demanded considerable time. However, everything was in readiness, when the greater part of my provisions bought in Ottawa, arrived in Edmonton, on July 6.

In the meantime, finding that I would have to purchase too many horses to carry my outfit and provisions, weighing about 9,500 pounds, through the whole distance, and being already late in the season, I decided to let my freighting out to contract, being certain to save considerable time and money. I accordingly, through the medium of the Edmonton *Bulletin*, asked for tenders, many of which were received.

The price asked ranged from 11 to 21 cents per pound, for transportation of goods to Hudson Hope, that is about half-way on my work.

As the lowest tenderers, who appeared to be traders on Peace River, offered to do the work in less time than the others, and with first class guarantee, I made arrangements with them, and a contract was accordingly signed with Messrs. Brick Bros. for transportation to St. John at the rate of 10 cents per pound, and at 11 cents to Hudson Hope.

On July 8 at 4 o'clock p.m. everything was on its way to these points and I was ready to start with my party, which consisted then of Messrs. A. T. Kerr, Assistant Engineer, F. de C. Davies and T. P. Heatherington, companions, besides a cook, three packers and two axemen, who were also supposed to be good boatmen.

I had twenty-one horses, three of which belonged to my packers.

On the verge of our departure from Edmonton a load of hay, which was being drawn into the corral where I kept my horses, caused a panic among them and five or six of them ran away through the streets and neighbourhood. It was 8 o'clock p.m. before we could set out, and we camped four miles from the town.

We left camp early on the 9th, hoping to make a good day's journey, but we had barely left St. Albert village, which is situated nine miles from Edmonton, when a dog frightened one of the horses and there was again a general stampede. We lost sight of some of our horses, and the remainder of the day was spent searching them. It was only next morning that we could resume our journey. Beside the delay thus occasioned, the loss of a certain quantity of provisions was also sustained, principally canned meat, carried away by thieves. Bacon was the only kind of meat left us for our journey as far as Lesser Slave Lake.

After travelling quietly all day on the 10th, we camped near Qui Barre River, on an Indian reserve, 29 miles from Edmonton.

On the morning of the 11th we left camp at 8 o'clock. The temperature was high all forenoon, and in the afternoon a frightful thunder and hail storm broke upon us. At 4 o'clock the first thunderbolts were heard, then it began to rain and hail, and shortly after the storm was raging. Hail the size of pigeon's eggs covered the ground to several inches thick; the wind was blowing with great violence, tearing and throwing down large trees by our sides. This was more than sufficient to start my nervous horses again, and many of them darted through the woods and quickly disappeared. Fortunately,

after the storm we found the horses with their packs undisturbed, resumed our march and in the evening reached Lake la Nonne, where we pitched our tents.

Having on the 11th travelled nearly 30 miles, on account of scarcity of water we stayed in camp all forenoon on the 12th to let the trail dry and allow the horses to take some rest. Advantage was taken of this delay to catch pickerel and pike, which abound in the lake, thus adding variety to our menu for a few meals.

Three miles from this lake we crossed Pembina River on a ferry. On the banks of this river I met a gentleman named G. McDonald, of Montana, who was established there since spring and had cleared enough land to cultivate a nice little vegetable garden. Upon examining same, I noticed some vegetables that were in a very promising condition. He gave me a few bunches of lettuce that were highly appreciated by the party.

Owing again to the scarcity of water in this region, we had to march till 10.45 p.m. before we could find water for the horses. We reached Paddle River and camped at an approximate distance of 72 miles from Edmonton.

Up to this date, July 13, we had travelled through a partly open prairie country, excellent for agriculture, a large wooded tract extending over 60 miles is now before us.

In the afternoon of the 14th we crossed Athabasca River on the ferry, a few miles below Old Fort Assiniboine. Notwithstanding that the water was very high and the current swift, the river was crossed without accident, but the water was rising fast and by the next morning, having attained 14 feet, the ferry rope broke and the scow was carried away by the current.

On the evening of the 19th we were camped at the foot of Swan Hill. Since the 14th we had travelled through swampy country and in many places had to rebuild bridges which had been carried away by the flood.

On July 20 we went over the Swan Hills, which rise about 1,100 feet above the neighbouring country. No serious difficulty would be experienced I believe in constructing a railway in this region until the Swan Hills are reached, but here is an almost insurmountable obstacle which, however, might be avoided by taking a westerly direction towards Smoky River, where I am informed the country is almost level.

At noon on the 25th we reached Lesser Slave Lake, having travelled about 235 miles from Edmonton, or an average of about 17 miles a day.

A few of my horses being sick and others not seeming fit to continue the journey, I traded three of them and bought two others.

A much needed rest was taken while awaiting my provisions, which reached this place on July 30 via Athabasca Landing, Athabasca River, Lesser Slave River and Lesser Slave Lake.

On August 1, having taken a new supply of provisions, we left Lesser Slave Lake for Peace River Landing and arrived there on the evening of the 4th.

On the 5th we swam the horses across the river. The width of the river at this point is about 500 yards and the current is swift, but we managed to reach safely across.

We arrived at Fort St. John on the evening of the 17th. Everybody was in good health and the horses in good condition.

At St. John we were delayed three days waiting for our provisions, about 3,000 pounds of which were stored here to finish the work on our return to Edmonton.

On the 20th, having taken a sufficient quantity of provisions, we resumed our march towards Hudson Hope, where we arrived on the 23rd, at 8.30 p.m., the remainder of our provisions reaching us at the same time. The greater part of these were left at Hudson Hope, taking only what was necessary to reach the point where I was to commence operation and back to Hudson Hope.

On the 24th we began portaging our provisions over Hudson Hope portage, a distance of about thirteen miles.

On the very first trip we had the misfortune of losing one of our horses, which was frightened by a dog and ran away on the bank, then over a cliff into the river, where it was lost with its pack in a rapid.

On the 29th we were ready to leave the west end, that is the head of the portage, having had the good luck of finding there a boat, that we were able to thoroughly repair in a day, and sufficiently large to carry all our goods.

My head packer was then sent back to Hudson Hope with the horses, to send them to pasturage. The Hudson Bay post was not yet opened, and there were miners camped in proximity to the place where I had left my provisions, and many others were going up and down the river, so I decided to leave another man to look after the provisions until our return.

On leaving Lesser Slave Lake, a man had been hired for the purpose of towing our boat later, before leaving the head of the portage, towing being a very laborious job, and fearing a want of help, I hired another man who had considerable experience about the navigation of that river.

On August 29 we set out on our journey to ascend Peace River as far as the Finlay Rapid, a distance of about 78 miles.

The 3rd of September we reached Parle-pas Rapid, which was ascended without difficulty.

At noon on the 6th we were opposite Mount Selwyn, which appeared to me the highest point in the vicinity.

Wishing to obtain a general view of the surrounding country, I ascended the mountain accompanied by my assistant and one of my men. No trouble was experienced up to an elevation of 1,000 feet, but then the slope became very steep in some places. Between the elevations of 1,200 feet and 1,900 feet above the river, blueberries of excellent quality and extraordinary size were found. At the elevation of 3,000 feet no more trees are to be seen.

The summit, according to my barometric observations, is at 4,210 feet above the river, is completely barren of all vegetation, and on the north side of the neighbouring peak a large quantity of snow was seen.

On the south side of Mount Selwyn many snow-capped peaks were observed, but no valley was seen, and on the north side the country was of the same character, except that no snow was visible, probably on account of having before us that side of the distant mountains exposed to the sun.

The Peace River valley could be seen for some miles towards the east, and on the west the valley at the forks of the Finlay and Parsnip and the beginning of the west range was also observed.

Our return to camp was rather difficult, on account of a sudden cloudiness that occurred while we were passing through bushy encampments covered with fallen trees; we arrived at 10.30, just as a severe rain storm broke upon us.

On September 8 at 11.30 we reached Finlay Rapids; this point was as far as I intended to ascend with the boat, it being about one mile from the place where my exploratory observations were to begin on our return trip.

It was exactly two months since we left Edmonton, having travelled over 700 miles by land and water without any serious accident.

Beginning of Exploration.

8. On the day of our arrival, at one o'clock a.m., my exploration, properly so called, was begun. Accompanied by my assistant, I left for the forks of the Finlay and the Parsnip, but, on account of the width of the basin at the forks, the flatness of the country towards the west, and the slow progress that we were making through the thick bushes, I decided to return to camp.

9. I left early the next morning with my assistant and one man, and ascended Parsnip River in a canvas canoe, about 3 miles from its mouth. Here was found a convenient place for constructing a bride across the river, but the increased length of the projected line would have to be taken into consideration.

Finlay River was then explored for a distance of 6 miles, and at a late hour the same day we returned to camp with some difficulty, owing to darkness.

10. On the 10th I continued my exploration on the Finlay, but crossing Peace River, just below the rapids, and opposite to my camp. I took a north-westerly direction until we reached the foot-hills, which were then followed towards the west, reaching Finlay, at that point where we observed the hills in close proximity of the river, for the first time.

The route just travelled was practically level, rising slightly in the direction of the mountains, and deep coulées or creeks were crossed; we were then about 100 feet above the level of the river. Some slides being seen at a distance of a quarter of a mile on each side of us, while I noticed that the opposite shore of the river was so low as to be flooded at high water to the extent of half a mile distant.

Finding no suitable place on this river for the construction of a bridge, we returned to camp at 8 p.m.

12. On Monday, the 12th, I returned to the same place that had been visited on the Parsnip a few days before, and by means of the sextant, measured the width of the river, which was found to be 960 feet wide at high water and 550 feet at low water.

The bed of the river is composed of very compact gravel, affording an excellent base for the building of a bridge, which would have to be 950 feet long and about 32 feet above low water level.

The maximum depth of the water at that place is 4 feet, and does not rise more than 15 feet at high water.

A flat exists on each side of the river, that of the west side rises to about 5 feet above high water, while on the east side it is 7 feet.

For a distance of two and one-half miles, the construction of a railroad would be very light and with very little grading, the ground being absolutely level, but curves of a small radius would have to be introduced, on a total distance of about three-quarters of a mile. After the 2nd mile, the line could be constructed easily and at little expense, on the slope of a somewhat irregular plateau elevation of about 300 feet above the river. The line could follow the river for a distance of one-quarter of a mile below Finlay Rapids, only one light cutting through friable rock being necessary.

From Finlay Rapids as far as the 7th mile, a practically straight and level line could be built at the foot of a plateau, rising 150 feet above the river, but, owing to the marshy and soft condition of the ground in certain places, for the distance of about half a mile, the road-bed would have to be consolidated.

An alternative is also possible, through the plateau just referred to, the grade in this case being uniformly 30 feet per mile, until the level of the plateau is reached.

The plateau is perfectly dry and level for a distance of two and one-half miles, but in descending to the lower level, the construction would be more difficult and expensive.

Between the 7th and 8th mile, a high mountain rises near the river, but there is sufficient room, at its base, to allow a railway to be cheaply built, the stony and and clayey slope being generally of an easy grade, not above 75 degrees.

Only two small creeks have been crossed up to this point.

No serious difficulty is apprehended on the 8th and 9th miles.

The construction would not be expensive, as the country is composed of several plateaus, varying slightly in elevation, that is about 40 feet above the level of the low water.

At the beginning of the 10th mile there is a creek, necessitating the construction of a bridge about 75 feet long and 10 feet above the water.

On the east side of this creek, a point of land trends towards the river, where it ends in solid rock, at a height of 40 feet above the water, but it rises quickly. On account of this point the line should follow a curve of 10 degrees and pass through a cutting of a few feet in the rock.

For the distance of 400 feet, the river has a coarse rocky shore, which, however, presents no serious difficulty and should be easily blasted.

At the beginning of the 11th mile the river turns at almost a right angle towards the east, and as the mountain is very close to the river, besides a 10 degree curve, the embankment would have to be protected from the action of the water for a distance of 200 feet.

Along the 12th mile considerable cutting is necessary and the line should follow slight curves on account of rock ledges which extend for half a mile, to the edge of the river. Then a slidebank of sand and gravel, 200 feet long and 150 feet high, would necessitate a heavy side cut, but the expense of this work would be compensated by the use of the gravel as ballast.

At about the middle of the 13th mile another gravel slide bank 300 feet long is met, sloping at 38 degrees to a height of 200 feet.

The gravel found there is of excellent quality for use as ballast. From this point the side of the mountains are very steep, almost perpendicular in places, and close to the river there is sufficient space, however, for a line to pass where no considerable trouble should be experienced as the slope is generally very close to the river.

At the foot of Mount Selwyn, that is to say, at the beginning of the 15th mile it might be necessary to bore a tunnel of about 150 feet in order to avoid a snow slide from the side of the mountain.

For the distance of three-quarters of a mile, rock ledges rising from 20 to 90 feet are passed, but the slope of the rocks being only 30 or 35 degrees, no great expense should be incurred.

From this point to the 22nd mile, the ground is composed of a succession of plateaus varying in height from 30 to 100 feet above the low water level, and the rocky portions might easily be avoided.

Three creeks are crossed, one of which requires a bridge of 70 feet span, the other two are unimportant.

On the 22nd mile, a cutting in the rock, varying in depth to 30 feet by 400 feet in length. At this point a gravel bank 1,200 feet long, sloping at 35 degrees to a height of 300 feet. would furnish another supply of ballast for the line.

From the 23rd mile to the middle of the 30th mile, the ground is most suitable for the construction of a railway.

The various plateaus would be successively passed without excessive grading.

Where the mountains approach the river the plateaus are naturally higher, and the slope is about 35 degrees. Rock is seen in some places on the shore, but may easily be avoided almost everywhere.

Four bridges, varying from 15 to 70 feet in length, would be required over creeks in this section.

In general, the creeks are not deep, especially at their mouths, on Peace River, where sand and gravel bars have been formed in many cases rising out of the water and dividing the creeks into small channels.

On account of the shallowness of the creeks, bridges could be built very low.

The last stream crossed is a small river 60 feet wide named Clear-water River. It should be crossed by the line as close to the mountains as possible, on account of a large flat gravel bar near its mouth which is often flooded by the waters of the Peace.

From the Clear-water River to Parle-pas Rapids, there is no difficult or expensive construction.

The general rise of the plateau above low water does not exceed 50 feet.

Above Parle-pas Rapids the elevation of the river, high and low water, was determined with regard to the sea level, and was found to be 1,945 and 1915 feet respectively, showing a difference of 30 feet.

From the initial point of my exploration of the Parsnip River the difference of high and low water is about 15 feet, and no change is noticed until we reach the Parle-pas Rapids. Just below the rapids I notice a slight decrease which keeps about the same until we reach the beginning of the 70th mile ; here, I notice a slight increase, and continues to increase rapidly until we reach the beginning of the cañon ; at this point I find high water mark to be 40 feet.

This is no doubt due to the enormous accumulation of drift-wood collected in the narrow passage at the beginning of the cañon, which at certain seasons of the year, I have sufficient proof that the water is forced back up the river, a distance of 7 miles. The distance between Parle-pas Rapids to the 68th mile affords an excellent site for the construction at a low cost of a first-class railway line. The valley stretches

out, the plateaus are wider and of a more uniform elevation, the hills are lower with an easier slope, and above all the rock disappears. Three small streams have been crossed. One which is called the Wide Valley River would require a 60-foot bridge, but the other two are of much less importance.

From the 68th mile, within one mile below the first creek flowing from the west into the cañon, the line could be built with little or no difficulty, and even as far as the entrance of the cañon it would entail little cost.

Half a mile further into the cañon a part of sandstone plateau about 1,200 feet long seems to have faulted and fallen into the river, leaving a wide open gap, at the bottom of which large pieces of rock are piled up, presenting a very wild aspect.

Here considerable filling would be necessary. From this depression in descending the river the ground is nearly level for the distance of about half a mile; then there is a hill which the river seems to have cut in two, and the ground correspondingly rises to the height of 300 feet. The river at this point flows between perpendicular walls about 450 feet high. These walls are covered with impure and friable clay, and the mountain rises with a slope of 45 degrees to a plateau about 350 higher, or about 800 feet above the river. This elevation is constant for a distance of some 3,000 feet.

A stream of the same appearance as the river, coming in from the south-west, is 50 feet wide, and banks at an elevation of 400 feet are 450 feet apart at the top. On the other side of this stream another plateau rises at 622 feet from the water. This plateau extends for a mile along the river, with perpendicular walls 200 feet high, then sloping at an angle of 45 degrees to the top of the plateau.

Below this point the ground quickly falls several hundred feet, and keeps a uniform elevation for about 1½ miles.

By the cursory examination of this section of the country, I am safe in asserting that, owing to the almost insuperable difficulties and excessive cost, the opening of a curved tunnel 1½ miles long being necessary, it would not be advisable to attempt building a railway line in close proximity on the south side of the cañon.

An alternative line, and perhaps a less expensive and otherwise preferable one, might be passed as indicated by a broken line on my plan, but it would necessitate the erection of two single-span bridges six hundred feet long, and the grade, although very light for the greater part, would be about three per cent for a distance of 3 miles from the second bridge.

Endeavouring to avoid all these difficulties, I examined the country at a greater distance from the river, and with great pains went over a large section without, however, meeting with very much better results. Four creeks would require bridges, and the increased length of the line would render it very expensive. The first stream crossed on the 77th mile would have to be spanned by a bridge 350 feet long, including approaches, at a height of 100 feet; at the second stream, which is 25 feet wide at the bottom, situated at the 80th mile, a single span, 400 feet long by 300 high, would also be required. The banks of these streams are much of the same character as that of Peace River, that is to say friable sandstone covered by a bed of clay several hundred feet deep.

The country next in view is a perfectly level plateau, and for a distance of 2 miles leaves nothing to be desired from the standpoint of economy for the construction of a railroad.

To maintain a uniform grade the line should follow a kind of bay more or less indented by shallow gullies, then, turning around a hill, gradually drawing closer to Peace River.

At the middle of the 87th mile a gully 50 feet wide and 40 feet deep was passed, and a cascade 100 feet high, formed by several falls of about 20 feet each, exists on a large creek on the 88th mile.

A bridge 300 feet long, including approaches, at a height of 200 feet would be required over the stream in order to preserve a uniform grade of one and one-half per cent.

From there the line would gradually reach a level but marshy flat at an elevation which, by observation, I have found to be 2,402 feet above the sea. The line which I

have indicated from the 84th mile to the 91st (*vide* plan) would perhaps be a more practicable one, but I have not followed it through for want of time.

The first coulée that this projected line crosses is nearly 80 feet deep by about 100 feet wide, while a second one is 800 feet wide by 300 feet deep. The hills on each side slope at a small angle and are separated from each other by perfectly level plateaus.

From the 90th mile until the 107th mile is reached, the country is most suitable for a railway line—very few wet places are seen, and the only coulée worth mentioning is met on the 98th mile, where it is divided into two branches and is 30 feet deep, gradually increasing in depth towards the river.

Between the 95th and the 107th mile the line might be shortened, but then numerous depressions and coulées would need excessive filling and bridging.

An important stream which the line crossed at the 107th mile demands the construction of a somewhat expensive bridge, its depth being about 175 feet, but as the bed of the stream rises very quickly, it would no doubt be possible to deviate the line and find a less expensive crossing.

We are now one and a half miles south of Hudson Hope, which is situated on the east side of the Rocky Mountains.

Between the 107th and 139th mile, the most suitable location for a railroad would be along the base of an elevation of the ground, lying at about 3 miles south of Peace River in a parallel direction from Hudson Hope to Pine River. This elevation seems to divide the water, a small part of which flows in the Peace River, and the greater part in Morberly and Pine River, and cannot be higher than 2,700 feet above sea level.

Between this point and Peace River, there is a slightly undulating plateau about 3 miles wide at 2,400 feet above the sea—*i. e.*, about 750 feet above the river—but the undulations are not greater than 20 feet deep.

This plateau was formerly well wooded, but destructive fires have ruined the greater part of the trees, which seem to have been growing thickly and to an average size, especially on the south declivity.

There would be on such location very few marshes, and no streams or coulées to bridge.

Wishing to ascertain the nature of the country at a greater distance from Peace River, I explored the interior; as far as Pine River, taking a south-easterly direction from Hudson Hope. Several plateaus were noticed, one of which is 1 mile long and 200 feet above the river at 1¼ miles from Hudson Hope. The main plateau has an elevation of 2,472 feet above sea, increasing to 2,832 feet at a distance of 4 miles; but towards Moberly River, it is gradually falling to 2,622 feet at 9 miles from Hudson Hope, and to 2,400 at Moberly River, 14 miles from Hudson Hope.

This section of the country is dotted by small lakes and marshes, small hills rising variously to 300 feet above the level of the ground. It is also well wooded in certain places, a large extent being covered with prairie brulé, or with aspen and jack-pine undergrowth.

Between Moberly and Pine Rivers, there is high rising ground running in a south-westerly direction, partly covered with very tall white and black spruce.

Half of this tract of land just traversed may be considered favourable for agriculture.

The construction of a railway through this section, extending southward and beginning at a point 3 miles south of Hudson Hope, would be rather costly on account of marshes and numerous declivities, which could only be avoided by a considerable prolongation of the line.

Returning again to the main line and in order to cross Moberly River at its most economical point the line should be made to gradually descend after the 138th mile is reached, towards the river, following a very irregular slope of the bank, and on account of the irregularity of the bank heavy side cuts and embankments would have to be made at different places, for the distance of 7 miles, by so doing the grade would be about 1·56 per hundred.

It would be easy to cross Moberly River over a bridge the dimensions of which should not exceed 200 feet span and 40 feet above low water.

East of Moberly River a magnificent plateau half a mile wide at an elevation of 50 feet extends almost as far as Fort St. John, a distance of 3 miles.

Opposite Fort St. John, a cut bank 300 feet long would entail considerable work, but from here to Pine River, a distance of 5 miles, an almost continuous plateau raising at 40 feet above low water, would afford an excellent location for a railway.

As far as I could judge, the only point where Pine River could be conveniently crossed is at its mouth and a 300 foot bridge by 40 feet above low water would be required.

On the west side of Pine River the elevation of the plateau just mentioned I found to be 2,247 feet above sea, while on the east side a rocky hill extending along the river for several miles and 290 feet higher than the west bank, presents the appearance of a wall without the least opening. On the east side of this hill a deep ravine running parallel to Pine River for a distance of 5 miles is also an obstacle.

From Pine River and on the shore of the Peace a rise in the ground having the shape of a narrow plateau is cut at a distance of one mile by a coulée 120 feet wide; it widens gradually to one-quarter of a mile and then keeps a uniform width for about 6 miles. Its elevation is 70 feet above low water.

From this point, that is to say from the 160th mile, the slope of the bank is rough for one-half mile, and cut banks 30 feet high are met on the space of 4½ miles, but below this, the slope is easy and not too irregular. This section of the location would not be very expensive.

At the middle of the 160th mile another plateau begins 60 feet high rising gradually to 80 feet at the river called Mud River on Dr. Dawson's 'Map of an Exploration from Edmonton to the Pacific Coast.' The Indians call the River Kis-ka-pis-qua-sepi, which means Cut Rock River.

Cut Rock River is 50 feet wide at low water and 80 to 90 at high water; from one bank to the other at the level of the lower plateau the distance is about 800 feet and 1,600 feet at the level of the higher plateau; a bridge 100 feet long at a height of 50 feet would be sufficient, but would require a large cutting on each side of the river.

From this point easterly 2½ miles, there are cut banks and the slope very rough.

Just before the end of the 183rd mile is reached, the River D'Echafaud is crossed, which would require a bridge similar to that of the Cut Rock.

From this point it would be better to climb up on the main plateau, where the ground is level, permitting no difficulty, however, in the construction of a line of railway.

Further on, the surface of the ground is much more favourable, plateaus met varying little in their elevation.

At this point we were supposed to be at the east boundary line of British Columbia. But as there is no trace of it here, I continued my survey as you will see by my plan some miles further east.

From Pine River to the boundary line nine coulées are passed, none of which, however, except one is of considerable size.

A more general description of the portion of Peace River district explored may find its place here, in order to supplement the first part of this report by information obtained by personal observation and also through the courtesy of several persons met in the district.

The meeting of the Finlay and Parsnip Rivers takes place in a basin of small extent at low water but very large at high water on account of the neighbouring low alluvial flats which are undoubtedly flooded every spring, as evidenced by the numerous dry channels seen through them.

This flat ground which extends principally to the west is covered with a shrifty growth of poplar and spruce.

From the junction of the Finlay and Parsnip Rivers the Peace breaks through the eastern range of the Rocky Mountains. At first the valley is very wide, being about 15 miles but quickly becomes narrow at a distance of 5 miles below the junction. The valley of the Peace is about three-quarters of a mile wide varying to an average width of one mile until we arrive at Clear-water River when it broadens considerably to the extent of 3 miles and about 7 miles between the mountain top.

Notwithstanding that the mountains generally rise close to the river, the plateaus are numerous and the slope of the mountains reaches the water's edge on the space of one mile only.

Rocks are seen in some places near the river, but blasting worth mentioning would be necessary through a couple of rocky points only. The curves would be numerous, and some necessarily as sharp as 10 degrees.

Although the fall of the river is relatively uniform at 2 feet 6 inches per mile, the grade would vary considerably on account of the difference in elevation of the plateaus which would necessitate cuttings and embankments to large extent.

Between the forks and the cañon two rapids, one of which Finlay Rapids has a total fall of 6 feet in the space of one quarter of a mile. The other rapid called the "Parle Pas" and 30 miles further down, has a fall of 4 feet in a distance of 500 feet.

Besides these rapids there is a number of ripples having a few inches fall only and generally followed by sections of almost still water.

The south shore of the Peace is well wooded as far as the foot of the mountains, whose slopes generally very steep rise to about 5,000 to 6,000 feet above sea level. The north shore is not as thickly wooded and the timber is of smaller dimensions, but the general character of the two shores is very much the same.

Below Clearwater River the mountains are not so high, their slope is less abrupt, and gradually become easier as they near the cañon.

The plateaus are of a larger extent and of a more uniform elevation, the woods soon disappear on the north shore, but on the south side the mountains are well wooded, whereas the flats often covered with a growth of small poplars, are for the most part thickly covered with tall grass which proves the great fertility of the soil.

Below Wide Valley River, that is to say from the 52nd mile, the mountains shelving up regularly and at a small angle, the line might easily be made to ascend several hundred feet above the river if necessary.

Peace River Cañon for 10 miles in length is a serious obstacle to the construction of a railroad, owing to numerous creeks cutting their way deeply through the mountains whose base is friable rock.

The appearance of these narrow deep creeks at their entrance to the main cañon changes, however, at a distance of a few miles from the river, where the cut bank disappears and beautiful broadening valleys are in view.

Moreover, the mountains which are low and flattened near the river, seem to rise there as barriers preventing passage from one valley to the other; there being five in number, the highest of which rises to 3,192 feet above the sea level.

The base of these mountains have been mined by the water of these rivers, forming the walls of the cañon which are 400 feet high.

Rocky plateaus, resembling terraces rising at 140 feet above water, are also observed on both sides of the cañon between the mountains.

On the north-east side of the cañon the base of the mountain called 'Portage Mountain' runs from one end of the cañon to the other. Its shape is very regular and easy, becoming almost horizontal near the river.

The construction of a railway line would be easily accomplished if a crossing was made one mile below the head of the cañon, but in order to return to the south shore a crossing would have to be made at the middle of the cañon. A grade of 3 per cent would be necessary in order to reach the plateau extending from Hudson Hope.

In the cañon the river is not navigable on its entire length. The fall of the river for the first 10 miles is 20 feet per mile. There are numerous rapids and long stretches of still water.

Two of my men were sent up the cañon for a distance of 13 miles above Hudson Hope by canoe. The fall of the river in this stretch was found to be an average of 5 feet per mile.

The plateau lying south of the river between Hudson Hope and British Columbia boundary, as well as its slope towards Peace River extending 2 or 3 miles from St. John, has previously been described.

Between Hudson Hope and Deep Creek, which comes in on the north side of Peace River, the banks are much broken by small coulées and are very wide at their entrance.

High cut banks are also numerous, rendering railway construction almost impossible close to the river.

From the junction of the Finlay and Parsnip rivers to the boundary line on the Peace, as far as facility and economy of construction is concerned, there exists no material difference between the north and south shores of the Peace River.

I am of the opinion, however, that the south shore is preferable, except at the cañon, where a decided advantage would be in favour of the north shore if it was not for the two crossings of the river, and the three per cent. grade, as spoken of previously.

A fact worth mentioning is that 1 or 2 miles south of the river the bushes are much thicker than on the north side, especially below Fort St. John.

As to the climate, it is much warmer than usually supposed.

Summer and winter are passed into without much transition. The weather is warm and dry in summer, and the winter is not rigorous, although at times the thermometer was seen to fall to 60 degrees below zero, but such severe cold is not unbearable on account of the dry atmosphere.

The warm winds, called Chinook, are very frequent at the beginning and the end of winter, causing a quick thaw.

I was informed by the Hudson's Bay officials that the fall of snow during the winter does not exceed 2 feet. The river begins to freeze early in October, broken ice coming down the river in sufficient quantity to prevent the swimming of horses, and was frozen solid, except in the rapids, on November 24.

The following is a record of the temperatures registered at Hudson Hope by Mr. John Brown, of London, Ont., who arrived at Hudson Hope on August 26, with the intention of wintering there. From September 1 to October 18, the temperature has been taken probably at noon, but from October 18 to November 27, the maximum and minimum are given.

Date.	Temperature		Weather.	Date.	Temperature		Weather.
	Max.	Min.			Max.	Min.	
Sept. 1	42		Fine.	Sept. 27	19		Rain.
" 2	43		"	" 28	22		"
" 3	32		"	" 29	30		First snow.
" 4	22		"	" 30	21		"
" 5	29		"				
" 6	34		"	Oct. 1	26		"
" 7	30		"	" 2	24		½ inch snow.
" 8	34		"	" 3	22		Snow, 1 inch deep.
" 9	30		"	" 4	9		"
" 10	38		"	" 5	17		"
" 11	36		"	" 6	17		"
" 12	40		"	" 7	28		"
" 13	36		"	" 8	28		"
" 14	44		"	" 9	20		"
" 15	29		"	" 10	21		Fine.
" 16	24		"	" 11	22		"
" 17	24		"	" 12	21		"
" 18	43		Rain.	" 13	22		"
" 19	44		"	" 14	32		"
" 20	42		"	" 15	21		"
" 21	40		"	" 16	28		"
" 22	37		"	" 17	28		"
" 23	30		"	" 18	27	54	"
" 24	35		"	" 19	29	36	"
" 25	34		"	" 20	26	36	"
" 26	40		"	" 21	26	40	"

TEMPERATURE AT HUDSON HOPE—*Continued.*

Date.	Temperature		Weather.	Date.	Temperature		Weather.
	Max.	Min.			Max.	Min.	
Oct. 22	21	36	Fine.	Nov. 10	20	42	Snow, 2 inches deep.
" 23	24	28	"	" 11	24	46	"
" 24	9	24	"	" 12	18	37	"
" 25	22	27	Snow, 2½ inches deep	" 13	28	51	"
" 26	18	24	" 3 "	" 14	34	45	"
" 27	20	28	" 4 "	" 15	22	44	"
" 28	22	28	Fine.	" 16	23	38	"
" 29	21	29	Snow, 5 inches deep.	" 17	1	8	"
" 30	14	30	" 6 "	" 18	10	6	Snow, 6 inches deep.
" 31	10	26	" 6 "	" 19	13	4	"
				" 20	24	2	"
Nov. 1	7	44	Snow, 1 inch deep; Chinook wind.	" 21	41	17	"
				" 22	34	17	"
" 2	8	24	Snow, 4 inches deep.	" 23	35	15	"
" 3	13	20	"	" 24	34	12	"
" 4	6	24	"	" 25		20	Snow, 7 inches deep.
" 5	9	41	Chinook wind.	" 26	17	22	"
" 6	4	24	Snow only 2 in. deep.	" 27	4	14	Snow, 8 inches deep.
" 7	6	9	Fine.	" 28			
" 8	16	13	"	" 29			
" 9	13	36	Chinook wind.				

I will now give the approximate cost of this section of 201 miles of railways, exclusive of steel bridges. The work to be done could be classified as follows :—

Light work,	of which there is	135 miles.
Medium	" "	46 "
Heavy	" "	20 "

Cost of permanent way :—

Steel rails, 70 lbs., 110 tons at $30	$3,300 00
Angle plates, 30 lbs., 704 plates, 21,120 lbs. at 2 cts	422 40
Bolts, 1 lb. each, 2,108 lbs. at 3½ cts	73 98
Spikes, 5½ x $\frac{9}{16}$ inches, 6,500 lbs. at 2½ cts	162 50
Ties, 2,640 at 25 cts	660 00
Washers and rubbers	25 00
Track laying per mile	200 00
Ballasting, 2,000 cubic yds. at 35 cts	700 00
Total	$5,543 88

Cost of construction one mile of railway:—

LIGHT WORK.

Clearing 12 acres at $20	$ 240 00
Close cutting 2 acres at $35	70 00
Grubbing 2 acres at $40	80 00
Earth work, 15,000 cubic yds. at 20 cts	3,000 00
Rock work, 500 cubic yds. at $1	500 00
Under drain and small wooden bridges	1,200 00
Engineering station, water supply, telegraph and siding	1,400 00
	$6,490 00
Contingencies, 10 per cent	649 00
	$7,139 00
Permanent way	5,543 88
Total	$12,682 88

MEDIUM WORK.

Clearing 12 acres at $25	$ 300 00
Close cutting 2 acres at $35	70 00
Grubbing 2 acres at $40	80 00
Earth work, 30,000 cubic yds. at 25 cts	7,500 00
Rock work, 5,000 cubic yds. at $1	5,000 00
Under drains and small wooden bridges	2,000 00
Engineering station, water supply, telegraph and sidings	1,400 00
	$16,350 00
Contingencies, 10 per cent	1,635 00
	$17,985 00
Permanent way	5,543 88
Total	$23,588 88

HEAVY WORK.

Clearing 12 acres at $25	$ 300 00
Close cutting 2 acres at $35	70 00
Grubbing 2 acres at $40	80 00
Earth work, 50,000 cubic yds. at 25 cts	12,500 00
Rock work, 2,000 cubic yds. at $1	2,000 00
Under drain and small bridges	5,000 00
Engineering station, water supply, telegraph and sidings	1,500 00
	$21,450 00
Contingencies, 10 per cent	2,145 00
	$23,595 00
Permanent way	5,543 88
Total	$29,138 88

Besides the above estimate there are sixteen bridges of lengths varying from 25 feet to 950 feet. I estimate the cost of the following bridges as follows :—

Across	Length of bridge.	Cubic yards of masonry required.	Price per yard.	Total cost of masonry.	No. of span — Length of span	Cost of lin. foot.	Total cost of steel.	Total cost of bridges.
			$	$	No. ft.	$	$	$
Parsnip River	959	3,000	12 00	36,000	2 200 3 182	106	100,700	136,700
Creek on the 10th Mile	25	500	12 00	6,000	1 25	30	750	6,750
" 17th "	70	500	12 00	6,000	1 70	45	3,150	9,150
Clear Water River	75	500	12 00	6,000	1 75	46	3,450	9,450
Creek on 47th Mile	50	500	12 00	6,000	1 50	34	1,700	7,700
Wide Valley River	60	500	12 00	6,000	1 60	39	2,340	8,340
Creek on the 77th Mile	350	2,500	12 00	30,600	2 187	106	19,822	49,822
" 80th "	400	2,500	12 00	30,600	1 400	175	70,000	100,600
" 87th "	50	500	12 00	6,000	.....	.....	.....	7,700
" 88th "	300	2,000	12 00	24,000	1 150 2 75	77 46	11,350 6,900	42,250
" 100th "	150	1,500	12 00	18,000	1 150	77	11,350	29,350
Moberley River	200	2,000	12 00	24,000	1 260	107	21,400	45,400
Pine "	300	2,000	12 00	24,000	1 300	150	45,000	69,000
Gullet on 150th Mile	25	500	12 00	6,000	1 25	30	750	6,750
Cut Rock River	100	1,000	12 00	12,000	1 100	55	5,500	17,500
D'Echafaud "	100	1,000	12 00	12,000	1 500	55	5,000	17,500
Total								583,962

Total cost of the 201 miles will be—

135 miles at $12,682.68 per mile	$1,712,188 80
46 do 23,588.88 do	1,085,088 48
20 do	582,777 60
3,205 feet of steel bridges	583,962 00
Total cost	$3,964,016 88

This gives an average cost of $19,721.47 per mile, including steel bridges.

I might say that good sandstone could be had mostly anywhere for the construction of piers and abutments of bridges, but the only timber that could be used in the construction of the railway is white and black spruce, which are of suitable dimension and could be got mostly anywhere.

The ballast of very good quality is in abundance and of easy access.

Speaking of our return trip, I would briefly state that our first move coming down from the junction was made on September 19, which was 8 miles.

On October 1, I met engineer Dibblee going up with two boats loaded with supplies. He had a hard and tedious time coming up the river, owing to the water being so very low, and was obliged to leave part of his supplies at Parle-pas Rapids.

We spent the next day together, as it was Sunday.

Monday morning an exchange of two men was made, Joseph Gagnon going with Mr. Dibblee, while Frank Neilson came with me.

We bid good-by to the party at 7 a.m. and at 4.15 p.m. we arrived at the parle-pas Rapids, making a total distance of 36 miles explored up to date (October 3).

On Saturday, October 8, the camp was pitched opposite Cust's house, which is at the head of Peace River cañon.

But the exploration was not finished up to that point.

Having explored over 100 miles south-west and south-east of the Peace River Cañon, and difficulties of all kind being met with, consequently causing much delay. However, under all these circumstances, we were very much pleased to arrive at Hudson Hope on November 16.

We spent eight days here making sleighs and fitting up harness for our trip down the river.

The snow is about one foot deep and the river is still open in places. The horses are in very poor condition, owing to the scarcity and poor quality of food found around the cañon.

On November 24, I started part of my party down the river in charge of my assistant, keeping three men and three horses to assist me on my trip to Pine River, as already spoken of. I started the next morning, but returned on the 30th instant.

December 1, I also started down river, completing my survey as I was travelling, and finishing the 18th of the same month. At this date the ice was in good condition.

But the balance of my party, which was a few days ahead, had a great many difficulties to contend with, owing to the bad condition of the ice.

On December 22, I reached Dunvegan, where I found the head division of my party. They had decided to spend Christmas here, in order to give the horses a very much needed rest and feed them with hay and oats.

During our trip we lost eight horses. One getting frightened and jumping into the river with pack and was lost. Three died with sickness during the summer, and the remaining four were shot between Hudson Hope and Dunvegan.

Realizing that our horses could not make the journey to Edmonton in a reasonable time, and hearing that Mr. Brick, who is living 50 miles below here, was going to Edmonton, I sent two men ahead, thinking, perhaps, I could make some arrangement with him.

The same day I met Mr. Charles Anderson, of Lesser Slave Lake, at Dunvegan, who offered to do the transportation very reasonable, but I did not want to commit myself until I saw Mr. Brick.

The next morning, the 26th, Mr. Anderson and I started to see Mr. Brick, and as his price was much higher, I decided to arrange with Mr. Anderson, for which I gave him $125 cash, reserving two horses that I sold, also tents, riding saddles, our personal baggage and bedding, and some other articles of but very little importance.

Twenty days were allowed him to reach Edmonton, and a bonus of $20 for each day he might gain, and if he was over twenty he was to pay a forfeit of $20.

The weather having been exceptionally fine and favourable for the trip we arrived in Edmonton on January 21, all glad to see civilization again after an absence of six months and thirteen days. We came by way of Lesser Slave Lake and Athabasca Landing.

Before closing my report I will give some distances that might become useful. These distances are based on time taken in travelling over the country just mentioned.

	Miles.
From Edmonton to Lesser Slave Lake via trail	285
Lesser Slave Lake to Peace River Crossing	80
Peace River Crossing to Dunvegan via trail	60
Dunvegan to Port St. John "	158
Port St. John to Hudson Hope "	50
Hudson Hope to head of portage "	13
From the portage to Parle-pas Rapids via water	48
Parle-pas Rapids to Finlay Rapids	31
Finlay Rapids to the junction	1
Total distance from Edmonton to junction of Finlay and Parsnip Rivers	726

Returning again to Hudson Hope—

	Miles.
From Hudson Hope to Port St. John via water	46
From St. John to Dunvegan "	106
From Dunvegan to Parsnip River crossing "	60
From Parsnip River crossing to Lesser Slave Lake via portage.	80
From Lesser Slave Lake to mouth of Little Slave River via water	68
From mouth of Little Slave River to Athabasca River via water	39
From Little Slave River to Athabasca Landing via water	56
From Athabasca Landing to Edmonton	96

I have the honour to be, sir,

Your obedient servant,

P. H. DUPONT, C.E.

To COLLINGWOOD SCHREIBER, Esq.,
Chief Engineer,
Railways and Canals.

OTTAWA, September 20, 1899.

SIR,—In compliance with your instructions received on June 18, 1898, I left at once for Edmonton, the initial point of the expedition, where I was to procure a pack train and organize my party for field work.

I arrived at Edmonton on the evening of June 24, having had a pleasant trip on the Canadian Pacific Railway.

I at once waited on the Hudson's Bay Company's employees and other leading citizens to acquire all information I could gather from them of the country I was going to explore and the best means to get into it with my supplies.

They all advised me to get my supplies freighted in by contract, as it would take too many horses to carry so large a supply so far. They also advised me to take more supplies than what was then following me from Ottawa, stating that I could not possibly do my work and get back in less than a year.

Upon representing this fact to you sir, you ordered me to take in more supplies, which I purchased from the firm of LaRue & Picard at reasonable prices.

I advertised for tenders for handling my supplies and delivering same at Hudson Hope. No one wanted to tender above that point.

Brick Bros'. tender was considered the best, and I entered into a contract with them to safely deliver my supplies at Hudson Hope in 40 days for 11 cents per pound. Fortunately I was enabled to get my second bill of supplies off in time to go with the supplies received from Ottawa, the last of it leaving Edmonton on Saturday, July 9. I also sent one of my men with the supplies at Brick Bros.' request.

During this interval I had been busy getting my pack train in readiness for a start on Monday July 11, but found on Sunday that six of the horses had strayed (or been driven from the band), which we did not recover until the afternoon of Monday.

We left Edmonton at 8 a.m. on Tuesday, July 12, and made Carrot Creek that day without any mishap, the horses behaving well, in fact they gave us no trouble at any time on the trip except through straying at times on the feeding grounds.

We arrived at Athabasca River on July 16, about 100 miles from Edmonton, where we were detained 11 days by the summer freshet. We found the river bank full and the tide rushing 12 miles an hour, a lot of drift stuff, trees, etc., floating down, and worst of all, the wire ferry torn down.

We are travelling on the new or Chalmers trail which crosses this river near old Fort Assiniboine.

We had to wait until the river fell 8 or 10 feet and then we had great difficulty in crossing, fortunately a number of outfits collected during the blockade and we were strong handed enough to row the ferry-boat across with large sweeps, first tracking the boat up stream about half a mile. We began ferrying on Tuesday afternoon, July 26, and on Wednesday at noon the 27th we got our train started again.

We arrived at Swan River on the evening of July 30, having driven that day about 40 miles (over a bad trail) on account of there being no feed for horses, we crossed a lot of muskegs, then the Swam Hills which rise 1,100 or 1,200 feet above the surrounding country. These hills could be avoided by keeping further east nearer Lesser Slave Lake where the country is level with plenty of feed, in fact old Indian trails lead in this direction.

I would say that nine-tenths of the land passed over on the Chalmers trail from Edmonton to Lesser Slave Lake is fine farming land, and it is only a question of time when this country will be all settled.

We arrived at the head of the lake on August 3, and found that notwithstanding our long delay at Athabasca River my supplies had only left here the day before. We rested the horses here one day and started for Peace River crossing on Friday, August 5, arriving there Sunday, August 7.

On the south side of Lesser Slave Lake, near its western extremity, there is a wild meadow 30 to 40 miles in extent that would cut 2½ tons to the acre, while the land on opposite side of lake is adapted for mixed farming. There are four stores here, a grist and sawmill, three churches and two schools. No doubt this will be a centre of some importance in the near future; Lesser Slave Lake should not be ignored by any projected railway in this country.

The country from the last mentioned lake to Peace River crossing is also well adapted for mixed farming, consisting of open prairie interspersed with tracts of small cottonwood timber, which would be easy to clear and the land is superb, in fact poplar and cottonwood grow on the best land in this country and to see this growth is to be sure of good land.

The land gradually rises from the lake to a high table-land which keeps up until the Peace River is reached. This river here at the crossing and from the crossing to Hudson's Hope is in a deep narrow valley with a high table-land on both sides. I learned from those that are acquainted with the river that below the crossing the valley widens until it is some 30 miles from foot to foot of table-lands.

There are some stores at the crossing and some up the river 14 miles, where the missions are established.

Five of our horses strayed from the band here and getting into some rough country below the crossing, we did not find them until 10 a.m. on Tuesday.

We swam them over the river (nearly half a mile) in the afternoon, four or five at a time, without an accident, and got out to first good feed in the evening. My supplies left this point on Monday evening, August 8, twenty-four hours ahead of me.

On the morning of August 10, we ascended to the table-land on north side of the river and from there to Fort St. John. We passed through magnificent grazing lands for at least nine-tenths of the distance.

We arrived at Fort St. John on Saturday, August 20, and found the supplies one day ahead of us, also Mr. Dupont's pack train one day ahead.

About 45 miles east of Fort St. John, on the trail, a celebrated muskeg is located. Before I reached this muskeg I had heard a number of contradictory reports. Some said it was 7 miles across, while others called it 25 miles wide. I crossed it on the afternoon of August 18 (a dry time of year), and found no trouble. There are four distinct muskegs, with islands or dry ground between them. The longest muskeg proper is not over 1,000 yards across. We had no trouble to speak of; only one horse got down and had to be unpacked; but earlier in the season no doubt it would be worse. I am told that this muskeg extends over a large extent of country, and that the trail crosses it in the narrowest place. From the beginning of the first muskeg to the end of the last is about 10 miles. Just west of this muskeg we passed through another wild meadow of great extent, like the one noted at Lesser Slave Lake.

Sunday, August 21, we started early to catch the freight, if possible, so as not to detain the freighters. We arrived at Hudson's Hope, Tuesday evening the 23rd inst., at 10 p.m., the boats having arrived at 3 p.m., and Mr. Dupont's train at 8 p.m.

The country from Fort St. John to Hudson's Hope is good grazing land for about two-thirds of the distance—good at both ends, with some poor land in the middle. The trail is hilly, however, following close to the river most of the way, where every small brook has a deep coulée which the trail crosses. The coulée at Deep Creek is between 500 and 600 feet on the east side and about 300 feet on the west side. The trail on both sides in places is at an angle of 75° from the level. Horses slide down the decline and get up the incline somehow. Those western ponies are sure-footed as cats and almost as active, and the amount of work they will do on grass alone is surprising.

We have travelled 625 miles from Edmonton to Hudson's Hope, in forty-three days, including lost time at Athabasca River and Peace River Crossing (thirteen days), averaging 14½ miles per day. We passed several parties of prospectors that have started early in the season from Edmonton—some in February and March.

On Wednesday, August 24, we took stock of our supplies and found only 50 pounds of oat meal had been damaged. Considering the mode of transit in this country, we were very fortunate, and it stamps the firm of Brick Bros. as painstaking and competent freighters.

J. P. Hetherington and G. Grandall changod places here to-day, Hetherington coming to me.

On Thursday, August 25, we took our first load on pack train over the Rocky Mountain portage (so called); it is 15 miles long and very hilly. We camped at Cust's House and fixed up comfortable as a new problem confronts us, viz., to whip saw lumber and build a boat to carry our supplies up river.

I engaged a man, John Bouche, at Peace River Crossing, that had been in the employ of the Hudson's Bay Company for ten years as boatman, to build and steer my boat. Bouche came up to Hudson's Hope as steersman on one of the Brick Bros. boats, but from some cause he changed his mind about going with me and started back as soon as he got his boat unloaded and before I arrived, thus leaving me without a skilled boat-builder. We built a boat, however, that was strong if not handsome, finishing and loading her on September 13.

In the meantime I had got all our supplies over the portage with the pack train. I had also bought a small boat for $10 from a party of four prospectors (belonging to the Dykeman party) who had come down from Fort Graham on the Finlay River and who were after their horses, left here in May last intending to take them over the Rockies to Fort Graham to winter them there. They told me that there was a good prospect for wintering horses up there, good grazing grounds and plenty of hay put up by prospectors who had arrived at Graham in August with horses and who intended wintering there. They also told me they thought I could use my horses on my work.

This induced me to send my horses to Fort Graham. September 14 we got away early having loaded both boats over night and before the first mile was passed found we were short handed, both boats were loaded almost to danger line, the men were green at tracking and we made little progress, so I concluded to caché part of the supplies leaving Wm. Colclough in charge. We got along better after this, but still our progress was slow and it was September 30 when we got all our stuff including boats through or above the Parle-pas Rapids, 48 miles from Cust's House.

I sent Alexander and Brenton with the horses to Fort Graham the same day, that we left Cust's House (September 14), they had to go back about 40 miles on the St. John train to Cache Creek where the trail to Graham branches off.

We left the Parle-pas Rapids on October 1, arriving at the Finlay Rapids with first load, October 5, and with last load October 9. It was on October 12 that we finally left this rapid and I begun my explorations. I might say here that the river was low and falling fast and we had a hard time coming up; it continued to get worse until finally winter stopped us at the Black Cañon on the Omenica River on October 24.

We had to carry all our supplies over the portage at the Parle-pas Rapids, 250 yards, also over the portage at the Finlay Rapids, 770 yards, the boats we pulled through the rapids light; both rapids are formed by ledges across the river, the Parle-pas Rapids drop 5 feet in 500 feet. The Finlay's drop 6 feet in 1,500 feet, either or both rapids could easily be utilized for water power, and if the rumour that gold bearing quartz has been located near Mount Selwyn is true, this fact will be taken advantage of no doubt.

We reached the mouth of the Omenica River with first load on October 14; also with the small boat. Here we found the stream so low and full of swift rapids that we had to abandon one of the boats, and with all hands on large boat and about one-quarter of a load in her, we were enabled to get all of our supplies up to the Black Cañon before winter set in. Here we built shacks and made this our headquarters for the winter. We also built hand sleighs and snowshoes, and after the streams froze up, I went on with my exploration, first having gone to Fort Graham—65 miles—for some needed supplies which we hauled to camp on hand sleighs. I recommenced taking exploratory notes in January and finished March 30. It was a hard and unpleasant job, but it kept us in good health, and was altogether better than waiting for the opening of navigation this spring to proceed with the exploration.

I went to Fort Graham the last of December and found that my horses were doing badly, ten of them being dead at that time and the rest looking miserable. There seems to have been some diesase among them.

They had plenty of hay and were sheltered from storms and cold and had plenty of good water. Still all the horses I purchased in Edmonton eventually died, only

three out of the whole number which I purchased at Peace River Crossing surviving the winter. The Dykeman party lost forty out of a train of forty-three; in fact about 80 or 90 per cent of the horses at or near Graham died. I might state here I sold the three surviving horses for $74 and a boat.

As I stated above, I began taking notes for exploration October 12, 1898. I found the country from the junction of the Parsnip and Finlay Rivers westward to where the Omenica River issues from the second range or Cariboo Mountains, a distance of 26 miles to be very easy. It crosses the valley between the Rockies and the Cariboo Ranges, which is from 30 to 40 miles wide below the mouth of the Omenica River. But above or north of the mouth of the Omenica it narrows gradually, until at Fort Graham, which is situated on the Finlay about 75 miles above the junction, it does not exceed three miles in width, where the Rockies and Cariboo both approach the river—I might state that Fort Graham is the most inaccessible trading post under the jurisdiction of the Hudson's Bay Co., in the great North-west. Flour is $36 per barrel and pork $80 per barrel, and everything else in proportion. From the crossing of the Parsnip River, located by Mr. Dupont, up the Finlay River to the mouth of the Omenica River, a distance of 16 miles, the line follows a shelf from 30 to 60 feet above the river. The formation being sand, gravel, and gravelly clay. The line crosses Manson River on the 4th mile, which would require a bridge 50 feet long. This section is all light work and does not require special mention; the general grade is about 3 feet per mile, so that local grades can be utilized to overcome slight irregularities in the ground.

Fine spruce and cottonwoods grow in abundance fit for use in construction.

I have shown on my plan an alternative line, which would branch off at or near the end of the 6th mile, and join Mr. Dupont's line at the end of the 7th mile, in a distance of 6 miles, in other words the point where the alternative line would leave my line is equidistant from Mr. Dupont's crossing of the Parsnip River and a point about 7 miles down his line.

Thus saving about seven miles in distance, and the bridge over Manson River, but on the other hand, I would have a bridge over the Finlay River 866 feet long, while the bridge projected by Mr. Dupont for the crossing of the Parsnip River would be ample for the crossing of the Peace River on my alternative line. The formation is the same as described above for the Finlay River section and is light work.

Omenica River.

The next section of 10 miles from the mouth of the Omenica River to where the river leaves the Cariboo Mountains is on a comparatively uniform shelf and does not require particular mention, as the grade is light about 14 feet per mile. Fine spruce grows in abundance on this section for construction purposes. This section is light work.

There is a fine ballast bank at and near the Black Cañon, about 23 miles from starting point, of great extent and of good quality.

We pass the Black Cañon (so called) on this section. It is about ½ mile long and from 80 to 120 feet wide, with perpendicular walls of mica schist, from 100 to 150 feet high. The water is very deep in this gorge, and at low water is comparatively still, so that boats can be rowed up until the upper end is reached, when a stiff rapid exists about 500 feet long. For about 1 mile above the cañon proper the stream is narrow and water swift with high rugged banks.

When the river is high, however, boats and boat loads have to be portaged by this cañon, and the narrow stretch above is 1½ mile, as the water rushes through the gorge like a mill race.

During the winter a spring brook trickled over the walls of the cañon in one place freezing into quaint shapes presenting a spectacle of the most amazing grandeur and beauty.

The next section of 12½ miles is on a lumpy side hill country (the beginning of the Cariboo Mountains). The 27th mile is on a shelf and is straight, the 28th mile winds around the side of a foot hill of clay and silt, where some curvature is required.

The 29th mile is on a side hill also, but is comparatively straight. The 30th mile like the 28th is crooked, while the 31st and 32nd are straight and the side hills are not so steep; the 33rd mile is on a level plateau and is easy, but the 34th mile again strikes a steep side hill where some heavy work is unavoidable; the 35th mile is like the last, while the 36th mile is easy.

We then have on the 37th mile some rough heavy side hill works, which extends to the middle of the 38th mile, crossing a creek on the 38th mile requiring a span of 25 feet.

Some trestling will be required on the section, and there is an abundance of fine spruce timber at hand for this purpose. The grade of the stream does not exceed 12 feet per mile, so that local grades can be introduced to lessen quantities; the formation is silt, gravel and clay with perhaps some rock in places; this section would class as medium heavy work.

The next section of 4 miles is on a plateau about 60 feet above the stream, where the grading is light and does not require any practical mention, the foundation being sand and gravel, the grade will not exceed 10 feet per mile.

We next have a section 5 miles long and heavy side hill work in limestone ledge. The 43rd mile is on the steepest part of this section, which stands at an angle of 60°, but the side hill is smooth and straight, and while the formation is solid limestone it will not cost a great sum to grade as all material can be wasted over the side. The 44th mile is like the last except the slope of the hill is not steep. We can cross the Omenica River near the end of this mile where the river takes a sharp bend at right angles to itself and flows through a gorge of perpendicular rock about 80 feet high, forming natural abutments for bridge, which will be one span of 100 feet. The 45th and 46th miles are like the two last, with the exception of the bridge, while the 47th mile eases off on to a plateau; very easy curves only required on this section. Heavy work.

Osilinca River.

The next 9 miles will be on a comparative uniform shelf or plateau. From the 48th to the 50½ mile the line is nearly straight, but on the next 2 miles considerable curvature will be required to get around a bend in the river; the 53rd, 54th and 55th miles are nearly straight or where light curves only will be required; plenty of ballast will be found on the 56th mile, the general formation of this section is clay and gravelly clay with some rock in places and is classed as medium heavy work; plenty of spruce abounds for construction purposes; the grade is 43 feet per mile.

The next section of 7½ miles up to the foot of the dead water is all side hill work. On the 57th mile a bluff of clay forces us back to stream where a sharp curve will be introduced to get around said bluff, without excessive work. We then follow the side-hills where some gulches or coulées will have to be trestled The 58th mile is nearly straight or only requires easy curves, but the 59th mile requires considerable curvature as well as trestling across some coulées. The 60th mile is comparatively easy, as well as the first half of the 61st mile, while the last half of the 61st and the 62nd mile is heavy work with considerable curvature; the 63rd mile is also pretty heavy work with a snow slide near the end of it. The grade on this section is 43 feet per mile; this section is classed heavy work.

The next 13½ miles past the dead water is much the same in general features as the last section, with the exception that the general grade is almost nothing, so that local grades can be used extensively to lessen work on construction. We have a bridge on the 64th mile over a small creek requiring a 25 foot span; this mile will require trestling to cross coulées, but easy curves will suffice. The 65th mile will require some trestling also as well as sharp curves, so will the 66th mile. While the 67th mile is nearly straight, the 68th mile requires some curvature, as also does the 69th mile, while the 70th mile swings around a bend in the valley; the 71st, 72nd and 73rd are nearly straight, requiring light curvature only. Near the centre of the 74th mile the hill takes a sharp turn to the right and we have to follow it around with a reverse on the

75th mile. The 76th mile is nearly straight. This section is all side hill work in solid limestone and clay and is all heavy work.

The next 2½ miles is like the last section except that there is more grade (24 feet per mile). The 77th mile is nearly straight, but the 78th mile is very crooked, needing a good deal of curvature. We cross a small creek on this mile that will require about 1,500 feet of trestling and a span of 25 feet. Just after crossing this creek we have a bold bluff of solid limestone on which the line winds around for at least ¼ of a mile; this bluff is steep almost overhanging the bottom, it extends on to the 79th mile, the latter part of this mile is easier, leading to a shelf or plateau that extends some miles. This section is classed heavy work.

The next section from the 80th to the 90th mile is located on a comparatively uniform shelf about 60 or 70 feet above the stream, and from ¼ to ½ mile wide, on which stunted pines grow thinly or in bunches indicating a sandy or sand and gravel formation. The general grade on this section is about 24 feet per mile, plenty of fine spruce grow on the bottom lands on this section. The 80th mile is straight; the 81st mile will require one slow curve; the 82nd mile is straight, while the 83rd and 84th miles will each have a slow curve, and the 85th mile is straight; the 86th require a medium curve and the 87th mile a long slow curve, as also will the 88th mile, while the 89th mile will have considerable curvature on the approach to the crossing of the south branch of the Osilinca on the 90th mile, where about 200 feet of trestling and a span of 50 feet are required; this section is classed light work.

From the crossing of one of the south branch of the Osilinca to the crossing of one of the forks of the north branch on the 98th mile, we have another high gravelly bench, but not so uniform as the last one described below the crossing of the south branch. After crossing the stream at the beginning of the 90th mile we have a curve to the right, and near the end of this mile, another to the left on the 91st mile, we have a slow curve to the right on the 92nd mile we have a medium curve to the left, while the 93rd is nearly straight, the 94th mile is on a slow curve to left for the first half, while the last half and the 95th mile is nearly straight; the 96th will require one slow curve to left and the 97th mile two curves to right; on the 98th mile we cross a stream where a span of 25 feet will be required. The formation of this section is like the last and ballast will be found in abundance. Medium heavy work. The general grade is 24 feet per mile. Fine spruce growing on the low flats on this section.

From the crossing of last branch of the Osilinca on the 98th mile to the summit at the 111th mile, the ground is lumpy, gravelly knolls and benches occur with slight depressions between them; the general grade is 24 feet per mile, so that local grades can be introduced to lessen work on construction. Pine, with a few spruce bluffs are in evidence. After crossing the stream on the 98th mile we turn an easy curve to the left and run straight to near the end of the 99th mile, where there is quite a curve to the right, then it is straight to near the end of the 101st mile, where a curve to left is required, then we have a tangent to nearly the end of the 110th mile, where a slight curve occurs. This section is medium heavy work.

We pass on this section a mountain rising out of the valley like an island in a lake (entirely surrounded by the valley). It is about 10 miles long and 2 miles wide at its base, and rises to an elevation of 6,452 feet above sea level. I obtained an excellent view of surrounding country from this mountain, having ascended it a bright, clear day.

We are now in a valley from 2½ miles to 3 miles wide, that extends for miles in a uniform direction, that is much like the last described section as to formation and general features, being composed of gravelly knolls and benches covered with a thin growth of jack pine. The grade, which is slight (about 10 feet per mile), is now going down however. From the 111th mile to the 120th mile the line is straight. Crossing on the 116th mile, a small creek that will require a span of 25 feet, this creek with another branch further down forming, as I suppose, the head waters of the Skeena River, or a branch thereof, and drains this part of the mountains which are lower than those noted further east. We passed the highest part of the Cariboo range on the dead water on the Osilinca.

On the 120th mile we have a slow curve to right, and then the line is straight to about the middle of 125th mile, where there is a slow curve to left, the line is then nearly straight to the 130th mile, where a curve to right occurs. It is again straight to the 136th mile, when a slow curve to left is required, also another one on the 139th mile. At the middle of the 140th mile the valley narrows; this section is close to stream, whose banks are comparatively uniform and above high water. The formation is sand and gravelly knolls and benches, being quite lumpy, local grades will be used to ease the work of construction, as the general grade is light, not exceeding 16 feet per mile. The growth is jack pine and spruce, this section is classed medium heavy work.

From the 140th mile to the 156th mile the valley narrows and the foot of the hills are close to stream, but as the general grade is light, local grades will be used to lessen quantities, the formation is clay and gravelly clay. We have a slow curve at the end of the 141st mile and the beginning of the 142nd mile, also another at the end of 146th and beginning of the 147th. The line is then nearly straight, requiring slight curvature until we reach the 152nd mile, where a curve to right occurs, we also have a slow curve on the 154th mile, crossing a small creek on the 155th mile (which is nearly straight), where a 25-foot span will be required. This section is medium heavy work.

After crossing the creek on the 155th mile the valley widens again, and the shelf is smoother to the end of the 171st mile, and is very light work. The line is straight to the 157th mile, when we have a curve to left, the line is then straight to the 160th mile, when a curve to left is required, then we have it straight to the 163rd mile, when a curve to the left is required, while the 164th and 165th mile has a slow reverse curve to get around a double bend in the stream. The 166th mile is straight, a slow curve on the beginning of the 167th mile and then straight to the middle of 169th mile where a slow curve to left is required at the end of the 171st mile, the valley again narrows and the foot of the hills approach closely to stream. Jack pine and spruce grow on this section, the general grade is about 11 feet per mile.

From 171st mile to 185th mile the line is on lumpy ground, where some rock may be found in places, the formation being clay and gravelly clay, and is classed as medium heavy work. Jack pines grow on the side hills, and spruce in the bottoms. Near the end of the 171st mile a slow curve to left is needed. 172nd mile is straight, and in fact very slight curvature is required until the end of the 183rd mile is reached, where a medium curve to left is required.

The next section of 5 miles is easy work, the hills again recede having plenty of room between their foot and the edge of the stream. From the 185th mile to the 190th, the end of the exploration, the alignment is nearly straight or requiring very little curvature. The formation is sand and gravel and the growth is spruce and balsam with Jack pine on hill sides, this is classed light work.

As stated earlier we finished our exploration on March 30, 1899. After a rest we got the boat out of the snow, and, after thoroughly drying it, caulked and pitched it, the gum of the spruce taking the place of the regular pitch, while old rope unravellings took that of oakum. We had a long tedious wait for the streams to open, it being a cold backward spring, our provisions ran low also and we were out of everything but flour and tea for sometime.

We finally got off on May 8, in the morning, and got down to the mouth of the Omenica in time to caulk and pitch the small boat (caché here last autumn that day).

We got away early the next morning. The boys from Fort Graham who had charge of the horses having arrived in the night, we were all together again. The boys from Graham were fortunate enough to secure some dried moose meat the day before from an Indian hunter, which we all enjoyed very much after our long diet of dry bread and straight tea.

We arrived at the Finlay Rapids about 9 a.m., and after lunch partially unloaded the boats, Joe Gagnon and Frank Umberg undertaking to shoot the rapids with the boats partially loaded, which they succeeded in doing without any mishap. We got away from rapids about 2 p.m. and ran into head of ice jam about 15 miles below the rapids about 4.30 p.m., and had to go into camp. We heard at a camp just below the

Wicked River where a party of prospectors wintered, that a party of prospectors camped at the mouth of the Clearwater, were laid up with the scurvy and needed help.

On May 10 we started at 5.25 a.m., the ice jam having broken in the night, and arrived at Clearwater Creek at 8.45, where we found affairs even worse than we had anticipated. Six men had camped here for the winter, and when we arrived one of them, Capt. Geo. W. Pontine from Sault Ste. Marie, Algoma, was dead, having died the 27th of April from scurvy, and the other five in bed helpless from the same disease. Walter Raines from same place, one of the captain's partners, was very low and so weak that he fainted every time he was moved. A. W. Ormiston from Calgary, another partner of Pontine's, also very low but a little stronger than Raines; J. S. G. Ironsides from Kingston, Ontario, very low; W. B. Moores from Kingston and G. S. Carter from McKenzie River (last three were partners). Moores and Carter were the strongest as they were the last two to succumb to the disease. It was a fearful condition for men to be in this wilderness and the hardest job of the whole expedition now confronted us. I would like to say here that my boys one and all were not only willing but eager to do all they could for these unfortunate men.

We made a coffin and buried poor Pontine near the shacks, painting his name and address and the date of his death on a headboard. The others we washed up and dressed and carried to our boats, making them as comfortable as possible. Fortunately having a boat large enough to allow plenty of room for them, we took nothing from their caché except a few pounds of pork and the clothes and bedding they required.

We got away from the Clearwater Creek at 12.25 p.m., and reached the Parle-pas Rapids about 2 p m. The river is about 5 feet higher than when we struggled up last autumn and the rapids present a different appearance altogether. We shot these rapids without taking anything out of the boats, the only danger being from floating ice, for if a boat should strike a cake of ice in the rapids it would stave it in. However, we got all boats through without an accident, and got about 12 miles below them before it was time to camp for the night. A strong head wind retarding us very much. The valley widens below the Parle-pas and the bottoms and hillsides are clear of snow. We slept on the bare ground for the first time since the 23rd of October last, nearly seven months.

The next day, May 11, we got away at 5.30 a.m., and were stopped about noon by another ice jam about 15 miles above Cust's House. This jam broke at 3.30 p.m., and we started at once and pulled through floating ice and timber, arriving at Cust's House or west end of Rocky Mountain portage at 8 p.m., the sick men standing the journey better than had been expected. We kept up the weaker ones with brandy, of which we fortunately had a good supply.

We met the Potts party here going in with some mining machinery, under charge of Dr. Robb, which they were taking up river, where they claim they have found paying gold-bearing quartz. Two of this party wintered just below the mouth of the Wicked River, and they with the 8 men who came in this spring intend developing their claims this season. This party left Edmonton the last of February with horse sleighs and got their supplies to this point on the snow and ice. They brought us about 50 lbs. of mail, which we were most pleased to get, being our first news from the outside world since November 4 last. We had some difficulty in getting the sick men and our small boat and our camp outfit over the portage; although there were plenty of horses in this neighbourhood, they were poor and weak and could not do much without resting.

I had to abandon the boat we built last autumn and the boat I purchased from the Dykeman party, they being too heavy to draw across portage; we got everything over however by the evening of Tuesday, May 16. The sick men all going through the terrible ordeal of being transported on travoys over a mountain trail 15 miles in length.

In the mean time I had hired the use of a large boat to the Peace River crossing from the agent of the De Ome & Dejarlais. Here I also purchased a Peterboro canoe from a party of prospectors to take the place of the two boats abandoned at Cust's House, and on Wednesday, May 17, we left Hudson's Hope about midday, the morning being taken up in repairing boat moved over portage, it having been shook up considerably in the transit. We got below the mouth of Halfway River about 4 miles this afternoon.

We reached Fort St. John at 9.30 a.m. on May 18, where we were enabled to get some fruit and syrup for the sick. A medical man who happened to be here, thought the sick men, with the exception of Raines, would be able to stand the journey to Edmonton. We reached Dunvegan on Saturday, May 20, at 10 a.m., where we were enabled to procure some fresh beef and potatoes (*nothing ever tasted so good as those potatoes*); we arrived this evening at Brick Bros.' ranch about 14 miles above the crossing, having sailed over 80 miles that day, notwithstanding we had a strong head wind all day, the last two days having been cold and raining some, which has been bad for the sick men, and poor Raines is perceptibly worse and has been wandering in his mind.

I made arrangements with Brick Bros'. to take us over the portage from Peace River crossing to Lesser Slave Lake, and as it would take him some time to get horses down to the crossing and over the river we laid off here over Sunday.

Two clergymen of the Episcopal Mission came to our camp to see the sick, and they offered to take Raines and Ormiston off my hands and care for them until they were strong and more fit for travelling.

Monday, May 22. Poor Walter Raines died this morning at 2.30 a.m., his death was not unexpected as he had been sinking ever since we left Hudson's Hope, and for the two last days had been unconscious, we carried A. W. Ormiston to the Episcopal Mission house this morning and took the remains of Walter Raines down to the Roman Catholic Mission (he being a Roman Catholic) which is situated about 5 miles below the the Protestant Mission. The priests kindly consenting to bury him, we making the coffin and digging the grave. We then sailed down to the crossing, where we cached some of our effects not needed on the trail in one of the government buildings under charge of the Mounted Police, we also left the canoe and small boat in their charge and returned De Ome & Dejarlais boat to their agent here. The Bricks arrived with their horses on a raft late in the evening. We found two or three new stores here, all seemed to be doing a good business.

Tuesday, May 23. Got away from crossing at 10 a.m., with four double wagons and a saddle horse, here we picked up another unfortunate victim of the scurvy, S. G. Heathcot, of Toronto, who wanted a passage to Edmonton, a request I could not very well refuse under the circumstances. We arrived at the head of Lesser Slave Lake on Saturday, May 27, at noon, the trail was very wet and heavy and the horses not strong and as the food was not very good we got along slowly. We learned on our arrival at the lake that the ice had not gone out; also found that we could not get a native crew to take us to Athabasca Landing as the natives were waiting the arrival of the Treaty Commission.

I tried to get a freighter to take us out to Edmonton by the Chalmers trail, with teams, but his prices were too high, so I hired a York boat from Brick Bros., intending to man it with my own men, Joseph Gagnon, captain and steersman, which we successfully carried out but it was somewhat risky.

We were detained here several days with a strong head wind from the east as well as the ice reported to be still in the lower part of the lake.

This place has improved wonderfully since going through here last August. A number of fine frame buildings going up, which are heavily stocked with all line of goods. I am more convinced that this place has a great future before it.

The wind changed Friday evening and we got away from the head of the lake, next morning June 3, at 7.30, the wind being favourable we crossed the lake in 12 hours. This lake is 85 miles long and about 20 to 40 miles wide, with splendid farming lands all around it, the waves ran high 10 or 12 feet at least, but Gagnon proved to be the right man in the right place and he managed to keep the boat from pitching badly. We camped at the head of the outlet or Lesser River as it is called; found that ice had all gone out of lake.

Sunday morning, June 4, we started down Little River at 4.10 a.m. and arrived at its mouth on the Athabasca River at 5.30 p.m. Little Slave River is narrow and crooked, and the lower part has several shoal rapids, making navigation very difficult; in going up freighters have to double this part of the river as the water is too shoal in places to float a full load. Those shoals could easily be deepened, requir-

ing very little blasting to make this river navigable for steamers of light draught. Good farming lands adjoin this river from the lake to Athabasca River on the upper part and about halfway down it is open prairie, that looks to me to be as good as any I saw in my life. The lower half has some bush alternate with open prairie, the length of this river is 57 miles.

The Athabasca River from the mouth of Little River to Athabasca Landing is a fine large stream about 1,500 feet wide, flowing about 4 miles per hour, without any rapids.

We sailed all night arriving at the landing at 7 a.m., just 47½ hours from the head of Lesser Slave Lake, a distance of a little over 200 miles, this I am told is a record breaker. We met the Treaty Commission about 8 miles above the landing with three large boats, they were getting along slowly on account of not having enough tracking force, they were expecting help from Lesser Slave Lake, and asked us eagerly when their men were coming down, we were forced to tell them that we had heard nothing about it. I was told later that the Mounted Police who were escorting the party went out on the tracking lines and rendered efficient service.

Athabasca Landing is situated just at a big bend the river makes here to the north, and is about 65 miles below the mouth of Lesser Slave River. This landing is headquarters for freighters going up the route we came down, and also for freighters going down the Athabasca River to Athabasca Lake and thence into Great Slave Lake and the Mackenzie River. It is also headquarters for the Hudson's Bay Co., and the place where they build their boats, there are some steamers here, and steam and naphtha yachts, while York boats and sturgeon hand boats are made by the score. The traders never bringing boats up from the lake except one apiece to transport their furs in, the rest are taken apart and used in buildings. There are some very bad rapids on this river below the landing, one 80 miles long, that requires a most experienced steersman to pilot a boat through, several parties prefer taking their freight to the Peace River via the way we came down and thence down that river to Great Slave Lake thus avoiding this dangerous water.

There are a number of stores here at the landing and a brisk business seems to be done. A great number of freighters are on the trail between here and Edmonton ; two, three and four horse teams are met frequently, also, one, two and four ox teams are seen drawing all kinds of merchandise and machinery for boats, one party brought in a steam yacht already for business, arriving the day before we got there.

A railroad to this place worked in connection with the steamers both up and down, would, I think be a paying industry as this country only awaits some rapid means of transit to develop fast. We were detained at Athabasca Landing one day on account of a heavy rain ; it was raining when we arrived here, and had been since nine o'clock Sunday night.

We left the landing on Tuesday, June 6, having been fortunate enough to find returning freight teams to take us all, the trail was very heavy on account of recent rains and our progress was slow ; however, I arrived at Edmonton on the evening of June 8, having left the party at Sturgeon River at 4 p.m., they arrived safely on the 9th about noon. We left Edmonton on July 12, 1898, being in the wilderness so to speak about 11 months, having travelled upwards of 2,000 miles by land and water, over prairies and over mountains, up and down wild mountain streams, over lakes and rivers, without any serious accident and without any sickness and we all were truly glad to get back to civilization again. The trail from Athabasca Landing to Edmonton is the best I have seen in this country, notwithstanding the fact that there is such a lot of freight hauled over it on wagons.

A great part of the country this trail passes through is good for farming, and from the crossing of the Sturgeon River to Edmonton, 28 miles, it is quite thickly settled.

The business men of Peace River Crossing, Lesser Slave Lake, and Athabasca Landing are sadly in need of a regular mail service, and there is nothing to prevent a monthly service being established, via Athabasca Landing, Lesser Slave Lake and Peace River Crossing, by pack-trail and boat during the open season, and by sleighs in winter. The only mail facilities they have now is through the courtesy of the Hudson's

Bay Co.'s officials who are very obliging in this respect; still this is irregular and unsatisfactory.

I began keeping a daily record of the temperature on the first of November; the first 16 days only recording the morning and evening readings, after the last date I managed to take 3 readings and also gave an average per day. I regret I had not started this account sooner, but I was worried with our slow progress up the river from Cust's House and I did not think of it. This record is taken in the Cariboo range of mountains down to May 10, 1899, and from that date to May 17, we were in the Rocky Mountains. I also kept a memorandum of the snowfall and have given same for each month, which aggregate 14 feet, settling to about 4¼ feet of solid snow in the bottom; up the mountains it was very deep, as much as 20 feet in places. From what I could learn from the Indians and Hudson's Bay Co.'s agent at Fort Graham it was an unusually mild winter with much more snow than usual.

TEMPERATURE for November, 1898.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°	°	°
1	30	.... ..	36	36·00	20	—12	12	—12	—7 34
2	28	....	40	34·00	21	—28	— 2	—18	—16·00
3	30	.....	40	35 00	22	—22	—14	—18	—18·00
4	31	.....	41	36·00	23	—28	— 8	—22	—19·34
5	32	....	44	38·00	24	—12	— 4	— 4	— 6·67
6	14	.....	25	19·50	25	10	20	20	16·67
7	15	.....	24	19·50	26	4	15	18	12 34
8	6	.....	18	12 00	27	16	28	20	21·34
9	21	.. ..	30	25·50	28	14	28	22	21·34
10	20	.....	36	28·00	29	16	28	20	21·34
11	27	....	40	33·50	30	19	25	24	22·67
12	26	... .	32	29·00					
13	28	....	38	33·00			Mean average for month		18·11
14	30	.....	36	33·00					
15	30	.....	33	31·50				Ft.	In.
16	29	....	34	31·50			Snowfall for October	1	6
17	21	17	10	16·00			" November....	2	9
18	3	5	2	3·34				—	—
19	— 4	8	— 2	0·67			Total to 30th inst.	4	3

TEMPERATURE for December, 1898.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°	°	°
1 ..	18	22	14	18·00	21 ...	9	19	13	13·67
2 ...	6	28	8	14·00	22 ...	0	11	3	4·67
3....	25	30	18	24·33	23....	6	13	17	12·00
4....	7	22	6	11·67	24....	22	30	32	28·00
5....	—10	2	6	—0 67	25...	22	30	19	23·67
6....	9	16	16	13·67	26....	22	28	28	26·00
7....	— 2	10	— 6	0·67	27..	31	33	28	30·67
8....	— 8	1	—10	—5·67	28 ...	2	10	— 4	2·67
9....	—18	2	—10	—8·67	29...	—18	0	—23	—13·67
10....	—10	6	— 8	—4·00	30....	—28	—18	—24	—23·34
11....	—16	2	—13	—9 00	31	—37	—22	—30	—29·67
12 ..	— 8	— 6	— 6	—6·67					
13....	— 8	— 2	— 2	—4·00					
14....	2	5	4	3·67					
15 ..	12	13	21	15·34					
16....	21	31	25	25·67					
17...	31	34	32	32·34					
18....	28	32	29	29·67					
19....	30	29	19	26·00					
20....	17	23	12	17·34					

Mean average for month..... 8·65

	Ft.	In.
Snowfall for month.. . .	2	5
" previous month	4	3
Total to 31st inst.....	6	8

TEMPERATURE for January, 1899.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°	°	°
1 ...	—34	—24	—32	—30·00	21....	30	31	14	25·00
2 ..	—35	—15	—25	—25 00	22....	16	25	26	22·34
3....	—37	—22	—28	—29·00	23....	26	31	24	27·00
4....	—26	—16	—26	—22·67	24. ..	28	34	32	31·34
5...	—38	—24	—26	—29·34	25....	20	19	18	19·00
6 ...	—20	—16	—14	—16·67	26....	6	17	20	14·34
7....	—16	—10	— 6	—10·67	27....	24	28	20	24·00
8 ...	— 2	3	4	1·67	28....	2	18	12	10·67
9....	8	8	6	7·34	29....	10	18	12	13·34
10....	4	2	2	2·67	30...	6	12	10	9·34
11....	2	24	16	14·00	31....	—10	— 8	—12	10·00
12....	14	26	26	22·00					
13....	24	26	26	25·34					
14....	20	18	12	16·67					
15 ...	0	4	0	1·34					
16 ...	2	12	18	10·67					
17....	18	21	20	19·67					
18....	20	30	24	24·67					
19 ...	26	34	16	25·34					
20....	16	26	28	23·34					

Mean average for month.... 7·02

	Ft.	In.
Snowfall for month... ...	3	6
" previous.....	6	8
Total to 31st inst.....	10	2

TEMPERATURE for February, 1899.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°	°	°
1	—24	—10	—18	—17·34	20	16	18	14	16·00
2	—30	—20	—40	—30·00	21	—22	— 8	—28	—19·34
3	—30	—20	—20	—23·34	22	—16	— 7	— 4	— 9·00
4	—18	—14	—22	—18·00	23	6	8	6	6·67
5	—17	0	— 4	— 7·00	24	2	6	2	3·34
6	— 2	2	4	1·34	25	—11	— 6	—14	—10·34
7	4	10	— 4	3·34	26	—11	— 6	— 2	— 6·34
8	4	16	—10	10·00	27	—10	7	2	— 0·34
9	2	5	— 4	1·00	28	— 2	8	4	— 3·34
10	— 2	0	— 4	— 2·00					
11	— 2	5	6	3·00				Mean average for month	4·88
12	10	21	22	17·67					
13	20	36	28	28·00					
14	30	36	32	32·67					
15	22	34	28	28·00					
16	18	38	22	26·00					
17	24	38	30	30·67					
18	37	42	34	37·67					
19	32	35	26	31·00					

	Ft.	In.
Snowfall for month	2	3
" previous	10	2
Total to 28th inst.	12	5

TEMPERATURE for March, 1899.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°	°	°
1	— 2	0	— 4	— 2·00	21	14	16	12	4·67
2	—14	4	0	— 3·34	22	— 8	14	8	4·67
3	— 8	12	5	3·00	23	— 6	18	12	8·00
4	—14	10	8	1·34	24	—12	20	14	7·34
5	8	14	18	13·34	25	— 2	20	20	12·67
6	18	44	32	31·34	26	— 5	28	26	18·34
7	22	28	18	22·67	27	24	48	30	34·00
8	10	16	10	12·00	28	18	40	24	27·34
9	— 4	10	15	7·00	29	— 3	30	12	13·00
10	10	25	25	20·00	30	—13	22	20	9·67
11	17	36	25	26·00	31	1	32	18	17·00
12	16	32	26	24·67					
13	10	27	16	17·67				Mean average for month	13·89
14	—14	26	12	8·00					
15	—12	25	24	12·34					
16	— 6	33	28	18·34					
17	— 0	40	30	23·34					
18	26	28	20	24·67					
19	—10	18	12	6·67					
20	— 2	21	8	9·00					

	Ft.	In.
Snowfall for month	1	5
" previous	12	5
Total	13	10

TEMPERATURE for April, 1899.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°	°	°
1....	2	36	18	17·34	21 ...	26	48	40	38·00
2....	4	35	22	20·34	22.. .	26	52	38	38·67
3. ..	8	38	36	27·34	23....	24	54	42	40·00
4....	20	44	32	32·00	24....	28	62	44	44·67
5....	16	45	36	32·34	25....	32	52	42	42 00
6....	32	46	36	38·00	26....	32	42	36	36 67
7....	30	45	38	37·67	27....	30	38	35	34 34
8....	25	37	35	32·34	28....	24	42	36	34 00
9 ...	32	40	36	36·00	29....	22	37	26	28·34
10....	28	36	28	30·67	30...	16	32	25	24·34
11....	14	38	36	29·34					
12...	29	38	32	33·00				Mean average for month.....	33·74
13....	18	40	32	30·00					
14....	22	43	34	33·00				Ft.	In.
15...	32	39	35	35·34				Snowfall for month . . . 0	2
16....	32	46	39	39·00				" previous..... 13	10
17....	23	42	34	33·00					
18....	32	40	36	36·00				Total for winter..... 14	00
19....	30	46	42	39·34					
20....	36	42	40	39·34				Snow settled to about 4 ft. 6 in.	

TEMPERATURE for May, 1899.

Date.	Morning.	Noon.	Evening.	Mean Average.	Date.	Morning.	Noon.	Evening.	Mean Average.
	°	°	°	°		°	°		°
1....	16	32	26	24·67	18....	36	71	54	53·67
2....	14	36	33	27·67	19...	45	55	49	49·67
3 ...	29	46	36	37·00	20....	44	51	50	48·34
4....	34	51	42	42·34	21....	35	78	57	56·67
5....	34	50	36	40·00	22....	38	75	52	55·00
6 ..	24	56	42	40·67	23....	42	65	54	53·67
7....	34	52	45	43·67	24....	37	74	54	55·00
8....	38	58	46	47·34	25 ...	46	74	50	56·67
9....	32	42	34	36·00	26....	40	69	58	55·67
10....	22	45	36	34·34	27....	48	65	50	54·34
11....	30	42	36	36·00	28....	48	58	53	53·00
12....	26	46	33	35·00	29....	30	64	54	49·34
13....	16	56	42	38·00	30....	55	69	59	61·00
14....	15	56	48	39·67	31....	53	62	52	55·67
15....	29	56	49	44·67					
16....	36	58	54	49·34				Mean average for month	46·02
17....	30	70	58	52·67					

GAME AND FISH.

That we were in a game and fishing country goes without saying, as the Hudson's Bay Co. have had forts or business posts here for centuries, and free traders also have been doing business in this country for a great length of time. We had no time to devote to much hunting, but we saw several bears, moose and cariboos during our journey in the north-west wilds, at different times. In October a young cariboo attempted to cross the Omenica River just ahead of our boat as we were struggling through a bad rapid. Some of the boys held the boat ashore and Smith soon put an end to the cariboo's career. The meat tasted like veal, and was highly appreciated after having lived on salt pork for months.

In February, we were again in luck, killing five fine full grown cariboos that we discovered on the summit of a high mountain. L. E. Smith asked permission to try his luck, which I granted, he overtook us next day, with the hearts and livers of two and the information that he had killed all the band, which numbered five. I sent the boys back next day to get the meat down the mountain and to cache all but one and bring that to camp. They had a hard time of it and only got four down, but this made a lot of meat as they averaged about 200 lbs. apiece, the meat proving tender and nutritious.

Along in March we had the luck to stumble on two fine moose in our work, and Smith soon had some more liver for us. They dressed about 350 lbs. apiece; in all we must have had at least two months meat. We were not so fortunate with fish, and although the streams seemed full of fine mountain trout, we never got many; we did not seem to have the right kind of bait for them, at least that is what the Indians told us. Small fur-bearing animals were plentiful such as marten, fisher, beaver, and woolverine. There was a party of native hunters in the neighbourhood of our winter quarters all winter, and they came in once in a while with fresh meat and mocassins to sell, taking flour, tea and tobacco in exchange. They belonged to the Sicannie tribe, and are bright and intelligent.

The Cree Indians live between Edmonton and Peace River crossing, and a few miles up the river above the crossing; then we have the Beavers up to the Finlay River where the Sicannies are located. We never had the slightest trouble with any Indians during the whole expedition, always finding them friendly and obliging.

In speaking of Omenica country, I would like to make a quotation from a geological report of Dr. Dawson's, made in 1880.

'The known auriferous localities here lie about fifty miles north of a line passing westward from Pine River pass by Forts McLeod and St. James. There are three routes by which the Omenica may be reached. First, from the coast by the Skeena River, Babine Portage and Firepan Pass. This route is travelled by canoe and on foot. Second, by a trail from Fort St. James, practicable for pack animals; and third, by canoe or boat from the eastward by the Peace and Finlay Rivers. Without entering into details, a glance at the map will show how completely isolated this district is, and account for the scarcity and high price of provisions, which has hindered the thorough examination of the country.'

One of my men, Mr. Frank Urnberg, is an old prospector, and from time to time we washed a pan on the bars of the upper Peace River, the Finlay and Omenica, always finding colours. The gold, however, is very fine, what is known as flour gold, and is very hard to retain by the primitive methods that have to be resorted to in this isolated region at present, and that with the high cost of provisions hinders prospectors from giving a sufficient time to thoroughly prospect the different bars on these streams. I know of one man who worked a bar just at the head of the Black Cañon on the Omenica who averaged $5 per day for about 6 weeks before the frost stopped him last autumn. If the country is ever opened up so that mining machinery and provisions can be got in cheaply, all these bars and bottoms will be profitably worked.

APPROXIMATE ESTIMATE OF COST.

I will now give an approximate estimate, based on prices for similar work in eastern Canada, of the construction (road-bed and permanent way) from the junction

of the Parsnip and Finlay Rivers, westward 190 miles to a point on the Skeena River north-westward of Fort Connolly.

60	miles light work at $12,000 per mile	$ 720,000 00
101½	" medium heavy work at $15,000 per mile .	1,522,500 00
28½	" heavy " 20,000 " ..	570,000 00
	Steel bridges on masonry abutments and piers.....	151,700 00
	Total cost.....	$2,964,200 00

Average per mile, $15,600, including steel bridges.

It must be remembered that this estimate is for similar work in eastern Canada.

In conclusion, I wish to say that I was most favourably impressed with the country north and north-west of Edmonton, its future possibilities are practically unlimited.

This part of the great west is lower in elevation than the country to the south of it, and there is more bush and timber, hence there is more rainfall, and consequently there is greater fertility.

This country truly is a great inheritance only needing development, and we should strain every nerve to accomplish this, as eternal vigilance only is the price of success.

I have the honour to be, sir,
Your obedient servant,

C. F. K. DIBBLEE,
Engineer in charge.

COLLINGWOOD SCHREIBER, Esq.,
Chief Engineer, Railways and Canals.

PRELIMINARY REPORT OF AN EXPLORATION ON THE UPPER PART OF THE STIKINE RIVER.

(By V. H. DUPONT, C.E.)

OTTAWA, December 3, 1899.

SIR,—I beg to submit the following preliminary report and sketch plan, of an exploration I made, on the upper part of the Stikine River, to ascertain the feasibility of building a railway.

Your instructions, dated May 1, directed me to leave Ottawa and proceed to explore the valley of the Stikine River, from where Mr. J. S. O'Dwyre, C.E., completed his work the previous year, viz., 107 miles south-east of Dease Lake, to the head waters of the river, and from that point to endeavour to find a pass to the Skeena River.

In accordance with your instructions, I proceeded immediately to get ready, but owing to some delays, I was unable to leave Ottawa before May 11.

I arrived at Vancouver on the 17th, and without delay I started to organize my party and purchase the necessary supplies.

Great difficulty was experienced in procuring a suitable outfit of horses, men, etc., and in making arrangements for the transportation, especially from Fort Wrangel to Telegraph Creek. However, all arrangements were completed on May 27 and at 4 p.m. on that date I left Vancouver for Fort Wrangel arriving at that point on May 30 at 11 a.m.

On June 3, I left Fort Wrangel for Telegraph Creek, but owing to the low stage of water, the boat was unable to proceed further than Glenora, where we arrived on the 6th. Here considerable time was spent in breaking mules and making packs ready for transportation.

On leaving Glenora on the morning of the 14th, we experienced a bad stampede through the rough bushy mountains, losing four mules. Searches were made without success, and we continued on our journey until we arrived at Telegraph Creek, which is 12 miles from Glenora. These mules we found next day.

On account of unforeseen circumstances it was impossible to leave Telegraph Creek before June 20.

On July 1, our camp was pitched at the crossing of the Tanzilla River, 2½ miles south of Dease Lake and 72 miles from Telegraph Creek.

Here, the greatest difficulty was experienced in crossing this river. As the season was fully a month behind, the water was at its highest stage and the river was a rushing torrent. We first attempted to ford it but, in trying to do so, one man and several horses were swept away and nearly drowned. We then tried to bridge the river, which seemed almost impossible, but after having built three bridges, we managed to cross part of the outfit, a few minutes before the third bridge was carried away.

Leaving the remainder of the outfit on the west side of the river, we resumed our journey on the 6th and travelled through rain and mud until the 11th. We were then stopped by a very steep hill of over 1,000 feet in height, and as the frost was just coming out of the ground, it was impossible to climb it so we pitched camp, and I ordered the pack train to go back to the Tanzilla River and bring on the rest of the outfit.

The hill just spoken of was at the foot of the divide mountain between Gnat and Ptarmigan Creeks.

As the mountain was nearly all covered with snow, and as on examination of the trail over the divide I found it was impossible for the pack train to cross, I at once marked out a new trail, and by the time the pack train returned, which was on July 20, the trail was completed and we were able to cross the divide with a light load, and proceed on towards the point the exploration was to begin.

After having built several bridges and rafts to enable us to cross some large streams, and travelling through mud and rain we arrived on August 4 at the beginning of the exploration.

On the morning of August 5, we started the exploration.

At the point where we started work, no trace of a trail could be found and four men were set to work cutting one, in order that the pack train might travel.

On August 28, having connected my survey with the one made by Mr. O'Dwyre on the Skeena River, and taking the old Telegraph and Ashcroft trail where it crossed the head of the Stikine River, we arrived, on September 19, at Kis-pi-ox an Indian village situated on the Skeena, 3 miles north of Hazelton.

At this point, I decided to send Mr. Kerr, my assistant, accompanied by three men, to Ashcroft over trail, where they arrived on October 22, having travelled 600 miles in about one month. The remainder of the party and myself left for the coast in an Indian canoe and arrived at Port Essington on September 26, at 10 p.m., and taking a steamer four days after, we arrived at Vancouver on October 3, and on the 13th I arrived in Ottawa.

DESCRIPTION OF THE COUNTRY.

Having made a brief narrative of the trip, I will now describe that part of the country which was the object of my expedition.

Beginning at 111 miles south of Dease Lake and following the river up stream, for the first 28 miles, the valley is from 6 to 8 miles wide, and between the base of the mountains and the river, it is generally bordered by flats and benches of different height and width. On the left side of the river, going up, there is about half a mile of side hill where it will be necessary to make some rock excavations in building a railway line, but in no place will it be deep or will it necessitate a large expenditure of money.

There are two land slides, one about 100 feet in length which is occasioned by a spring, and the other is 500 feet in length and was dry at the time I saw it, but it must be of bad character in the spring when the frost is coming out of the ground. These slides are composed of sandy clay and gravel which becomes very soft when wet and hard like concrete when dry. By careful drainage of the springs and diverting the water elsewhere, the slides mentioned can, without doubt, be stopped.

I also noticed a cut-bank 200 feet in length caused by the action of the river and composed of disintegrated beds of sandstone. This cut-bank will present very little difficulty.

Some short pieces of muskeg are also on the way, but all have a rocky bottom a few feet below the surface. From the beginning of this section of 28 miles and speaking always of the left side of the river (going up), there are 19 streams to cross, 16 of which are less than 6 feet in width.

The important streams are:—

The Ducker River, which is a very uniform stream, having a width of 250 feet in high water, it has a mean fall of 20 feet per mile for a distance of at least 6 miles and flows through a very wide valley, which appears to extend in a direction N. 60° E. This river will require a bridge 250 feet in length and 20 feet above the water. It is possible to bridge this river at any point, as the bottom is of a hard nature.

The Sanabar River is a very crooked stream, running through cañons of sandstone and conglomerate of a greenish colour. At a distance of 5 miles from its mouth, it branches into two equal streams, one running in a southerly direction, while the other follows an easterly course. This river has a fall of 106 feet in the first mile. It could be bridged with a 100-foot span, 12 or 15 feet above the water. The third stream will require a span of 40 feet. This stream after crossing a broken flat divides into three branches, the main one running in a direction S. 25° W.

From the beginning to the end of the first 28 miles, just described, the right side of the river appears to present the least obstacles to the construction of a railway line. Large flats of even height border the river, and the land seems to be dry and no streams of any importance will have to be crossed.

The Stikine River has a mean fall of 4 feet to the mile for the first 16 miles, and then the water is nearly still for a long stretch. The course followed by the river, is very crooked indeed, describing half a circle of 12 miles diameter and 28 miles long.

From the 28th mile to the 56th, the valley becomes much narrower, being in places not more than a mile wide. The river presents the appearance of a narrow lake with irregular contours of very peculiar appearance. As seen from the top of a moun-

tain, the valley looks like a very beautiful park. At one place, the river describes a very regular S over 4 miles long. The space between the branches of the S, is covered with grass of a fine yellow-green colour, and is cut off by numerous lakes and channels. The water is surrounded by a narrow strip of spruce trees, which gives the scenery a very pleasant effect.

The river for the second 28 miles flows through a muskeg of at least a mile wide, but a line could easily be built, at a moderate cost, by following the foot of the surrounding hills on either side of the river.

On the left side of the river, there are 13 streams, but only two are important. One will require a span of 75 feet, while a span of 20 feet will be sufficient for the other.

I noticed a cut-bank 40 feet high and 300 feet long. The base of this cut-bank is of slate formation.

In the next 12 miles, the river has a fall of 91 feet and becomes narrower and swifter in places. The land on both sides is dry and very suitable for the construction of a railway line. The valley, which is not more than a mile wide, becomes an open prairie for the last 4 miles.

There are six small streams on the left side of the river, and only three very small ones on the opposite side.

At the 68th mile, the river branches into three streams, one branch called the Tennasee Creek, running in a westerly direction, first through a short cañon, 1,500 feet in length, in which a vein of coal appears, and then through an open valley, one mile wide, until it comes within one mile of a branch of the Clappan River, where it turns in a southerly direction and branches out in the mountains.

The second branch continues toward the south, through several short cañons, for a distance of 5½ miles, and then branches off into two streams, one running in a westerly direction and is soon lost in the mountains, the other running toward the east across some high broken benches for a mile or so, and then through a very fine open valley one mile wide. This branch I have called the "Glacier Branch." It continues through the valley for 3 miles, where it touches a small lake which is the source of a branch of the Skeena River. From this lake the creek takes a sudden bend toward the south and runs in that direction for about 2 miles and then ends in a glacier, which I have named the 'Bell Glacier' on account of a black peak which at a distance has the appearance of an immense bell, and which is in the centre of this glacier.

This valley, through which a branch of the Skeena flows, continues to be open and becomes drier for a distance of 6 miles. The continuation of this valley will be described by Mr. O'Dwyer in his report.

I will now come back to the 68th mile and give a description of the third branch called the East Branch. The valley through which this branch flows presents a more favourable appearance for the route of a railway line than the valley just described. The stream follows an easterly course, running through a cañon about a mile long. The walls of this cañon are 25 feet high, and on the top of which ends the slope of a plateau of 150 feet in height. From here the valley is very open. At a distance of 14 miles, the river branches off into two streams, the most important one running in a north-easterly direction, and then continues toward the east for a distance of 4 miles, where it meets a branch of the Skeena River, which joins another branch of the Skeena meeting the Glacier Branch of the Stikine.

The junction point of the two branches of the Skeena River can be seen from an elevation, and as far as I could judge, this valley presents no serious obstacles to the construction of a railway line.

The approximate elevation at the divide of the Glacier branch is 4,335 feet above sea level, while it is 4,150 feet at the divide of the 'East Branch,' giving 185 feet lower in favour of the latter pass.

The mean grade by this route is 22 feet per mile, while it is 54·5 feet per mile by the valley of the Glacier branch, which is also 5½ miles longer than the other.

All the mountains in this part of the country are more or less covered with snow, and present the general appearance of the Rockies.

Particular pains were taken in studying the geolgy of the country but without any striking results. Colours of gold are found in the Stikine River up to the 38th mile, but then disappear entirely.

At the 48th mile we crossed a red mountain, which no doubt, is part of a mineral belt running practically east and west. Some good quartz might be found in this range.

The formation is chiefly of conglomerate and sandstone up to the 56th mile, where limestone, slate and shale formation commence to appear. At Tenasse Creek there is a vein of about 10 feet of impure coal, this same vein seems to appear on the Glacier Branch. Several indications of coal were noticed in the surrounding gulleys and even on top of the mountains, but all the coal seems to be impure and in small quantities.

Several peaks were ascended. The highest appears to be at the 48th mile, its elevation being 7,665 above sea level.

The climate is cool, freezing every night unless the sky is cloudy or the wind blowing. The season was very wet raining more or less ever day. From the time we left Telegraph Creek until we arrived in Vancouver, I am safe in saying it rained five days per week, but I am under the impression that this season was an exception, the climate being generally dry according to some Indians who I met at the head waters of the Stikine River.

Good timber is not very abundant; some white spruce of 2 feet diameter was seen in many places but not in large quantities. Many flats are covered with jack pine of small growth. There are also poplar trees in places, and everywhere there are thick bushes which make it very disagreeable in travelling.

An album containing the photographs taken on the trip will accompany the final report giving a better idea of the nature of the country.

I have the honour to be, sir,

Your obedient servant.

V. H. DUPONT, C.E.

COLLINGWOOD SCHREIBER, Esq., C.M.G.
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

THE INSTRUCTIONS OF THE CHIEF ENGINEER (WRITTEN AND VERBAL) GIVEN ME ON APRIL 21, 1899, OUTLINED THE FOLLOWING OPERATIONS IN THE FIELD.

(I.) An exploration of the Skeena River northward from Hazelton to the mouth of the east branch of the Skeena, thence along this branch to the Vicinity of Fort Connolly.

At this point a junction should be made with the work of Mr. C. F. Dibblee, who, during the winter of 1898-9, was expected to have made explorations westward from the mouth of the Omenica River towards Fort Connolly.

A personal interview with Mr. Dibblee was to be had, if possible, and his co-operation obtained in the exploration of the East Branch of the Skeena.

(II.) A continuation of the explorations of the Skeena River northward to its head, with the object of discovering a pass—suitable for railway construction between its head waters and those of the Stikine River.

My pack train and party started from Ashcroft for Hazelton, via Quesnelle, on May 20; we reached Hazelton June 30. Here we were delayed until July 5, getting the pack animals reshod, and preparing the supplies, outfit, &c., for the season's trip.

Before leaving Ashcroft, I received from the chief engineer a copy of Mr. Dibblee's report to him, dated April 1, 1899; in which Mr. Dibblee states, 'Have just finished explorations, getting back to headquarters the 30th ultimo. Have found a favourable route via Omenica, Osilinca, head waters of Skeena waters, &c.'

Mr. Dibblee's headquarters, referred to above, being at the mouth of the Omenica River, the proposed personal interview with him was now out of the question, as was also the contemplated assistance from him in exploring the East Branch of the Skeena.

Consequently, I decided to proceed directly to the head of the Main Branch of the Skeena, and explore that vicinity for a pass to the waters of the Stikine; leaving the work on the East Branch toward Fort Connolly for the latter part of the season. I was particularly influenced to adopt this programme of work, by the fact that Mr. Dupont, who had been sent out to continue my explorations on the Stikine River of 1898, southward to its head, would no doubt on reaching the divide between the Skeena and Stikine waters, be on the look out for my party, or evidences of our work. I realized too that it might be a difficult matter to connect our surveys in a wild, and wholly uninhabited territory, unless precautions were taken to reach that vicinity as early as possible, and ascertain the peculiar conditions topographically of the head waters of these rivers. As I was unable to obtain any reliable information regarding this locality, I could form no idea of the probable time required to explore for and secure the desired pass; another reason for proceeding directly to the head of the Skeena. Accordingly, I left Hazelton on July 5, making a track survey of our route, and taking barometer readings for elevation, also observations for latitude, to correct the traverse survey, as we proceeded. The most direct route to the head of the Skeena was taken. By August 8, I had discovered an excellent pass for a railway line between the head waters of the Skeena and Stikine Rivers—the divide being about 164 miles by trail from Hazelton—and had explored some 20 miles down the branch of the Stikine heading here. I then felt quite confident we were on the same branch of the Stikine River that I had explored last season, and which Mr. Dupont was this year following to its head. I was gratified to learn later on that Mr. Dupont had come directly onto my work and connected with reference posts left by me for that purpose on the banks of the Stikine, at the end of my explorations in that direction.

In taking the above-mentioned direct route to the upper Skeena, my trail left the main river about the 91st mile, and ascending to the head of a large tributary branch, passed through a low, wide valley to the head waters of the Nass River. It followed down this branch of the Nass for a few miles, then ascended by another one to an elevated unbroken watershed between the Nass and the Skeena. From here the route

descended to the main Skeena, reaching it at the 143rd mile. If it were not for the summit just mentioned, the route of this trail itself would form a good line for a railway, the general direction being almost due north from Hazelton.

Had the season not been so far advanced, on my return from the head of the river to the 143rd mile, I would have explored the main Skeena southward from this point to the 91st mile, where I had left it on my way north. To do this, however, under the circumstances, would have meant abandoning, for the present season, any possibility of exploring the East Branch to Fort Connolly, one of the objects of my expedition.

My explorations so far had established the fact that a railway line from Hazelton to the pass, now located between the Skeena and Stikine Rivers, must follow the main Skeena, the more direct route followed by the pack trail not being feasible. Hence the exploration of the river from the 143rd mile southwards, while necessary to obtain an idea of the approximate cost of construction over this section, was not absolutely essential to the work in hand. This portion of the river must be accepted in any case as part of the railway route northward from Hazelton, as mentioned above. However, before leaving the 143rd mile, I ascended a high mountain in this vicinity, and obtained from its summit a good view down the Skeena for some 20 miles southward. The river valley is quite direct, and timbered generally to the water, it did not appear to offer any serious obstacles to railway construction, and furthermore, my Indian guide, who had previously been over this part of the Skeena several times, told me that similar conditions obtained down to the mouth of the East Branch.

I then returned to the 91st mile on the main Skeena and on August 22 began the explorations eastward toward Fort Connolly, following the main river to the 116th mile. Here the East Branch, or Sestoot River, bringing westward the waters of Sestoot Lake and Bear Lake, joins the Skeena, which, veering around through 90 degrees from its previous east and west course, now turns abruptly north. Looking up the Skeena from this point, I observed for several miles, conditions somewhat similar to those noted at the 143rd mile, and I therefore feel quite confident that the section of the river between the 116th and the 143rd miles will not present serious difficulties to railway construction. Continuing eastward along the East Branch, I reached Fort Connolly at the lower or north end of Bear Lake, on September 6. I ascertained from Indians living here, that Sestoot Lake was distant some 60 to 70 miles by trail, and that this trail cuts across country avoiding the river entirely, and passing over high mountains on which freshly fallen snow could be seen at this early date.

To follow this trail to Sestoot Lake would give me no information regarding the country immediately adjacent to the East Branch, such information could only be obtained by cutting a new trail along the river, a task quite too great for the short part of the season now available.

In Mr. Dibblee's report, previously noted, he states he had reached the 'head waters of the Skeena waters.' This no doubt means the waters of or leading into Sestoot Lake; as, on his line of explorations he could hardly meet any other of the Skeena waters. Therefore, although an examination of this remaining portion of the East Branch, viz., from the outlet of Bear Lake to Sestoot Lake, is necessary to a proper estimate of the approximate cost of construction over this section, it is not absolutely essential to the immediate results of the expedition. This portion of the East Branch offers the only route to the main Skeena from Sestoot Lake, and must be accepted in connection with Mr. Dibblee's line.

While camped at Fort Connolly, I examined the shores of Bear Lake to its upper or south end, also the divide at this point between the lake and the head waters of Driftwood River. These waters form part of *a possible route from the Peace River to the main Skeena*, via Omenica River, Fall River (west Branch of the Omenica) Hogem Pass, Tacla Lake, Driftwood River, Bear Lake, and the East Branch.

Returning, I left Fort Connolly on September 9, and reached Hazelton on the 24th. Here I was detained a few days disposing of my pack train and outfit. From Hazelton I proceeded to Port Essington by canoe; the trip occupying three days, during which I made a cursory examination of the banks of the Skeena at a number of points, as we came down the river.

While waiting at Port Essington for a steamer to Vancouver, I went to Port Simpson, and had a look at its harbour as well as at the western portion of Work Channel, along which a railway line from the Skeena River to Port Simpson would necessarily have to be located.

Returning to Port Essington, I picked up my party and finally reached Vancouver on October 12.

From the time we left Hazelton until our return there, about 360 miles of actual explorations were made, and 530 miles travelled by trail; this latter, added to the distance to Hazelton from Ashcroft, 550 miles, makes 1,080 miles by trail. The canoe trip to Port Essington was about 150 miles; so we have a total of 1,230 miles of horse and canoe travel between Ashcroft, on the Canadian Pacific Railway, and Port Essington, on the Pacific coast, from May 20 to October 1.

With this preliminary report, I beg to file a small sketch map showing my explorations of this season. (Scale of 10 miles to the inch.)

The whole respectfully submitted,

JOHN S. O'DWYER,
Engineer in charge.

December 5, 1899.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Cheif Engineer and Deputy Minister,
Department of Railways and Canals.
Ottawa.

No. 4

CANALS

SAULT STE. MARIE CANAL.

SUPERINTENDENT'S OFFICE,
SAULT STE. MARIE, Sept. 20, 1899.

SIR,—I beg to submit the fourth annual report upon the operation of this canal for the fiscal year ending June 30 last

The canal was closed for the season on the 9th day of December, having been in continuous operation for 243 days and without any material delays to vessels, and was reopened for traffic this spring on the 26th day of April, some fifteen days later than last year.

During the fiscal year just ended there has been made some 2,336 lockages, passing through 3,321 registered and non-registered craft, with a total tonnage of 2,352,166, with an average time of 14·56 minutes to a lockage including all delays to vessels in the lock by breaking of tow lines, &c. Of this tonnage some 458,517 tons was of Canadian bottoms, being an increase this year on this item of tonnage of some 63,081 tons. In the total tonnage passing through the lock there was a falling off of some 1,766,326 tons. The only reason I can give for this great decrease is that several vessels in going out in the lower channel struck bottom, and this report got out, and several captains have informed me that they were afraid to come this way on that account, and as the channels of the American canal were down to 21 feet, there was no danger of touching bottom there. Now that the day of the large carriers and of deep draught ones is to hand, and this canal, so to speak, is built alongside of the American one and the lock was constructed for a 20-foot channel, this idea should be carried out and our channels deepened from 18 feet 6 inches to 21 feet to meet the altered circumstances. As it is now vessels drawing 18 feet 6 inches are very frequent, and in case of an accident to the American lock a vessel drawing that much water would either have to wait until the repairs were made or otherwise secure a lighter and lighten her load so as to be able to pass down through this canal. Whilst it is true that our present channels are deep enough for any of the Canadian vessels using it, we must not forget that a good deal of the produce of the Canadian North-west is carried through in American vessels, and there is not much doubt but that the large iron ore and other mineral deposits on the north shore or Canadian side of Lake Superior are about to be developed in a marked degree. All improvements to be made on this canal should be subordinate to this idea. The daily exchange of vessel reports with the American canal has been carried on the same as in former seasons, and we are indebted to the canal officials on the American side for many courtesies during the season.

SESSIONAL PAPER No. 10

A perusal of the following table will in some measure give an idea of the immense traffic on Lake Superior and shows the vast increase of this traffic since the opening of the first lock in 1855.

Year.	Number of Vessel Passages.	Registered Tonnage of Vessels.	Total Freight Tonnage.	Cost of carrying per mile. Ton.	Estimated Value of Freight Carried.	Proportion of Freight carried in Canadian Vessels.
				Mills.		
1855	No record	106,296	No systematic record until 1881		No record kept until 1881	
1860	"	403,657	"		"	
1865	997	409,062	"		"	
1870	1,828	690,826	"		"	
1875	2,033	1,259,534	"		"	
1880	3,503	1,734,890	"		"	
1887	9,355	4,897,598	5,494,649	$2\frac{5}{10}$	79,031,757	7
1888	7,803	5,130,659	6,411,423	$1\frac{6}{10}$	82,156,019	6
1889	9,579	7,221,935	7,516,022	$1\frac{5}{10}$	83,732,527	4
1890	10,557	8,454,435	9,041,213	$1\frac{3}{10}$	102,214,948	$3\frac{1}{2}$
1891	10,191	8,400,685	8,888,759	$1\frac{35}{100}$	128,178,208	4
1892	12,580	10,647,203	11,214,333	$1\frac{31}{100}$	135,117,267	$3\frac{8}{10}$
1893	12,008	8,949,754	10,796,572	$1\frac{1}{10}$	145,436,957	$4\frac{1}{10}$
1894	14,491	13,110,366	13,195,860	$\frac{99}{100}$	143,114,502	$3\frac{1}{4}$
1895	17,956	16,806,781	15,062,580	$1\frac{4}{100}$	159,575,129	$3\frac{9}{4}$
1896	18,615	17,249,418	16,239,061	$\frac{99}{100}$	195,146,842	4
1897	17,171	17,619,933	18,982,755	$\frac{93}{100}$	218,235,927	3
1898	17,761	18,622,754	21,234,664	$\frac{89}{100}$	233,069,739	$2\frac{9}{10}$

At a first glance of the above table it would look as though the carrying capacity of Canadian boats was decreasing every year, but this is not the fact; the apparent decrease in the percentage is from the building of large American vessels, there being at present quite a number over 470 feet long and some now building and to be ready for next season's work are to be 500 feet in length. The 8,000 ton cargo is now of the past it having been broken by two vessels. The first of this large class of vessels to pass through these canals was the schooner *Manilla* of the Minnesota steamship line, with a cargo of 8,205 net tons of iron ore on a draught of 18 feet 1 inch, followed shortly after by the schooner *John Smeaton* of the Bessemer steamship line with a cargo of 8,339 net tons of ore on a draught of 18 feet, both of these cargoes passed down through the American lock. The largest cargo carried through the Canadian lock is to the credit of the steamer *Henry W. Oliver*, 476 feet long, with a net registered tonnage of 3,617 tons, drawing 18 feet of water and carrying 7,464 net tons of ore.

All the machinery in the power house and on the lock walls has been thoroughly overhauled and is in good working order.

During last season dredging was done in the lower entrance channel by taking off the elbow on the south side, thereby enlarging the width of the channel, giving vessels a much wider turning point when coming in or going out.

We are still short of dockage room for vessels to tie up to when locking down at night and they have to wait here until daylight so as to be able to go on down the river. Our present south pier is too short, as there is only about sufficient room for a large sized tow to lie there, and even in that case the pier is very short, for it brings the stern of the schooner so near the lock that the surge from opening the discharge valves breaks the lines of the vessel lying there. An addition of some 800 to 1,000 feet would be of a manifest improvement to the use of the canal.

During the close of navigation a new swing bridge for carrying the Canadian Pacific Railway over the canal was erected under contract with the Dominion Bridge

Company of Montreal and extending over the whole width of the canal, thus doing away with the dangerous pier that has heretofore stood in the centre of the prism of the canal, calling for very strong remarks of condemnation from captains using the canal. This pier was removed by Messrs. Hickler Bros. under contract with this department.

It would be a manifest improvement in the appearance of the canal grounds if some more levelling up of them were done.

A small frame building should be erected for the use of the motormen and linesmen when not actually operating the lock, as the room now used by them in the power house is not of sufficient size to accommodate the number of men using it. Painting of the buildings has been done where necessary.

This coming winter it will be necessary to do some extensive repairs to the lower main and auxiliary gates. Very little damage has been done to the piers or lock walls by vessels using the canal.

An arrangement was made with the Marine Department for the maintenance of three front lights to mark the turning points of the channels and they have been of great convenience to the captains of vessels using the canal at nights.

I have the honour to be, sir,

Your obedient servant,

J. C. BOYD,
Superintendent.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Railways and Canals.

SESSIONAL PAPER No. 10

SOULANGES CANAL.

ENGINEER'S OFFICE, COTEAU LANDING, P.Q., November 2, 1899.

SIR,—I have the honour to report as follows on the progress of the Soulanges Canal. The subjoined list gives the names of the contractors and the dates of the various contracts :—

Sections.	To whom Let.	Date of Letting.
Sections Nos. 1 and 2	(1.) Archibald Stewart	September 24, 1892.
	(2.) Ryan & Macdonell	December 11, 1897.
" No. 3	J. & M. O'Leary	March 27, 1893.
" Nos. 4, 5, 6 and 7	(1.) George Goodwin	May 9, 1893.
	(2.) Andrew Onderdonk	April 17, 1897.
" No. 8	Charles H. Raynor	December 29, 1892.
" No. 9	Randolph Macdonald	January 30, 1893.
" No. 10	Rogers & Taylor	December 24, 1892.
" No. 11	(1.) George Goodwin	May 11, 1892.
Transfer	(2.) Thomas Feeny	
	(3.) Poupore & Fraser	
Section No. 12	(1.) Denis O'Brien & Son	April 8, 1892.
	(2.) George Goodwin	May 9, 1893.
	(3.) M. J. Hogan	April 5, 1897.
Section No. 13	Randolph Macdonald	September 24, 1892.

The canal is 14 miles long, and is built on the location line of 1890. The rise of 82½ feet between Lakes St. Louis and St. Francis is overcome by four locks. Three of these, each 23½ feet lift, occur in the first mile from the Ottawa River. There is then a reach of some 2½ miles to the fourth lock which has a lift of 12 or 13 feet to low water level of Lake St. Francis. The summit is 10½ miles long. At its western end there is a guard lock, supply weir, and other structures. The lake fluctuates some 5 feet, but this extends over a long series of years, the annual variations being comparatively small. The lowest water of which there are authentic record, occurred in November, 1895. Twice during that month, the lake surface was only 151·88 over mean tide at New York, at which time there was, however, 14·55 feet at the upper entrance of the canal, and 14·83 feet on the lower mitre sill of lock No. 1. At mean water there will be from 17 to 18 feet in the long level. The canal is, for all purposes of navigation, a straight line throughout.

The present condition of the works may be briefly described as follows :—

Sections Nos. 1 and 2.—The completion of this contract was let to Messrs. Ryan & Macdonell in December, 1897.

As indicated by me at the close of 1898, the masonry and concrete (exclusive of the lower entrance works) was not practically completed until July, 1899. The earthwork was considered to be far enough advanced to permit of water being let into the canal to full height early last month, but so far nothing has passed through drawing more than about 8 feet, although, even at the present low stage of the river, there is a channel of a least depth of 15 feet throughout the canal and its entrances.

As a matter of fact there are scarcely any vessels drawing 14 feet now engaged in the St. Lawrence trade, except the line of American propellers plying between Chicago and Ogdensburg. When the St. Lawrence River and canals are fully ready, it is presumed that craft of the required capacity will be forthcoming. Some propellers of what is called 'Welland Canal' size, are in course of construction at upper lake ports, but the grain fleet for the St. Lawrence route has yet to be built. There is a number of whalebacks which could pass through our enlarged canals, but these are not likely to descend to tide-water, so long as the present freight rates continue on the great lakes.

Sections 1 and 2, entrance locks Nos. 1, 2 and 3, each of about 23½ feet lift, together with three regulating culverts and a large amount of concrete in retaining walls and other structures. The quantities of the principal items of work done by Messrs. Ryan & Macdonald up to September 30, 1899, are as follows:—Earth 366,734 cubic yards, rock 18,485, cut stone 14,554, concrete 53,442. The total value of work, deducting materials supplied by the previous contractor, is about $500,000. This is a very good showing for two years' operations, and was only accomplished by considerable energy on the part of the present contractors, who expended some $80,000 to provide proper plant to enable them to complete the work in a reasonable period.

The south entrance pier is now in progress and the concrete wall will be in place on both sides this year. But there is yet a large amount of rip-rap, sodding, finishing, &c., to be done before the works can be accepted as complete, according to contract.

Section No. 3.—As stated in my last year's report the work of section No. 3 was completed in the fall of 1897.

Sections Nos. 4, 5, 6 and 7.—Although comparatively fair progress has been made on these sections by the present contractor there yet remains a large amount of protection lining, macadam, sodding, &c., to be done before the work can be taken off his hands

When he began operations in the summer of 1897 there were some 850,000 cubic yards of earth remaining to be removed. This was chiefly blue clay, difficult to handle especially in winter. It has been nearly all taken out with the exception of some trimming and removal of certain points on the sides of the cutting on section No. 7 which will have to be done by dredging.

The principal items of work are as follows:—Earth 832,812 cubic yards, cut stone 5,148, concrete 38,598. Value of work to September 30, 1899, $516,215.30.

Lock No. 4.—The guard gates, and various other structures were practically completed in May last. The masonry and concrete is excellent and this work was carried on satisfactorily in accordance with the requirements of the plans and specifications.

It may here be stated that the walls of lock No. 4 are 37 feet high and the structure is built on piles about 35 feet long, but so far no perceptible settlement has taken place in the foundations. The banks on each side of the summit level from lock No. 4 to the west end of this contract at station 460, have proved quite water tight under full head.

Section 8.—On Sections Nos. 8 and 9 the slopes of the north bank between stations 513 and 560 were flattened out to 4 to 1, and a 15 foot berme left at the foot of the protection lining. Notwithstanding these precautions about 350 feet of this work immediately to the west of the St. Emmanuel road bridge slid into the canal on July 28 last. This material is now being removed by dredging and a final attempt will be made to repair the slope before the close of the season. The recurrence of slides has greatly retarded the progress of section 8, which would otherwise have been easily completed this year. It also largely increased the cost of the work. The progress estimates to September 30 amount to $298,966.74, which is already about $40,000 in excess of the original estimate.

The building of a set of regulating culverts designed to control the summit level was let to C. H. Raynor in March, 1898. The site chosen for these in 1890 was in the south bank of the canal, a short distance west of the crossing of River à la Graisse. They were estimated to cost $50,000. It was subsequently considered advisable to revert to the original scheme of placing the power house at this point also, and the weir plans were accordingly modified to suit the foundations of the building, the formation of wheel pits, &c. The cost of the whole will not exceed $55,000. The power house proper will amount to about $25,000, so that the structure for the combined purposes will not exceed say, $80,000. The foundations cover a space of 130 x 80 feet and are supported on piles. In the base walls, arches, &c., there are nearly 6,000 cubic yards of concrete of the best quality.

The main building is of brick with sandstone dressings. Its outside dimensions are 85 x 24 feet with a height from the floor to the apex of the roof of 46 feet.

There are two sets of four 24 inch wheels. Each individual wheel will develop 90 h.p under 18 feet head, or 360 h.p. the set. The generators will be each of 200 k.w. capacity which would equal say 270 h.p. This would leave a surplus of about 90 h.p. to be used as regulation and to overcome the losses in the bearings, &c., &c.

The horizontal shaft of each set of wheels is coupled directly to its generator. The power provided is considered ample to light the canal throughout in an efficient manner and also to easily operate the lock gates, sluices, &c.

The excellence of the site is now quite apparent. At mean level of Lake St. Francis (155·50) there will be at this point a cross sectional area in the canal of about 2,600 square feet: therefore the abstraction of say 26,250 cubic feet per minute, would only create a movement of 10 feet per minute in the prism, which will be barely perceptible; whilst the discharge of this volume into a wide tail race formed partly by the River à la Graisse will obviously preclude the inconvenience of fluctuating backwater. The difference in level between the surface of the canal and that of the river is remarkably uniform and generally about 20½ feet.

The power house is almost completed and the two generators are being set up. A ten ton travelling crane is provided and in place so that it is probable the western circuit of about 5 miles in length may be operated this month, and a test made of the lighting apparatus and also of the working of the stoney sluices and gate machines at the guard lock by electrical power. The whole question of the application of this power in the way designed will have to be carefully worked out in detail before next spring. The operation of the system when completed can only be safely entrusted to persons properly trained for that purpose. Any want of skill or knowledge in this department will result in immediate disaster to the machinery and interruption to the navigation of the canal.

Most of the line poles are now in place. They are 120 feet apart. Those to carry the lamps (480 feet apart) are being slowly set up. All the poles are of red cedar from British Columbia—of excellent quality—dressed to an octagonal shape and tapered. The lamps are to be closed, so it is expected that the carbons will only have to be changed every 150 hours. It is presumed that on this canal there will be really 2,000 candle power at each lamp, as the government supply the power and there are no 'commercial considerations' to prevent the full volume of light being furnished. The wires are now being strung from Coteau Landing eastwards and there is some appearance of the Canadian General Electric Co. accelerating their hitherto slow and unsatisfactory pace.

In connection with the electrical power it may be stated that no provision has been made for applying it to the operation of the two small swing bridges over the upper wings of lock No. 3 and the guard lock—or the bridge carrying the Canada Atlantic Railway over the lower wings of the latter structure at Coteau Landing.

Section 9.—Although none of the slides on section No. 9 were as serious as that which occurred on section 8 near the St. Emmanuel bridge on October 25, 1897; yet they were both numerous and troublesome to deal with between stations 535 and 565. The treacherous and uncertain nature of the material is shown by the fact that in some places it would not stand even at a 4 to 1 slope on the north side of the cutting, although it remained firm at 2 to 1 on the south side of the canal and immediately opposite; whilst the material on both sides was to all appearance the same. This question of slides is now practically disposed of by the introduction of the water into the canal, since when there have been no slides whatever.

On section 9, the north slope is re-established throughout but that on the south side will not be finished until next season. The work of this kind remaining to be done on sections 8 and 9 will not however interfere with the operation of the canal for a 14-foot navigation next year. The considerable increase in the cost of sections 8 and 9 was largely owing to the amount of stone which had to be used in holding up the slopes whilst the prism was dry.

The earth taken out to September 30, 1899, on section 9 was 636,520 cubic yards, which is already 130,000 cubic yards in excess of the original estimate. Value of work to same date, $167,257.13.

Section No. 10.—Section No. 10 was completed last fall.

Section No. 11.—Section No. 11 was only finished about a month ago, its completion having been unnecessarily prolonged, as stated in previous reports.

Section No. 12.—The work here was very difficult. It required the most strenuous exertion on the part of the contractor to get the section in such shape as to permit of the water being let into the summit level on August 12 last. This was of very great importance, as it enabled the stone lining of Onderdonk's contract to be carried on rapidly in scows; and the counterpoise of a column of water from 13 to 14 feet in depth has (as above stated) effectually prevented any further sliding on sections 8 and 9. Certain questions relative to the excavation on section 12 having been referred to Mr. T. C. Keefer, some data has been supplied to that gentleman to enable him to arrive at a decision in the matter.

The contract for the section is now practically completed. The quantities to September 30, 1899, are: earth 332,287 cubic yards, rock 121,000.

Mr. Hogan deserves much praise for the very plucky way in which he tackled such a difficult job and carried it through to completion without any attempt on his part to evade his contract obligations. This case should, however, serve as a warning to contractors whose previous experience is confined to railway work. The conditions on a canal are so essentially different that to attempt to execute similar items for the same price inevitably results in delay to the work and loss to the person undertaking it.

Expenditure to September 3, 1899, $196,528.34.

Section No. 13.—This section is nearly completed. The clay dam at the head of the canal has been removed and the outside shoal in line with the upper entrance is partly excavated. The channel between the piers is being cleaned up, but there is yet a considerable amount of dredging to be done.

The masonry of the section is excellent work. The cut stone was obtained at Point Ann near Belleville, Ont.; but the retaining walls are chiefly built of material got out near the mouth of the River Delisle, in what is called the Calciferous sandrock. All the structures on this section are founded on the rock, of which some 20,000 cubic yards were unexpectedly met with in the bottom of the canal at and to the eastward of the guard lock. The chief items of work are, earth 611,798 cubic yards, dredging 214,020, masonry 24,316, concrete 17,010. The total cost to September 30, 1899, is about $640,000.

With reference to the completion of the canal, it is urgent that the stone protection of the banks on Onderdonk's contract which is about 5 miles in length, should be pushed on as fast as possible. This is now being done with scows, but should be continued on the ice during the coming winter; as, when the canal is open, the water must of course be raised to full height, and this work would then have to be completed under quite disadvantageous circumstances. The other work remaining to be done, such as sodding of slopes, macadam, &c., &c., need not at all interfere with navigation.

The total value of work and materials returned in the progress estimates to Sept. 30, 1899, is as follows:—

Sections.	Contractors.	Amounts.
		$ cts.
1 and 2	Archibald Stewart	516,934 85
	Ryan & Macdonell	497,481 38
3	J. & M. O'Leary	193,852 61
4, 5, 6 and 7	George Goodwin	326,246 75
	Andrew Onderdonk	516,215 30
8	Charles H. Raynor	298,966 74
Power-house	" "	42,047 21
9	Manning & Macdonald	167,257 13
10	Rogers & Taylor	290,667 95
11	Poupore & Fraser	325,639 75
12	O'Brien & Son	26,811 15
	George Goodwin	11,400 37
	M. J. Hogan	196,528 34
13	Manning & Macdonald	639,004 15
		4,049,053 68

Bridges.—There are, besides the above, expenditures on the following works, viz.:

Road and railway bridges. (*a.*) The five bridges over the canal at St. Antoine, St. Féréol, St. Dominique, St. Emmanuel and River Rouge roads are erected and in operation. The cabins for the reception of the electrical apparatus are not however yet completed, and the bridges are now being swung by hand. They have been described in previous reports, and when open give a clear channel-way of 100 feet. The contract for them was awarded in April, 1896, to the Dominion Bridge Company of Lachine, Que.

(*b.*) Two small road bridges, one over the upper wings of lock No. 3, and the other in a similar position at the guard lock, section 13, have been furnished and set up by the Weddell Bridge Co. of Trenton, Ont. These have cost so far $4,995.

(*c.*) There is only one railway bridge, namely, that carrying the Canada Atlantic across the lower wings of the guard lock at the upper entrance of the canal. The superstructure of this has been completed and in use for some years. It was let to the Dominion Bridge Co. in November, 1894, and cost $9,970. The electrical appliances to operate this or the small bridges across the locks above referred to have not yet been put in hand.

Lock Gates.—The lock gates (11 pairs) have been constructed on the solid timber principle (similar to those in use on the Welland Canal) by Messrs J. R. Miller of Ingersoll, Ont., who have had considerable experience in this class of work. The timber is of large dimensions and is chiefly Douglas fir obtained in British Columbia and hauled across the continent. The construction work is excellent and the gates fully answer the required purposes.

The lower gates of each of the locks Nos. 1, 2 and 3 are 42 feet 3 inches high; the bottom bars are 28 feet 6 inches long and from 21 to 34 inches wide. The gates are well pivoted, securely hung and turn freely with a moderate force, which is applied through simple machinery, now worked by hand but shortly to be operated of electrical power. The cost of this apparatus so far is $8,920.

By way of safety the gates of the guard lock on section 13 were set up before the clay dam at the head of the canal was removed. This was a good precautionary measure. The water was let into the summit level in August last as before stated, and was subsequently held at a height of 150 feet above datum by a temporary dam erected by lock gate timbers at the upper mitre sill of lock No. 4. The pair of guard gates about 800 feet west of this were then brought up from St. Anne's, through the Beauharnois Canal, floated down the summit level here, which is 10½ miles long, and set up. When these were closed, together with the large stony sluices alongside of them, the lower levels of the canal were safely separated from the large body of water to the west, reaching to Lake St. Francis. The gates of the guard lock were in position in December, 1898, and the guard gates above lock 4 were set up at the close of August, 1899. The lower gates of lock No. 1 were placed in September, 1898, when it was necessary to remove the clay coffer-dam across the lower entrance. But it was not until the early part of last month that the upper gates of lock No. 1 and all those of locks Nos. 2, 3 and 4 could be erected. This was, however, accomplished in a few days, the upper gates of lock No. 4 being set up and closed on October 8, 1899 The contract also embraces five pairs of spare gates, which are delivered at the foot of the canal. Arrangements will be made for the protection of these during the winter, and a suitable plant for erection and repairs must be provided. The total cost of the sixteen pairs of gates is $100,000, and about $4,500 has been spent on the special work connected with the erection of the gates of the guard lock at the head of the canal and the placing of a temporary dam of timber at the head of lock 4 to enable the guard gates to the west of it to be set up as above described.

It is said that British Columbia fir is of great durability, but there is latterly an impression that metal gates are in many positions an improvement upon wooden ones.

Stony Sluices.—The filling and emptying of the locks is done through sluices of the stony pattern, which are also used in the weirs. There are thirty-six of these of various sizes on the canal, the largest of which (21 feet 1½ inches by 22 feet 3 inches) are alongside the guard gates on section No. 4. It is not considered necessary to enlarge

upon the excellence of these sluices as a means of controlling large bodies of water with ease and safety. The principle is being rapidly adopted in large hydraulic works in America as well as in Europe, where they have been known for some years. Their use in the locks of this canal in connection with side culverts has resulted in making it possible to lock vessels quickly with but little strain on their lines, as the water rises or falls steadily in the chamber when being filled or emptied. This has a very important bearing upon the safe and rapid navigation of the canal. The amount of water required for a lockage where the lift is 23½ feet is about 300,000 cubic feet. The progress estimate on these sluices to date give a total expenditure of $56,934. They are practically completed, but some minor changes may be made to them to increase the rate of lifting if on further investigation this is considered necessary.

A lockage of 23½ feet can easily be made in about twelve minutes. The difference, however, between the times of slow and fast filling or emptying in four locks is of little practical importance. The real gain will be made in the speed which can safely be maintained on the summit level, which is 10½ miles long and 75 per cent of the total length of the canal. The difference between a 5-mile and a 4-mile rate would make half an hour in 10 miles. This would exceed the time required to fill all the locks on the canal. A quick passage through the summit level is secured by the large cross section of the prism as compaaed with that of a fully laden vessel of the ordinary type. This will be at mean water of Lake St. Francis in the proportion of 2,600 to 600 or 1 to 4⅓. Besides, there will be no stop at the bridges, which, as previously stated, give, when open, a clear waterway of 100 feet in width. In short it seems reasonable to expect that a passage through the canal should not take more than from two and a half to three hours.

If the lockages are assumed at three per hour, the carrying capacity of the canal, with vessels fully laden both ways, would be very large indeed. With one-third west bound cargoes it would probably be able to pass over 20,000,000 tons in an ordinary season. Great as these figures are, they will doubtless be considerably exceeded by the amount of tonnage at Sault Ste. Marie during the year 1899.

Cement.—In the construction of the canal there have been used over 200,000 barrels of Portland cement, at a cost (including handling) of about $500,000. The cement is of excellent quality and has been properly tested at this office, where, up to date, over 60,000 briquettes have been made. The advantages of concrete construction in hydraulic works is now universally admitted. This is particularly suitable to the Soulanges Canal, where over 300,000 cubic yards of rock have been excavated; which, although generally unfit for masonry, is excellent material for concrete. As stated in previous reports, there are, roughly speaking, about 200,000 cubic yards of masonry and concrete on the whole work. About one-fourth of this (50,000) in cutstone masonry of various kinds, and the remaining three-fourths (150,000) in concrete. But the total cost of the masonry was about the same as that of the concrete, whilst it takes, for similar quantities, a longer time to build, besides requiring principally skilled labour. These reasons are considered quite sufficient to prove the judiciousness of adopting concrete to such a large extent in the building of the Soulanges Canal.

OPERATION.

As instructed by your letter of October 11 last, a number of men from this locality have been employed in operating the canal by hand. Of these there are at present about forty. They are in attendance by day only at the various locks and bridges. As there have been so far, passing through, the tugs and scows connected with the dredge employed in cleaning out the slides, and those engaged in putting in the stone protection lining of the canal, the duties of these men have not hitherto been very arduous; and an attempt has been made to utilize them for other purposes when practicable. But it is probable that this organization will not be necessary after the end of the present month, during which period, however, it is expected that some vessels of a larger size than can pass through the Beauharnois Canal will avail themselves of the increased dimensions and depth of the Soulanges to come down from the upper lakes or

ascend to Lake Ontario. There is now a clear channel way of 15 or 16 feet least depth between Lakes St. Louis and St. Francis; and transit through the canal will, as previously indicated, be safely made in 2½ to 3 hours.

I may say, in conclusion, that when the electrical power is applied to the lighting of the canal and the operation of the locks, bridges, &c., in the manner and to the extent contemplated, it will only then be possible to properly determine the number and kind of persons required to efficiently work the line throughout. It is, however, quite clear that the minimum of unskilled help will be necessary, as it is proposed to do by machinery in a safe, precise and rapid manner, work which has hitherto been performed on the Welland and St. Lawrence Canals by slow and expensive manual labour.

I am, sir, your obedient servant,

THOMAS MUNRO, M. Ins. C. E.,
Superintending Engineer, Soulanges Canal.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer Canals,
Ottawa.

QUEBEC CANALS.

SUPERINTENDING ENGINEER'S OFFICE,
MONTREAL, October 5, 1899.

SIR,—I have the honour herewith to submit my annual report on the works under my charge for the fiscal year ended June 30, 1899.

The canals in this division are the Lachine and the Beauharnois, on the St. Lawrence route; the Ste. Anne, the Carillon and the Grenville Canals on the Ottawa River, and the St. Ours Lock and the Chambly Canal on the Richelieu River.

Of these the Lachine Canal is by far the most important, on account of its immediate connection with the harbour of Montreal, the great export centre of the Dominion.

The traffic through it has rapidly increased of late years, owing to the development of industries and agriculture in Western Canada and the Canadian North-west, and it will certainly take a still greater importance with the completion of the deepened canals, especially when adequate terminal facilities for handling freight and grain shall have been provided,

The Ottawa Canals afford a most convenient route for the transportation of the produce of the extensive forests of the Ottawa Valley, a large proportion of which finds its way to the United States, through the Richelieu River Canals.

LACHINE CANAL.

Length, 8½ miles; 5 locks, 270 by 45 feet; 14 feet water on sills; total rise, 45 feet.

Old locks, 200 by 45 feet; still available with 9 feet of water on the sills.

Any interruption to the navigation of the above various routes cannot fail to be very serious, but I am pleased to state that, with the exception of a few hours detention on July 29 and August 6, 1898, on the Lachine Canal, and another interruption of forty-eight hours duration on the Beauharnois Canal in the month of June of the same year, the navigation was unimpeded throughout the year.

On July 29, 1898, the coal ship *Turret Court* was coming down from Wellington Basin, where she had discharged her cargo. As she approached Black's Bridge some misunderstanding of the bell signals by the engineer on board caused her to run into the bridge, which was thrown off its pivot and so badly injured that half of it had to be entirely rebuilt. Repairs could not be done on the spot and no vessels could pass that point before 11 p.m., when the structure was removed from its piers and floated on scows to the head of Wellington Basin. Another interruption of six hours took place on August 6, when the bridge was put back into position.

The cost of the repairs ($3,104) was borne by the owners of the ship.

REPAIRS AND RENEWALS.

Repairs during the year were executed as follows:

The towpath on the north side of the canal above Cote St. Paul, was macadamized for a distance of 800 feet from the point where this work was left off the year before.

Some planking along Wellington Basin was removed and a heavy coat of iron dross substituted; this was in turn covered up with cinders and the whole well-rolled down. It is the intention to thus replace wooden platforms around the basins wherever practicable, with a view to reducing the cost of maintenance of the works.

The slope walls on both sides above Cote St. Paul were repaired in a number of places on the lines adopted the previous year. This is only temporary work, as the slope walls will shortly be rebuilt all the way up to where the bed rock comes up to the surface in the vicinity of Lachine.

Considerable work was done in renewing the side walls of the head-race to the old supply weir at Lachine.

The last of the sliding sluices in waste weirs Nos. 1 and 4, were removed and swing gates substituted.

A cribwork pier, 200 feet long, below the old lock at Cote St. Paul, was renewed from the waterline to the top, the portion below water being at the same time straightened up and underpinned where necessary.

The gravel roof of two of the buildings leased to 'The Canada Horse Nail Co.,' as well as that of the carpenter shop in the canal yard on Mill street were renewed last fall, the work being done by 'The Montreal Roofing Co.'

At the time of the converting of the old Tate mill into an electric power house, the flume extending from the mill to the tail race of waste weir No. 2, a distance of 75 feet, had only been temporarily repaired. The said flume was completely renewed in April and May last. The work was a rather difficult one owing to the unsteady nature of the soil. The old wooden race was removed and a new one built consisting of timber and concrete bottom and sides, the roof of the structure being formed with heavy round cedars and the whole covered with clay well watered and rammed.

The canal electric lighting service was satisfactory throughout the year, but I cannot say as much of the telephone service which is more or less deficient owing to reduction in size of most of the copper wire in the line due to the prolonged strain on it. It will soon become necessary to renew the whole of this wire.

REPAIRS TO VESSELS.

The dredging fleet connected with the canals on this division, but mostly used of late years in connection with the Lachine Canal and the Lake St Louis channel, consists of the following vessels :—Dredge No. 1, loaned three years ago to the Public Works Department; Dredge No. 2, floating steam derrick, tug *Josephine*, house-boat used as office and lodgings by the engineer's staff of the Lake St. Louis channel, and eleven flat scows. All these vessels were put in working condition before the opening of navigation.

A couple of new flat screws, built in the spring, in connection with the dredging done during May and June, below lock No. 3, now form part of the fleet. They will replace two of the old scows which have become useless through length of service.

DEEPENING FOR 14 FEET NAVIGATION BETWEEN ST. GABRIEL AND LACHINE LOCKS.

The contract for this work was awarded to Messrs. McNamee & Mann, in September, 1894, and operations were commenced by them in the month of May following. The contract extended from lock No. 3, at St. Gabriel, to lock No. 5 at Lachine, a distance of $6\frac{1}{5}$ miles and the work consisted in the deepening of the prism of the canal to 15 feet, an average depth of 2 feet to be excavated between the two points above mentioned. The work was carried on night and day during seasons of navigation, the bulk of it being completed at the end of November, 1898.

While the canal was unwatered last April a large force of men was employed by the contractors in destroying boulders, spreading some ridges thrown up by the dredges and cleaning along the toe of the slope walls. All of the materials thus handled were thrown into the deeper portions of the canal prism, the dredges having had to cut much deeper than the 15-foot line in order to ensure grade at all points.

On the last day of April the two reaches were brought to the required grade line, and that part of the canal made ready for boats drawing 14 feet.

The quantities removed to reach the grade line from the beginning of the contract to the end of November, 1898, were in round numbers: earth 180,000 cubic yards, rock 184,000 cubic yards.

DEEPENING RIVER ST. PIERRE.

This work is intended to complete what has been termed the Lachine Canal drainage system, the object of which is to dispose of the water leaking through the canal banks, and incidentally to afford an outlet for the drainage of the town of Lachine, which is cut off from the St. Lawrence by the Lachine Canal.

The present work, which is being done under contract by Messrs. Brewder & McNaughton, consists of the deepening 2½ feet and the widening to 20 feet at grade line of the bed of the Little River St. Pierre, from a point 5,700 feet west of the culvert carrying the stream under the canal to a point on the city water works tail race, 4,100 feet below the outlet of the said culvert. The upper or western section is completed down to within 150 feet of this culvert, and so is another piece in the lower section 950 feet in length from the tail race upwards.

Besides the deepening of the bed of the river, this contract also embraces the rebuilding of the road bridge over the stream where it crosses St. Patrick street directly under the Grand Trunk Railway high level crossing at that point, and the cleaning of the culvert under the canal.

The roadway bridge was finished in March last, and while the deepening was going on then, the railway company had the stone abutments of their own bridge rebuilt, placing them such a distance apart as to give ample passageway for the waters at flood time.

The contractors suspended operations in March, and owing to unfavourable circumstances did not resume them before the end of the fiscal year, an extension of time having been granted them to finish the work which ought to have been completed on June 30, 1899.

Towards the end of the lower section of this contract, the intended grade line of the river strikes across the pipes of the Montreal Water Works. The stream had therefore to be carried under these pipes by means of a syphon culvert, consisting of five parallel lines of cast iron pipes, 4 feet in diameter and 158½ feet long; buried in a solid mass of Portland cement concrete connecting the inlet and outlet wells. These wells are also built of concrete up to 1 foot below the water surface, the upper position of the walls being of rock face masonry laid in cement, with cut stone copings and checks for stop logs.

For the purpose of cleaning this syphon, a partition has been built in both wells between the second and third lines of pipes from the east side in such a manner that the stream can be diverted to one side while the other is being attended to.

As many as five lines of water pipes intersected the trench at various angles and two valve chambers were also encountered. All these had to be underpinned and otherwise supported while the syphon pipes were being laid underneath, and in each case a solid mass of concrete was built up from the bottom of the excavation to the water pipes so as to prevent any possible settling.

Delays in obtaining authority from the city water department compelled us to execute the most arduous part of the work during the winter months, the cost of the undertaking being thus materially increased. However, it was brought to completion towards the end of April, 1899.

SLOPE WALLS ABOVE COTE ST. PAUL.

For a distance of 3½ miles above Cote St. Paul lock the slopes of the Lachine Canal are protected with a rip-rap revetment formed of small sized stones, which, as reported last year, will have to be almost entirely rebuilt, owing to the work of deepening the canal having disturbed it.

For this purpose a contract was awarded to Mr. J. B. DeLorimier on October 11, 1898, for the supply of 6,000 cubic yards of stone. At the end of the fiscal year most of this quantity had been delivered and the contractor was granted an extension of time to finish his contract.

The work of rebuilding was begun last spring, when some 1,800 cubic yards of wall were laid at various points between April 12 and 30. This was done by day labour.

It has now been decided to continue the work under contract, and, at the time of writing, tenders for it are being invited.

The above construction works were executed under the direct supervision of Mr. L. G. Papineau, assistant engineer.

WIDENING THE UPPER ENTRANCE TO THE OLD LOCK AT LACHINE.

For some years back forwarders have complained of the narrowness of the channel in the upper entrance, and by actual survey last summer, this channel was found to be not more than 25 feet wide at some points.

Towards autumn the Montreal Harbour Commissioners drill boat was rented for a couple of weeks, and the necessary blasting having been done, the canal dredge No. 2 was sent out. After six weeks work a width of 75 feet was provided on the shoals complained of, the aggregate length of which was 200 feet and the average depth of cutting thereon 2½ feet.

DEEPENING BETWEEN LOCK NO. 2 AND LOCK No. 3.

From May 1 last, to the end of fiscal year dredge No. 2 was engaged in deepening the prism between lock No. 3 and Montmorency street, the depth of water in this stretch being only 13 feet. This work being now done, the Lachine Canal from end to end is available for vessels of 14 feet draught.

LAKE ST. LOUIS CHANNEL.

This work which is under contract with the Weddell Dredging Company was commenced during the summer of 1895, it was practically completed at the end of the fiscal year. The contractors, however, have to go over the whole area of the channel to pick up boulders which may have escaped the dredges or to level down ridges thrown up by the buckets. The quantity of material removed from the cut since the beginning of the operations is 230,827 cubic yards, consisting of solid rock, boulders, clay and sand.

The cut thus made, 300 feet wide and 16 feet deep at low water, extends from a point opposite the lower lightship to some distance above the second lightship on the present 9-foot channel. Between those two points a number of stretches were encountered with water deeper than 16 feet and at other places a point of a shoal only had to be removed. The heaviest work was done in the lower portion where, on a length of some 1,200 feet, the depth of cutting was about 6 feet on the average.

The above construction works were performed under the direct supervision of Mr. L. S. Pariseau, assistant engineer.

BEAUHARNOIS CANAL.

Length 11¼ miles; 9 locks, 240 x 45 feet; 9 feet water on sills; total size, 82½ feet.

The interruption to navigation referred to above in connection with this canal, occurred on June 6 last, when the steamer *Sir L. Tilley* broke through the lower gates of lock No. 12, throwing them down. The rush of water through the lock chamber also carried the upper gates away, and the reach between locks Nos. 12 and 13 emptied into the reach below, the wave thus formed overflowing the banks and causing some damage to the towpath and to the adjoining farms, especially on the north side.

Spare gates were fortunately on hand, and after forty-eight hours uninterrupted work, the passage of boats was resumed.

The accident cost the owners of the boat $2,047.33, this amount including $660 for damage to land owners.

REPAIRS AND RENEWALS.

Two pairs of gates had been renewed before the above accident took place, completing a full set of spare gates for all the locks.

The lower mitre sills of locks Nos. 11, 12 and 13, which had been more or less displaced during the previous year, were put back in position and otherwise repaired.

A considerable quantity of macadam stone was placed on the roads along both sides of the canal as well as on the Hungry Bay dike road.

In connection with this dike a strip of land, half an arpent in width on each side was purchased from the estate Bergevin dit Langevin. Good clay for repairing the road and the dike proper can now be procured from this land instead of having to be carted long distances as formerly.

Boundary stones will be planted during the fiscal year 1899-1900, to mark the newly acquired property.

A new and very substantial scow for repair purposes was built during the winter.

All minor necessary repairs were made and the canal kept in good working condition.

PROTECTION DIKE ALONG THE SOUTH SHORE OF LAKE ST. FRANCIS IN THE PARISH OF STE. BARBE.

Orders to lay out this work and execute it by day labour were given on October 17, 1898, and operations commenced four days later.

The object of it is to reclaim a large area of lands which are now flooded at high water owing to the dams erected at the head of the Beauharnois Canal. The dike will have a length of about 2 miles. It will consist of a clay embankment built as follows :— A trench 4 feet in width and 3 to 5 feet in depth is cut into the black muck forming the surface of the soil down to hard ground and refilled with good clay taken a short distance alongside of it from another deeper trench, which will in future ensure the drainage of the reclaimed lands.

Work was begun at the eastern end and 600 feet of the dike had been built at the end of March, when, owing to thaws, operations had to be suspended. They were resumed in June at the other end and about three weeks later, the appropriation being exhausted, the year's work was brought to a close. This dike, it is expected, will be completed during the fiscal year 1899-1900.

CHAMBLY CANAL.

Length 12 miles ; 9 locks, 118 x 22½ feet ; 6½ feet water on the sills ; total rise 74 feet.

This canal was operated without accident during the year.

REPAIRS AND RENEWALS.

The most important work of repair executed here during the fiscal year consisted in the replacing in position and the strengthening of the western wing wall at the foot of the lower entrance lock, the facing of which was loosened from the backing. Both parts of the wall were joined together by means of iron bands and rods, the latter being passed through the body of the wall and firmly anchored to a heavy block of concrete placed some distance behind.

Similar repairs had been made in 1896 to the eastern wing wall and both are now quite safe.

The wharfs on this canal have an aggregate area of 55,000 square feet, and the renewing of the planking on them every six or seven years is very costly. It is the intention to gradually replace such planking by heavy gravel wherever possible.

Some of the numerous culverts carrying surface water from the farms on the east side of the canal to the Richelieu River require constant attention.

One of them, at the 6th mile will have to be renewed shortly, and I would suggest the rebuilding of it either with concrete or iron pipes.

The South-eastern Railway Co's. lease with the department having expired, their old wharf at Chambly Canton has been taken possession of by the canal authorities.

The planking on this wharf was renewed during the spring and a derrick erected in a convenient position to handle canal materials which are mostly delivered at that point.

A new steel swing bridge was erected at the head of Ste. Thérèse Island, superseding the ferry scow there. The superstructure was furnished and erected under contract, by the Dominion Bridge Company, and the pivot and rest piers, which are of timber, were built by day's labour, under the direct supervision of Mr. L. S. Pariseau, assistant engineer.

COLLECTING DRAIN AND SYPHON CULVERT AT ST. JOHNS.

This work, the contract for which was awarded to Messrs. Napoleon Laporte & Co. in February, 1898, should have been completed long before the end of the last fiscal year. However, only two-thirds of it had been executed at that date, and an extension of time was granted the contractors to bring it to a finish.

At the time of writing there still remains about 100 feet of the drain to be built before reaching St. Charles street, where the new drain will be connected with the old sewer built some years ago by the town.

Mr. L. S. Pariseau, assistant engineer, is in charge of this work.

ST. OURS LOCK AND DAM

Length, $\frac{1}{8}$ mile; 1 lock 200 x 45 feet, 7 feet of water on sills; total rise 5 feet.

Besides ordinary repairs to the lock, wharfs, piers, buildings, &c., a piece of work of some importance was executed here during the fiscal year 1897-8.

It consisted in the taking down and rebuilding of the western abutment of the submerged dam connected with the canal. This abutment is a solid masonry structure. A portion of it about 50 feet long and 20 feet high had been so undermined that its collapse was threatening. After the stones had been removed, a large cavity at the bottom was filled with concrete and the new wall started on the improved foundation, high class Portland cement being used in place of lime mortar with which it had been originally built.

The timber dam here is in a very unsatisfactory condition, a large quantity of water running through it.

Extensive repairs will have to be built next year at low water.

Some of the vessel owners using the lock, I am informed, are agitating for the permanent raising of the dam by 3 or 4 feet in order to facilitate navigation over the St. Antoine shoals, 5 or 6 miles further up. But, besides being unnecessary, this change in the level of the dam would surely open the door to unending claims on the part of the farmers whose lands would thus be more or less flooded. All that need be done is making the structure water tight.

There was no accident here during the year.

ST. ANNE LOCK.

Length of canal $\frac{1}{8}$ mile; 1 lock 200 x 45 feet; 9 feet water on sills, total rise 3 feet.

Old lock still available 200 x 45 feet, 6 feet of water on sills; total rise 3 feet.

Works other than ordinary repairs here during the year, consisted in the building of an extension to the mooring pier in the channel at Ile-aux-Tourtes, about one mile above the lock, and in the completing of the repairs of the south channel piers, which had been in progress since 1896.

The new lock and the various structures connected therewith are in first rate condition.

In the process of double-tracking their bridge across the river at this point, the Grand Trunk Railway Company had to rebuild the pier adjoining the south side of the old lock and in so doing they have renewed a portion of the outer wing dam, thus considerably improving it as far as the canal is concerned. The part of this dam above the railway pier will require some extensive repairs shortly.

An attempt will also be made to staunch the south wall of the old lock which is leaking badly.

No accident of any kind interfered with navigation on this canal during the year.

CARILLON AND GRENVILLE CANALS.

Carillon Canal.—Length, $\frac{3}{4}$ mile; 2 locks, 200 x 45 feet, 9 feet water on sills; total rise 16 feet.

Grenville Canal.—Length, $5\frac{3}{4}$ miles; 5 locks, 200 x 45 feet, 9 feet water on sills; total rise $43\frac{3}{4}$ feet.

Both these canals are under one superintendent. They are separated by a stretch of navigable river about 5 miles long, and between them is to be found the old Chute-à-Blondeau lock, which has been abandoned since the completion of the dam at the head of the Carillon Canal in 1883, the rise at that point having been then practically obliterated.

At the opening of the season of 1897, the operating staff on these canals had been reduced by the removal of one man from each lock, but owing to a considerable increase in the traffic during 1898-9, it was found necessary to re-appoint the same number of lock hands at the opening of navigation in 1899.

REPAIRS AND RENEWALS.

Carillon Canal.—The timber works on this canal are very extensive. The upper entrance is formed on the south side by a guard pier 800 feet long and a series of 9 detached piers, the first four lower ones about 60 feet and the others 140 feet apart, the space between the lower ones being spanned by strong booms, necessary, especially at high water, to prevent vessels from being carried over the dam.

Every spring the detached piers are more or less damaged by floating ice, and the keeping of them in good repair is very costly. Two of them were tilted over bodily in April, 1898, and had to be entirely rebuilt during the present year, at a cost of some $1,500 each.

The long guard pier which is of about 19 years standing, is rapidly decaying in its parts above water and extensive renewals will have to be made in a year or two.

Grenville Canal.—This canal is in good condition and no work of any consequence beyond general maintenance, was performed thereon during 1898-9. The heaviest items of expenditure were in connection with the towing paths and banks, the pointing of the lock walls, the painting of lock gates and the cleaning of the prism before the opening of the navigation season.

No interruption to the traffic occurred on the Carillon and Grenville Canals during the year.

GRENVILLE CANAL ENLARGEMENT.

The contract for this work was awarded to Messrs. Pigott & Ingles on April 9, 1897, and operations commenced in the month of May following. Very little, however, was done until the close of navigation that year.

The undertaking consists of the widening of the reach between lock No. 4 and Lock No. 5 about a mile long and of another stretch of the same length above the latter lock. In these two miles the 10 foot depth was only available on a very limited width and navigation considerably hampered in consequence.

The channel, as now enlarged, will have a minimum width of 45 feet in the bottom and will be provided with a substantial dry retaining wall on the towpath side. Both approaches to Lock No. 5 will be considerably enlarged and the lock itself make much easier of access.

About 1,800 feet above the lock a new waste weir has been built, which will permit of a better regulating of the level in the reach and will afford the means of thoroughly unwatering that part of the canal.

The work ought to have been finished on the 1st of May last, but the contractors failed to bring it to an end at the time specified.

On the opening of navigation last spring the reach between Lock No. 4 and Lock No. 5 was ready except for some grading, the building of a piece of wall about 400 feet long on the south side and the forming of ditches and trimming of the spoil banks.

The work still to be done in the section above Lock No. 5 consists of some rock excavation and walling at the upper end, some grading, the trimming of the spoil banks and the forming of the towpath.

It is expected that the whole will be completed early during next winter, as the contractors will resume work as soon as navigation is closed.

Mr. F. J. Lynch is now in charge of the enlargement, having succeeded Mr. H. G. Stanton, who has accepted a position on the Ottawa and Georgian Bay Canal survey.

Annexed to this report are tabular statements showing the highest and lowest water on the mitre sills of the locks at the upper and lower entrances of each canal, as well as statements of fines and damages collected during the fiscal year ended June 30, 1899.

I have the honor to be, sir,

Your obedient servant,

ERNEST MARCEAU,
Superintending Engineer.

C. SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Railways and Canals,
Ottawa.

QUEBEC CANALS.

Closing and opening of navigation, 1898-9.

	Closing.	Opening.
Lachine Canal	Dec. 1, 1898	May 1, 1899.
Beauharnois Canal	Dec. 1, 1898	May 1, 1899.
St. Ours Lock	Nov. 26, 1898	April 22, 1899.
Chambly Canal	Dec. 1, 1898	May 1, 1899.
St. Anne's Lock	Nov. 27, 1898	April 27, 1899.
Carillon Canal	Nov. 26, 1898	May 1, 1899.
Grenville Canal	Nov. 26, 1898	May 1, 1899.

LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of old Lock No. 1, at lower entrance, and Lock No. 5, at upper entrance, during the fiscal year ended June 30, 1899.

MONTHS.	OLD LOCK NO. 1, LOWER SILL.		OLD LOCK NO. 5, UPPER SILL.	
	Highest.	Lowest.	Highest.	Lowest.
1898.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July	18 11	16 6	12 1	10 7
August	16 6	15 10	10 8	10 3
September	16 0	15 1	10 5	9 10
October	17 1	14 9	11 3	9 7
November	17 1	15 11	10 11	10 1
December	29 0	15 5	16 2	14 7
1899.				
January	36 5	27 7	11 10	9 10
February	27 8	24 7	11 3	9 3
March	29 3	24 11	10 9	9 8
April	36 4	22 11	14 4	10 4
May	24 6	20 4	15 5	13 0
June	20 9	18 1	13 4	11 8

Lachine Canal.

Statement showing the depth of the river water on the mitre sills of new Lock No. 1, at lower entrance, and new Lock No. 5, at upper entrance, during the fiscal year ended June 30, 1899.

Months.	New Lock No. 1, Lower Sill.				New Lock No. 5, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	21	1	18	8	17	1	15	7
August	18	8	18	0	15	8	15	3
September	18	2	17	3	15	5	14	10
October	19	3	16	11	16	3	14	7
November	19	3	18	1	15	11	15	1
December	31	2	17	7	11	2	9	7
1899.								
January	38	7	29	9	16	10	14	10
February	29	10	26	9	16	3	14	3
March	31	5	27	1	15	9	14	8
April	38	6	25	1	19	4	15	4
May	26	8	22	6	20	5	18	0
June	22	11	20	3	18	4	16	8

Beauharnois Canal.

Statement showing the depth of the river water on the mitre sills of Lock No. 6, at lower entrance, and Lock No. 14, at upper entrance, during the fiscal year ended June 30, 1899.

Months.	Lock No. 6, Lower Sill.				Lock No. 14, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	11	4	10	0	11	9	11	1
August	10	4	10	1	11	6	10	10
September	10	4	9	10	11	3	10	8
October	10	8	9	7	11	3	10	6
November	11	6	10	4	10	10	10	4
December	11	6	10	0	11	4	10	10
1899.								
January	13	6	11	3	11	2	10	10
February	19	6	13	4	11	5	10	6
March	17	0	12	4	12	0	10	9
April	13	9	12	9	12	6	11	8
May	14	8	12	4	12	0	11	6
June	12	8	11	4	12	3	11	6

Chambly Canal.

Statement showing the depth of the river water on the mitre sills of Lock No. 9, at lower entrance, and Lock No. 1, at upper entrance, during the fiscal year ended June 30, 1899.

Months.	Lock No. 9, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	10	9	8	11	8	10	7	7
August	9	1	7	11	8	5	7	2
September	9	0	7	10	8	5	6	9
October	10	2	8	6	9	1	7	6
November	10	10	9	1	9	3	7	4
December	10	6	9	1	8	8	8	4
1899.								
January	11	9	9	0	8	10	8	4
February	12	5	11	5	8	7	8	3
March	15	0	11	11	9	10	8	2
April	18	1	14	0	12	1	9	3
May	17	7	13	3	12	1	10	0
June	13	1	10	0	10	3	8	3

St. Ours Lock.

Statement showing the depth of the river water on the mitre sills of the St. Ours Lock, during the fiscal year ended June 30, 1899.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	11	0	8	3	9	3	8	1
August	8	6	7	6	8	2	7	6
September	8	6	6	11	8	6	7	5
October	8	11	6	9	9	3	7	9
November	9	9	8	0	9	6	8	0
December	10	4	7	10	8	10	8	0
1899.								
January	11	4	9	1	9	0	7	8
February	11	4	9	0	9	1	8	2
March	14	3	11	5	10	10	8	9
April	20	0	13	11	16	3	10	4
May	18	6	13	2	14	8	10	11
June	13	1	10	2	11	1	8	8

Ste. Anne's Canal.

Statement showing the depth of the river water on the mitre sills of Ste. Anne's Canal, during the fiscal year ended June 30, 1899.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	12	0	10	7	13	9	11	11
August	10	7	10	2	11	9	11	2
September	10	2	9	9	11	2	11	0
October	10	10	9	8	12	11	11	0
November	10	10	10	2	12	11	12	3
December	11	8	10	3	12	6	11	3
1899.								
January	11	9	10	5	11	9	11	1
February	11	5	9	8	11	6	10	5
March	10	10	9	9	12	3	10	5
April	14	5	10	6	17	8	10	8
May	15	7	13	2	19	4	15	9
June	13	6	11	9	16	3	13	8

Carillon Canal.

Statement showing the depth of the river water on the mitre sills of Locks Nos. 1 and 2, Carillon Canal, during the fiscal year ended June 30, 1899.

Months.	Lock No. 1, Lower Sill.				Lock No. 2, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	15	6	13	1	15	2	13	0
August	13	0	12	3	12	9	12	0
September	12	4	12	8	12	2	12	0
October	14	4	12	2	14	0	12	0
November	14	4	13	4	14	1	13	4
December	13	10	12	10	14	1	12	8
1899.								
January	13	10	12	10	17	4	12	3
February	13	8	12	6	12	4	11	7
March	12	9	11	9	11	10	10	10
April	19	9	12	0	20	9	10	10
May	20	10	17	8	22	8	18	2
June	18	2	14	10	19	4	15	2

GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Locks Nos. 3 and 7, Grenville Canal, during the fiscal year ended June 30, 1899.

MONTHS.	LOCK NO. 3, LOWER SILL.				LOCK NO. 7, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	19	3	15	6	16	6	13	0
August	15	5	14	5	12	10	11	11
September	14	9	14	0	12	0	11	9
October	17	6	14	4	15	0	11	9
November	17	7	16	4	15	6	14	0
December	19	9	15	4	13	11	13	3
1899.								
January	22	0	16	6	13	6	12	11
February	21	9	17	3	12	10	12	0
March	17	1	15	3	12	2	12	0
April	25	4	14	6	21	6	12	1
May	28	1	22	6	24	3	19	2
June	23	2	18	7	19	8	16	0

LACHINE CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ending June 30, 1899.

Date.	Name of Vessel.	Name of Owner.	Fines.	Damages.	Total.
1898.			$ cts.	$ cts.	$ cts.
Aug. 10..	Str. "Belmont"	S. Filgate	42 00	.....	42 50
" 24..	" "Turret Chief"	F. B. Horsfall	10 00	.....	10 00
Oct. 26..	Schooner "A. M. Ash"	M. Mackie	5 00	10 00	15 00
Nov. 7..	Barge "Lapwing"	Kingston & Montreal Forwarding.	.....	176 41	171 41
1897.					
May 19..	Tug "Nellie Reid"	A. Lomer	.....	10 00	10 00
June 1..	Barge "Metacomet"	I. Brakly	.....	30 00	30 00
" 19..	Tug "H. Larose"	H. Larose	5 00	.....	5 00
" 20..	Barge "Ivonne"	A. Laplante	20 00	.....	20 00
		Totals	82 00	226 41	308 41

TRENT CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
PETERBOROUGH, October 31, 1899.

SIR,—I have the honour to submit herewith the annual report of the works under my charge for the fiscal year ending June 30, 1899.

The Trent Canal is a term applied to the several stretches lying for the greater part along the valley of the Trent, between the Bay of Quinté on Lake Ontario and Georgian Bay on Lake Huron, which, however, in their present condition do not form a continuous line of navigation. The object of the present works is to connect these several water stretches so as to make a continuous line of navigation. A glance at a map of the district will show how comparatively small the length of water-way to make or improve is to the length already provided by nature in the way of its beautiful and deep lakes and rivers. The total distance between Lake Ontario and Lake Huron is about 200 miles. By utilizing the numerous lakes and rivers, and taking advantage of the lay of the land to make flooded reaches, it is hoped that not more than 15 or 20 miles of the total length will be actual canal. The Imperial Government as far back as the year 1835, chose this route as being the most natural and feasible to make a water communication between Lake Ontario and Lake Huron, and they spent considerable sums in carrying out this project, and in fact a sufficient sum of money was voted by the Government at the time to construct that part of the work lying between Lake Ontario and Balsam Lake. The works then constructed have ever since been used for local traffic. When the two divisions at present under construction are completed a continuous line of navigation between Heeley's Falls and the ports of Lake Simcoe, a distance of about 160 miles, will then be available. Though a draught of 6 feet is provided on all the sills, the lands necessary to flood for a draught of 8 feet have been purchased on the new sections at present under construction, so that if required a draught of 8 feet could be provided at a comparatively little extra cost. The depth of water through the several lakes and rivers would give a draught of from 10 to 15 feet, except at a few places in the vicinity of shoals which have a draught of not more than 8 feet.

MAINTENANCE.

Navigation closed on the upper reach November 17, 1898, and opened May 1, 1899. On the lower reach navigation closed November 26, 1898, and opened again April 21, 1899.

The height of water on the mitre sills of the locks was very fair throughout the season, though there is still room for much improvement in regard to the regulation of the water on the different reaches. The regulation of the water is under three different managements, namely, the Dominion Government, the Ontario Government and the lumbermen, consequently it is not surprising that there are complaints regarding the management of the water during the dry season. Owing to the immense country drained, and the country becoming every year more cleared, the proper regulation of the water becomes more difficult. The regulation of the water also between Peterborough and Lakefield is, under the present circumstances, very unsatisfactory. Owing to the mills at Lakefield using all the surplus water, during the low stages of the water, any temporary stoppage of the mills almost stops the entire flow, in consequence of which the mills below are often stopped for a time. If the mill owners at Lakefield were compelled to notify the caretaker of the dam at Lakefield when it was necessary to stop temporarily for repairs the cause of complaint would be removed.

The total number of lockages for the season was 3,772, though this does not represent the traffic on the canal, as owing to many of the longer routes of the steamers not passing through a lock no record of the traffic is kept. There are about twenty steamers on the reach between Lakefield and Balsam Lake and seven on the reach between Peterborough and Heeley's Falls, and several on Lake Simcoe.

REPAIRS.

The following repairs were executed :—

CHISHOLMS.

The dam at this station is in a very dilapidated condition and will not hold the water at the proper level. A new dam will have to be built when this stretch is required for navigation. The lock and canal are in a fair state of repair.

HEELEY'S FALLS.

The dam here is in good condition and only required some few minor repairs.

HASTINGS.

A break occurred in the old dam, north of the sluices which were built last fall, occasioned by the ice during the spring freshet. This was temporarily repaired.

PETERBOROUGH.

The apron of the upper side of the east sluice was staunched and a new stoplog platform and track for the stoplog lifting winches placed thereon.

LAKEFIELD.

The platform over the dam was repaired and the east side of the dam was staunched by gravelling.

YOUNG'S POINT.

The upper and lower ends of the canoe slide over the dam were carried away by the ice in the spring. This was replaced.

BURLEIGH FALLS.

There were extensive repairs made to the dam. This dam has always leaked badly, and lately it became so bad that it lowered the water below navigation level. All the finer material in the gravel in front of the dam was washed out leaving only the coarse stones. This material was removed in front of the sheeting and new sheeting put on, and new gravel was placed against the new sheeting.

BOBCAYGEON.

New cribwork was placed at the upper entrance of the canal and a new landing provided to replace the old wharf. The bottom of the floor of the lock also burst up in the south-west corner, this was again replaced in its former position.

FENELON FALLS.

During the spring the culvert passing through the wharf became clogged with drift-wood, and the force of the water coming down the hill burst the culvert open and carried away part of the wharf. This culvert and wharf were repaired.

DREDGE "OTONABEE."

The hull of this dredge is rather light for the work it has been doing lately. It was necessary to build up the engine bed and strengthen it by braces and stay rods. The engine was also overhauled.

TUG "EMPIRE."

New frame timbers were put in the hull from stem to stern, and also new bed timbers for the engine.

BUOYING OUT.

The old buoys were repainted and new ones placed where required.

INCOME.

A second hand scow was purchased and rebuilt to suit the purpose of a dredge scow.

HASTINGS.

The old dam at this station is a flat tumble dam. The timber in it became so decayed that it was not safe. Part of the old dam was removed and two new sluiceways put in its stead. The remainder of the dam will have to be treated in the same way.

The drill scows and dredge were working for about five months removing the rock in order to make a new channel of navigable depth. It was not finished at the close of the year.

CAPITAL.

CONSTRUCTION.

Section No. 1.—Simcoe-Balsam Lake Division.

The contract for this work was let to Mr. Andrew Onderdonk on April 22, 1895.

Work on this section has been going on very slowly, only a small force of men being employed at any time during the season. There is very little work yet remaining to be done and the contract should be completed this season.

Section No. 1.—Peterboro'-Lakefield Division.

This contract was awarded to Messrs. Brown, Love & Aylmer on August 19, 1895.

Work has been going on continuously, though not at a very fast rate. The work on this contract should be completed at the end of this season, with the exception of the concrete superstructures in the upper and lower entrance piers at Lakefield, and the removal of the rock from the bottom of the river below Lakefield.

Section No. 2.—Peterboro'-Lakefield Division.

The contract for this section was awarded to Messrs. Corry & Laverdure, on May 21, 1896.

Most of the work on this section has been completed with the exception of Lock No. 6, and the work in connection with the masonry and excavation for the hydraulic lock. The work in connection with the hydraulic lock has been exceedingly slow, and unless a great improvement is made in the rate of progress, this masonry will not be ready for

the steel superstructure before the end of next season. Lock No. 6 should be completed this season and also the balance of the work, with the exception of that in connection with the hydraulic lock.

Hydraulic Lock.

The contract for the steel superstructure of this lock was awarded to the Dominion Bridge Company. The contract called for completion on May 1, 1900, but the contractors for the masonry will not be far enough advanced to allow of the superstructure being commenced before the end of next season, in which case the lock will not be ready for operation before the season of 1901.

PLANT.

The dredge *Otonabee*, with dump and drill scows, have been continuously employed at Bobcaygeon, and working for the contractors on section No. 1, at Balsam Lake, and on section No. 1, Lakefield.

The stone-lifter has been employed at Hastings, excavating the navigation channel.

Tug 'Empire.'

The tug *Empire* has been fully employed throughout the year in attending the dredge, buoying out the navigation channel, delivering timber to the different works and towing scows for staunching dams, &c.

I have the honour to be, sir,

Your obedient servant,

RICHARD B. ROGERS,
Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Railways and Canals.

SESSIONAL PAPER No. 10

STATEMENT showing the highest and lowest Water Level at each Lock on the Trent Canal for the fiscal year ended June 30, 1899.

Station.	1898.													
	July.		August.		September.		October.		November.		December.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
Hastings	6 11	6 10	6 10	6 8	6 11	6 8	7 0	6 9	6 10	6 7	6 3	6 7
Peterborough	7 3	6 4	7 2	6 1	7 0	6 5	7 1	6 0	6 10	6 3	.....	.....
Lakefield	5 6	5 0	5 7	5 0	5 7	5 0	5 7½	4 11	5 4	4 11	5 5	5 1
Young's Point	6 5	5 4	5 4	4 11	5 3½	5 1½	5 4½	4 11	6 0	5 4	6 3	5 4
Burleigh Falls	5 6	4 8	5 9	4 2	5 0	4 8	5 2	4 8	4 11	4 6	.....	.....
Lovesick	6 2	5 4	5 9	4 6	5 5	4 11	5 9	4 7	6 0	5 5	.....	.....
Buckhorn	6 6½	6 0	5 10½	5 4	5 5	5 0	5 0	4 10	5 0½	5 0	5 2½	5 0
Bobcaygeon	6 11	6 3	6 9	6 4	6 8	5 9½	5 9	5 6	6 6	5 7	6 7	6 4
Fenelon Falls	6 3	5 6	6 4	5 10	5 9	4 10	5 9	5 0	6 4	5 10	6 1	5 9

Station.	1899.											
	January.		February.		March.		April.		May.		June.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
Hastings	7 4	6 5	6 8	6 1	7 1	6 1	9 2	7 2	9 4	7 10	8 3	7 6
Peterborough	5 8	4 6	5 4	4 10	8 1	4 6	9 11	8 1	9 11	8 4	9 0	8 0
Lakefield	5 7	5 3½	5 5	5 0	6 2	4 10½	8 5	5 11½	8 5½	5 10	6 9	5 9
Young's Point	7 3	6 4	7 1½	6 4	6 9½	6 1	11 1½	6 10	11 1	7 10	8 9½	7 3
Burleigh Falls	.....	.....	.....	.....	.....	.....	6 4	4 10	6 3	5 4	6 4	5 7
Lovesick	.....	.....	.....	.....	.....	.....	9 5	7 5	9 7	8 1	8 9	7 6½
Buckhorn	6 1¼	5 2½	6 2	5 7½	5 5	6 7	9 4½	6 5¾	9 3	7 0½	7 5	6 8½
Bobcaygeon	6 8	6 4	6 7	6 2	7 1	6 1	7 5	6 9	7 4	7 0	7 4	6 9
Fenelon Falls	6 4	5 10	5 10	5 6	6 4	5 8	8 4	6 0	8 0	6 1	6 8	6 0

RICHARD B. ROGERS,

Superintending Engineer.

RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
OTTAWA, July 7, 1899.

SIR,—I have the honour to submit my annual report on the work performed on the Rideau Canal, under my charge, during the fiscal year ending June 30, 1899.

Navigation closed at Ottawa, November 29, 1898.
" " Kingston Mills, November 23, 1898.
" opened at Ottawa, May 2, 1899
" " Kingston Mills, May 2, 1899.

The depth of water maintained in the various levels throughout the whole season of navigation was excellent, no trouble from low water having occurred anywhere.

The spring freshet this year was of unusually long duration, and although not so violent as last year, from this very cause, did considerable damage to Black Rapids station, an account of which will be detailed in due course.

The principal works and repairs performed at the various locks stations and bridges along the line of navigation, are as follows :—

OTTAWA.

Two pairs of lock gates were rebuilt. The wharfs round the Maria Sreet end of basin were re-inforced and raised, and the roadway behind the same widened and macadamized. A large quantity of broken stone was filled into the holes caused by the washing away of the banks on the west side of the Deep Cut, inside the line of sheet piling. A new sidewalk was laid on the east side of Canal Street, from Sparks Street down to Bate & Co.'s warehouse. Lock No. 7 was thoroughly grouted and is now in fairly good condition. The masonry, however, of the whole eight locks taken altogether is not what it should be, and will sooner or later cost considerable to renew,

STEWARTON BRIDGE

The stone foundation of the bridge keeper's house was repaired. The pivot pier of this bridge is continually settling, and requires close watching, in order to allow the swing span to move.

BANK STREET BRIDGE.

Sundry small repairs were made to the bridge keeper's cottage. The new steel swing bridge has given great satisfaction during the past year.

HARTWELL'S LOCKS.

Sundry small repairs made to lock masonry. Stable built for lock house, and a summer kitchen added to lock labourer's cottage. The dam on the south side of the canal from Concession Street to the St. Lawrence and Ottawa Railway crossing, was raised and widened, a much needed improvement. The tow-path road from the said railway swing bridge to the locks, was considerably damaged when the frost went out of the ground this spring, the banks falling in, in some cases as far as the wheel track on the road. This has all been repaired, and a dry stone wall built in the water to protect the banks from the wash of the steamers.

HOGSBACK LOCKS.

Swing bridge across upper lock repaired. Also repaired apron below old bulkhead. About 500 feet of dry walling was built into the water along the tow-path road, as the canal banks fell in considerably, as at Hartwell's. This work has cost a considerable amount of money, but was absolutely necessary on account of the roadway itself being encroached upon, and also to prevent the banks sliding into the channel. The old break in the canal bank about half way between Hartwell's and Hogsback appeared to be sinking, so I had the bank filled up level with clay, a retaining wall of dry masonry being built at the foot to hold up the material when dumped from the top. A well was sunk for the lock-house; and a new boat purchased for the station, and a new boat-house built for same.

BLACK RAPIDS.

The side pier of the long dam, which was wrecked by ice, was rebuilt last winter. The lay-by piers below the lock were rebuilt from low water up; two new manhole gratings built, and four new chain blocks set in place. The ice this spring cracked the stop-log bent on the west side of the west waste weir. It held till May 24, when the check piece gave way, and let the stop-logs go down the river. This was temporarily repaired, without delay to navigation, but on the 30th the coffer dam broke, and it was necessary to run down the whole upper level before repairs could be made. This occurred, fortunately on a Friday afternooon, so that by the time the water was sufficiently lowered on Saturday night, everything was framed ready for erection. This was finished by Sunday night, and the upper reach was full again by 10 o'clock Monday morning, so that navigation was actually only stopped for about two days. The down stream side of the earth dam was considerably washed away last spring by the eddy from the waste weirs. However everything is secure for the season, and repairs will be made during the coming winter.

LONG ISLAND LOCKS.

The upper mitre sill of lock No. 2, which was to have been rebuilt last year, but was left undone on account of the freshet, was built last winter by our own masons. The piers at the head of Long Island and at Manotick were rebuilt from low water up. The bulkhead at Manotick was replanked. Thirty-five new stop-logs were purchased for Manotick bulkhead, and thirty-six for the bulkhead at the locks. Some new wire fencing was erected around the station. The 10-in. x 12-in. x 24-ft. sheet piling at the waste weir was completed this summer, and the effect is all that could be desired in the way of holding the clay in the wings from being washed out.

MANOTICK SWING BRIDGE.

Trifling repairs and painting done by the bridgekeeper.

WELLINGTON BRIDGE.

Trifling repairs and painting done by the bridgekeeper.

BECKETT'S LANDING.

Planking renewed in places and painting done by bridgekeeper.

BURRITT'S RAPIDS LOCKS.

Sundry small repairs made to station and embankments. New wire fence erected along canal land. The swing bridge in the village and the fence along the approaches

thereto are being, at the present time, painted by the bridgekeeper. A red and green signal lamp was purchased and placed on the swing bridge.

NICHOLSON'S LOCKS.

Sundry small repairs made to station. The waste weir was damaged by ice this spring, so that at first it was found impossible to put in the stoplogs. This has, however, been temporarily repaired, and the whole weir will be rebuilt next winter.

CLOWE'S QUARRY LOCK.

Sundry small repairs made to station.

MERRICKVILLE LOCKS.

Sundry small repairs made to station. The swing and fixed bridges across the locks and waste weir, together with fencing on approaches, are now being painted. The masonry at this station is in bad condition. I propose next winter to rebuild the south wall of the upper basin, and also the wing walls of the upper lock.

KILMARNOCK LOCK.

Sundry small repairs made to station. The bulkhead was repaired and widened out so as to form a crossing for vehicles, and the old corduroy bridge, the former means of crossing, was removed. The upper cut at this station is to be blasted out and deepened 2 feet this coming winter, which will be of great benefit to vessels navigating the canal.

EDMOND'S LOCK.

A lot of new wire fencing was put up round the canal land, replacing the old log fences, which have rotted away. A stable was built for the lock house, gravel placed on dam, and sundry small repairs made to station.

OLD SLY'S LOCKS.

Lower sill of lower lock repaired and sheet piled. The swing bridge across the upper lock was repaired, but will have to be rebuilt this winter. The dam at the bulkhead was raised two feet with broken stone and the road leading to the lock was gravelled.

SMITH'S FALLS COMBINED LOCKS.

One pair of lock gates rebuilt. The basin wall from the waste weir to the swing bridge approach was raised and straightened and a substantial iron railing erected thereon.

SMITH'S FALLS DETACHED LOCK.

General repairs to station and embankments. New summer kitchen and porch built round lockmaster's cottage.

POONAMALIE LOCK.

Sundry small repairs made to station and embankment. New kitchen built to lock house. The stoplog bulkhead across the upper cut is in bad repair and will be rebuilt next winter.

PERTH BRANCH.

Sundry small repairs to locks and station generally. The iron bridges in Perth required some small repairs, which have been made. The retaining dam at Beveridge's Bay was partially burned on the down stream face last week. This, as far as I can learn, was caused by unknown persons leaving a camp fire burning in a high wind. The damage, however, will not interfere with navigation, but several courses of timber must be replaced next winter.

OLIVER'S FERRY BRIDGE.

Small repairs to flooring made by bridge keeper. The swing span will be rebuilt next winter.

THE 'NARROWS' LOCK.

Small repairs made to lock house and lock labourer's house. New approaches built to swing bridge. Six new stoplogs were purchased for waste weir, and the long dam was gravelled and faced with stone.

NEWBORO' LOCK.

Two pairs of lock gates rebuilt. Bulkhead at head of cut repaired. Four new chain blocks set in place, and sundry small repairs made to station and lock house.

CHAFFEY'S LOCK.

One pair of lock gates rebuilt. Swing bridge over lock rebuilt. Storm sash were purchased for lock house windows. General small repairs made to station.

DAVIS'S LOCK.

A small summer kitchen was built to lock house, and general small repairs made to station. A well is required here for the lock house, as the present source of drinking water is a spring which is at a considerable distance from the house. The lock labourer, whose cottage is on the opposite side of the lock, has to procure his drinking water from the same spring.

JONES'S FALLS LOCKS.

One pair of lock gates rebuilt. Fencing of approaches to swing bridge, and hand railing of bridge repaired. Leakage through basin weir stopped with pine sheeting. Store house shingled. Small repairs made to Morton dam and station generally. The lower wing wall on the west side of the upper lock requires to be taken down and rebuilt. Our masons are now taking out the necessary stone in the quarry, and the work will be done this summer.

BRASS'S POINT BRIDGE.

Small repairs made to bridge railing and also to swing span. A small addition was built to bridge keeper's cottage.

BREWER'S UPPER MILLS LOCKS.

Swing bridge across lower lock rebuilt. Sill No. 3 was concreted and repaired, two coffer dams having been built in order to have the lock pumped out for the work. Four new manhole gratings laid. The lock house (which had not been used for some years, as the late lockmaster, who died last year, lived in his own house) was thoroughly renovated for the new lockmaster, and a kitchen and stable built to it. Sundry small repairs made to station generally.

BREWER'S LOWER MILLS LOCK.

An additional story was built on to the old stone lock house, as in its former state it was unfit for habitation. Repairs made to by-wash, and general repairs to station. The lay-by wharf at the head of the lock is now being rebuilt from water line up. Gravel placed on embankment.

KINGSTON MILLS.

Four chain blocks set in place, one new sluice frame put in, and two new foot boards placed on lock gates. Several pieces of coping and some hollow quoin stones were put in last winter. Our masons are now taking out of the quarry at Elgin, several more pieces of large dimension stone, which will be set in place here next winter. One of the lock labourer's cottages was lathed and plastered, and the lock house re-shingled and chimney rebuilt. A large quantity of gravel and stone was placed on the embankments, and general repairs made to the station.

GENERAL.

The pointing and grouting of the lock masonry was done by the lockmen in the spring; the cement for which, 300 barrels White Cross Portland, was purchased by contract with Messrs. Bellhouse, Dillon & Co., of Montreal. The painting of the lock houses, lock gates, bridges, &c., was also done by the lock men; the paint itself, 3,500 pounds of white lead and black, being supplied by contract with Messrs. McDougal & Cuzner, Ottawa. The contract for the supply and delivery of 6,000 cubic feet of white oak dimension timber for next winter's repair has been awarded to Messrs. Cameron & Co., of Ottawa.

DREDGING PLANT.

The dredge *Rideau* was employed all last summer between Kingston Mills and the city of Kingston in deepening the channel through the marsh, with the exception of six weeks, when she was dredging near the Exhibition Grounds at Ottawa. Her hull is to be rebuilt this winter, and for this reason her repairs when fitting out this spring were made as light as possible.

The tug *Shanley* was employed last season in attending on the dredge, delivering stores and buoying out the channel and removing logs and stumps from the channel throughout the canal, also on inspection work. Her repairs this spring were somewhat more extensive than usual, as last autumn she was cut through by ice and nearly sunk. She is now sheeted round the water line with light boiler plate, which will protect her from such accident in future. A new dingey was purchased, and a set of davits put up on her port side, which is, I think, a better way than towing the skiff astern, as we have had many boats broken in the locks from this way of towing them behind the tug.

The four side dump scows are in fair condition, but can be made almost as good as new at a comparatively small outlay. The coal scow is in first-class order. I append hereto a table showing the highest and lowest water during each month of the year at Ottawa and Kingston Mills lock stations.

I have the honour to be, sir,

Your obedient servant,

ARTHUR T. PHILLIPS, Mem. Can. Soc. C. E.,

Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals.

SESSIONAL PAPER No. 10

RIDEAU CANAL.

TABLE showing monthly, the Highest and Lowest Water on the Lower Sills of the locks at Ottawa and Kingston Mills, respectively, from July 1, 1898, to June 30, 1899.

OTTAWA.				KINGSTON MILLS.			
Highest.		Lowest.		Highest.		Lowest.	
	Ft. In.		Ft. In.		Ft. In.		Ft. In.
July 2	14 6	July 31	10 0	July 1 to 5	8 0	July 22 to 31	7 10
Aug. 1	9 11	Aug. 31	8 6	Aug. 1	7 10	Aug. 26 to 31	7 5
Sept. 10	8 9	Sept. 20 to 22	8 1	Sept. 1	7 5	Sept. 29 and 30	7 0
Oct. 31	12 4	Oct. 1	8 1	Oct. 1 to 17	7 0	Oct. 18 to 22	6 11
Nov. 1 and 2	12 4	Nov. 12	11 0	Nov. 26 to 30	7 1	Nov. 7 to 18	6 11
Dec. 1	11 3	Dec. 30 and 31	9 8	Dec. 1 to 21	7 1	Dec 11 to 31	7 0
Jan. 1 and 2	9 7	Jan. 10 to 31	9 5	Jan. 23 to 31	7 1	Jan. 1 to 22	7 0
Feb. 10 to 15	9 4	Feb. 16 to 20	9 3	Feb. 1 to 9	7 0	Feb. 10 to 21	6 11
March 31	10 8	March 1 to 6	9 4	March 29 to 31	7 4	March 2 to 12	6 11
April 30	21 9	April 1	10 8	April 23 to 30	7 10	April 1	7 4
May 8	25 6	May 29	18 0	May 22 to 31	8 1	May 1	7 10
June 1 to 6	20 0	June 30	14 7	June 1 to 16	8 1	Jnne 17 to 30	8 0

A. T. PHILLIPS,
Superintending Engineer.

RIDEAU CANAL OFFICE,
OTTAWA, July 7, 1899.

ST. LAWRENCE DISTRICT,

SUPERINTENDING ENGINEER'S OFFICE.
CORNWALL, July 1, 1899.

SIR,—I beg to submit my annual report upon works of construction, survey, &c., as connected with the enlargement of the St. Lawrence Canals for the year ending June 30, 1899.

CORNWALL CANAL.

(Opened for traffic 1843.)

The canal has a total lockage of 48 feet, and was designed to overcome the Long Sault Rapids, which extend from Dickenson's Landing to Cornwall, a distance of 11½ miles.

It is located on the north side of the St. Lawrence on ground sloping rapidly towards the river, and at a considerable elevation (generally about 30 feet) above it.

By closely following the margin of the river, high embankments became necessary, which, when imperfectly constructed (as has been found to have been the case) have under certain conditions been subjected to frequent land slides, accompanied by subsidence entailing as in 1888, very serious consequences.

The works of enlargement, now under construction, consist in deepening, widening, and straightening the original channel, in strengthening and protecting the embankments, and in the construction of new and enlarged locks, supply weirs, bridges, &c., also in addition to the above and not covered by the original contract, the repairs or renewal of the foundations and general restoration of the damaged masonry of the old locks 15, 16, 17, 18, 19 and 20 and the adaptation of the basin between 15 and 16 to the purposes of a dry-dock.

The construction of the dams, weir, &c., in connection with the Sheik's Island channel, including the guard gates and automatic dam at lock 20.

And the masonry superstructure and ice-breaker on the upper entrance pier.

The most important of these works, the Sheik's Island dams, were designed to perfect the channel and do away with the existing imperfectly constructed embankments west of the village of Mille Roches embraced in contracts 6 and 7 and part of 5 and 8, which have been abandoned.

This improvement in the alignment was considered necessary for the reason that the class of vessels for which the enlarged canal is designed would have great difficulty in navigating it and that on some of the curves west of Mille Roches on the abandoned contracts it would be practically impossible for those of full canal size to pass each other while under headway.

And the guard gates and dam connected therewith at lock 20 was constructed to protect the lower reaches in case of accident to the locks from the large body of water practically a lake, between the Sheik's Island dams.

The enlargement of the lower or eastern entrance (section No. 1) was commenced in 1876, and with the exception of some work on old lock 17, and the weir and head race to the mills, were completed in 1882.

Section No. 10 upper entrance, which was commenced in 1884, was completed 1895, with the exception of the entrance.

In 1888, the remainder of the work required to complete the enlargement was placed under contract and is practically completed.

And in 1893, the contract for section No. 4 was extended to include the construction of Sheik's Island dams, which are now completed and the contracts for sections Nos. 6 and 7 and part of 5 and 8 affected by their construction, cancelled.

Locality.	Section.	Contractors.	Date of Contract.
Cornwall	2	Wm. Davis & Sons	Nov. 5, 1888.
Lock No. 19	3	"	"
Maple Grove	4	"	"
Sheik's Island Dams	.....	"	June 19, 1893.
Mille Roches	5	The Gilbert Blasting and Dredging Co.	Nov. 2, 1888.
Moulinette	6	" "	"
Sand Bridge	7	" "	"
Long Sault	8	" "	"
Dickenson's Landing	10	Jocks, Delorimier & Broder	April 7, 1884.

NOTE.—Sec. 2 includes the completion of Sec. No. 1. Sec. No. 4 includes the Sheik's Island Dams. Sec. No. 8 adjoins Sec. No. 10.

These contracts are now completed except some work now in progress in connection with the guard gates above lock No. 20, section No. 4, and of the widening and straightening of the upper entrance section No. 10.

Very unsatisfactory progress has been made with the final estimates for the above contracts.

WILLIAMSBURG CANALS.

FARRAN'S POINT CANAL.

(Opened for traffic 1847.)

This canal is about $\frac{3}{4}$ of a mile in length and has a lockage of $3\frac{1}{2}$ feet.

It overcomes a short, swift rapid above the village of Farran's Point, which is situated about 5 miles west of the village of Dickenson's Landing, the head of the Cornwall Canal.

The enlargement of this canal having been authorized, tenders were advertised for on May 9, 1897. On June 1 a contract was entered into with the Canadian Construction Co., the work to be completed January 31, 1899.

The time for completion has since been extended to May 1, 1899.

The work commences at Farran's Point, the entrance of the canal, and extends west to Empey's Bay, above the original entrance.

The works contemplated in the proposed scheme of enlargement consist in forming a new lower entrance, north of that at present in use, and beyond the influence of the 'Big Eddy' at the foot of the rapid, also of a new lock extending from deep water west to a point about 200 feet above the old lock and nearly parallel to it, of the deepening and straightening of the present channel to the head of the old canal, and its extension through Point Avoyon to Empey's Bay, a distance of about 7,000 feet.

The old lock and entrance will not be interfered with beyond such necessary repairs as may be required to continue its use in the event of accident to the new lock.

The timber and concrete foundations for the new lock were completed in October, 1898.

The building of masonry in this lock was continued to November 10, 1898, resumed April 20, 1899, and is now almost completed, 24,800 cubic yards of masonry having been laid during the year.

The lock gates were fitted and placed in position between May 11 and 16, 1899. and the lock is now ready for use.

A large amount of material has been excavated in prism of canal and lockpit by means of steam shovels and dredges.

The embankment on the south side of canal is about completed, and the cribwork at the upper and lower entrances well advanced.

RAPIDE PLAT CANAL.

(Opened for traffic 1847.)

The lockage of this canal is 11½ feet. It was constructed to overcome the rapid of Rapide Plat, and extends from the village of Morrisburg to Flagg's Bay, a distance of 3¾ miles.

The works placed under contract now completed are as under, viz. :—

Locality.	Section.	Contractors.	Date of Contract.
Morrisburg	1	Poupore & Fraser	January 26, 1891.
Mariatown	2	Weddell Dredging Co	" 12, 1891.
New Road	3	Poupore & Fraser	" 26, 1891.

NOTE.—The change of alignment east of lock No. 24, formerly section No. 4, is included in section No. 3.

These contracts have all been completed and the final estimates for sections Nos. 2 and 3 returned.

That for section No. 1 is in progress and will be finished by the end of this year.

GALOP'S CANAL.

(Opened for traffic 1847.)

IROQUOIS SECTION.

The enlargement of the eastern portion of what is known as the Galops Canal having been authorized, tenders for the Iroquois section were advertized for on April 17, 1897. On May 20 following a contract was entered into with Messrs. Larkin & Sangster, the work to be completed January 31, 1899.

The time for completion has since been extended to January 30, 1900.

The contract begins at the village of Iroquois, the eastern entrance of the canal, and extends westerly to Presqu'Isle, a distance of about 16,000 feet.

By the proposed scheme of enlargement it is designed to raise the normal level of the existing canal 6 feet, that is to the height of the lowest known stage of water in the River St. Lawrence above the guard lock, and thus, on the main line of navigation, dispense with the lift lock No. 26, Cardinal, which will hereafter be connected directly with the river, and thereby accommodate the village of Cardinal, the mills and the coasting trade.

The total quantity of earth excavated on this section during the year amounts to about 320,000 cubic yards, of which about 12,000 cubic yards were dredged out of lower entrance to the canal, about 18,000 cubic yards removed from lock-pit, 118,000 cubic yards from prism of canal west of lock, and about 170,000 cubic yards excavated from borrow pit.

The total quantity of rock excavation embraced by lower entrance, lock-pit and prism of canal has been about 65,000 cubic yards.

The laying of masonry for the foundation of lock walls at Iroquois was commenced on June 20, 1898, and the work has since been pushed so vigorously day and night that on December 22, 1898, when the laying of the masonry was discontinued for the season, the side walls of the lock were completed with the exception of a few short stretches of coping.

During this period about 3,600 cubic yards of concrete were deposited in foundation of lock, and over 50,000 cubic yards of lock masonry laid, and the enormous quantity of 500 cubic yards per day was laid during the month of October and the first week in November.

Between May 1 and 6, 1899, three pairs of gates were fitted and placed in position in this lock, and on May 13 the lock was brought into use.

CARDINAL SECTION.

Tenders for the Cardinal section were advertised for on April 17, 1897. On May 10 a contract was entered into with Messrs. Wm. Davis & Sons, the work to be completed January 31, 1899.

The time for completion has since been extended by Order in Council.

The contract embraces the old 'Junction' and the eastern half of the 'Galops' division. It commences at Presqu'Isle and extends west through the rear of the village of Cardinal to Gate's Point, the eastern end of the upper entrance contract now under construction, a distance of about 17,000 feet.

The proposed scheme of enlargement contemplates abandoning the use of lock No. 26 on the main line in future, and raising the normal level of the existing canal 6 feet above the lowest known stage of the River St. Lawrence at the upper entrance.

Since the commencement of the work in June, 1897, the principal work done has been in the excavation of the 'Deep Cut' through the village of Cardinal.

This cut is 5,900 feet long and 68 feet deep at the highest point and contains about 2,000,000 cubic yards, of which 1,660,000 cubic yards have already been excavated, leaving a balance of about 340,000 cubic yards yet to be removed.

Four steam shovels have been employed day and night on the excavating of this cut. Work was continued with these shovels until November 25, 1898, when the night work was stopped for the season, the day work being continued until December 3, 1898, when it being found almost impossible on account of the continued unfavourable weather to keep the tracks in a safe condition for the running of trains, the contractors considered it prudent to discontinue shovel work, and they were accordingly laid up for the season.

Day work was resumed on April 1, 1899, and on May 9 the shovels began working at night, and have since been working 22 hours in each 24.

Of the 1,660,000 cubic yards excavated in this cut about 860,000 cubic yards have been excavated during the year, showing an average of 4,057 cubic yards for each day during the time the shovels were working.

Solid rock was encountered in November, 1898, in the bottom of this cut near the centre and extending for a distance of 800 feet in line of canal and completely across the bottom, rising from each end to about 12 feet above grade.

The material overlying this rock, and for a considerable distance east and west of it, was found to be very hard and containing many large boulders, and this with the obstruction to shovel work caused by the solid rock, accounts in a great measure for the comparatively small quantity of material excavated by the shovels during the year.

About 1,400 lineal feet of this cut is, however, now excavated to bottom of canal and for the full width, and about 1,500 lineal feet to bottom of canal and for half its width.

The foundations for piers and abutments for the highway swing bridge across this cut, designed to connect the north and south portions of the village of Cardinal, are being prepared.

A few small slides occurred near the deepest part of the cut during the season of fall rains and when frost was coming out of the ground last spring, but nothing serious enough to indicate that the protection designed for the face of the slopes would be insufficient.

Earth excavation west of 'Deep Cut.' The excavation here consists in the widening and deepening of the old canal at Gate's Point, the removal of portions of the south bank of old canal, and the dredging of prism of new canal as well as dredging for seat of cribwork and embankment across Gate's Bay.

The total quantity of material to be excavated here is about 324,000 cubic yards, of which about 200,000 cubic yards have already been taken out by dredges, which worked until November 26, 1898, resumed work April 10, 1899, and are still continuing to work.

Earth excavation east of 'Deep Cut.' The excavation here includes the widening of the present canal, the removal of portions of the old towpath, and the dredging of new prism across Glassford's Bay. The total quantity of excavation east of 'Deep Cut' is about 228,000 cubic yards, of which only about 26,000 cubic yards have been removed, the greater part of which has been deposited along the shore of McDonald's Bay, on the north side of old canal.

The excavation from the 'Deep Cut' has been used in raising and widening the south bank at east end of section, in the formation of new banks across Glassford's Bay and Gate's Bay and the raising of the highway north of the cut; the remainder has been placed in spoil along McDonald's Bay or on the outside of the new bank east and west of Fraser's Point, to strengthen it where necessary.

UPPER ENTRANCE, GALOPS CANAL.

The works now under contract and in progress and for which Messrs. Murray & Cleveland are the contractors, were commenced in 1889.

The contract was entered into on November 14, 1888, to be completed June 15, 1891.

It embraces the construction of a lift lock connecting with the river below the rapid, and of a guard lock and supply weir, and the removal of the old guard lock, &c., also the deepening, widening and straightening of the channel from the upper entrance to Round Bay, a distance of about one mile.

The masonry of the upper entrance pier has been completed, also the entire removal of the old guard lock.

The pier across Little Bay connecting the new guard lock with McLaughlin's Point, the embankment between the new guard lock and supply weir, and the protection to slopes east of lock has been finished, and the pier east of guard lock connecting it with the main land is now in progress.

The work remaining to be done consists of the masonry on the outside of the south pier at lower entrance, some excavation adjoining the Cardinal section, the cleaning up of the bottom of the prism, and the completion of the north slope from McLaughlin's Point west to the head of the canal, all of which will be completed by the opening of navigation in 1900.

GALOPS RAPID IMPROVEMENT.

The Galops Rapid improvements consist in the formation, by subaqueous excavation of a straight channel 200 feet wide and 17 feet deep, through the shoals termed respectively Upper Bar, North and Caledonia Shoals, Island Shoal and Lower Bar, the whole of which are included in a distance of 3,300 feet.

This work was completed in November, 1888.

The work now in progress is for the purpose of making 'a satisfactory test and survey of the bottom of the said channel, and at the same time to be prepared for the removal of any material above the original or contract grade, and further in view of the apparent permanent lowering of the water surface of the River St. Lawrence, in said channel, that provision be made for the execution of such additional work as may be considered advisable.'

An agreement was entered into with the Gilbert Brothers Engineering Company, Limited, on September 15, 1897, to undertake the work as above described.

Operations were commenced November 10, 1897, and are still in progress.

The work of sweeping and testing this channel was continued by means of a dredge until November 24, 1898, when she was laid up for the season; work was resumed on May 23, 1899, and is still in progress.

The result of testing the channel shows it to be now clear for a distance of 2,500 feet from the upper entrance, and for the full width of 200 feet, with the exception of three points on Island Shoal which are now being removed.

The remainder of the channel, about 750 feet, has been satisfactorily tested on the south side of the centre line, showing a full depth at low water.

The sweeping and sounding on north side is now in progress and will be completed this season.

It having been decided to widen the entrance to the existing channel across Upper Bar towards the south, drilling and blasting operations were accordingly commenced on August 11, 1898, and continued to the close of the season, November 25.

The work was resumed June 5, 1899, and is still in progress, with the result that about 850 feet in length and for full width has been drilled and blasted and partially dredged, leaving to be done to complete about 300 feet in line of channel.

The question of reducing the finished surface of Island Shoal 6 inches or 1 foot, as recommended in former reports, is again submitted for approval.

NORTH CHANNEL.

The work having been authorized, tenders were advertised for on April 10, 1897. On May 14, a contract was entered into with Mr. M. A. Cleveland, the work to be completed on January 31, 1899.

The time for completion has since been extended to December 31, 1899.

The work commenced on June 1, 1897.

The proposed channel has been increased in width to 300 feet, and will be perfectly straight, commencing about 1 mile west of the upper entrance of the Galops Canal, and is practically an extension of canal navigation for fully 3 miles west to the deep water in the Prescott reach, opposite Johnstown.

The total quantity of earth excavation on this work during the year is about 400,000 cubic yards, which includes the Middle Ground and the cutting through Drummond's Island, between the dams, and also the dredging operation on all shoals west of Drummond's Island to deep water at the upper entrance to the channel

Two cableways were erected for the removal of the rock in the portion of the channel unwatered, and worked continuously through the year till June 15, 1899, when the rock excavation inside of dams, with the exception of a small portion along south slope, having been completed, they were dismantled.

The total quantity of rock removed during the year by cableways in the unwatered portion of the channel was about 160,000 cubic yards, and by derricks, 25,000 cubic yards.

The stone protection to slopes was continued during the winter, keeping pace with the excavation between the dams, and is still in progress; the length completed to the level of normal water is about 6,000 lineal feet.

The daily average of rock excavation during the season of 1898 was 1,000 cubic yards, and that for 1899 to date is 650 cubic yards.

During the past year the pumping for the purpose of completing the prism between the dams has necessarily been very constant. At the lower dam a 12-inch, and at

Tuttle's Point an 8-inch pump were kept continuously under steam, but working only a part of the time; but at Drummond's Island some heavy springs were uncovered as the level of the bottom channel was approached and it became necessary to provide additional pumping plant. Accordingly early in July, 1898, another 8-inch pump was placed on the north side near the commencement of the rock cut, and has been kept continuously at work since that date.

About 750 lineal feet of cribwork has been built, sunk and fully ballasted, at the upper entrance of the channel.

RIVER REACHES.

IMPROVEMENT OF CHANNEL, LAKE ST. FRANCIS.

St. Regis section, 2½ miles east of Cornwall.

This work, situated at the foot of Cornwall Island and nearly midway between it and the 'First Crab,' commences near the western entrance to the lateral channel over the St. Regis bar, which connects the existing north and south navigable channels.

The contract was entered into with Messrs. Manning & Macdonald, May 24, 1898, to be completed November 30, 1898.

The time for completion has since been extended to May 1, 1899.

Work was commenced in June and is in progress.

The channel through the bar now exceeds 150 feet in width, the dike is partially completed, and the cribwork at head and foot of channel is in progress.

It is expected that the width of the channel will be increased to 250 feet by the end of the present season, and fully completed by the opening of navigation in 1900.

Hamilton Island section, 10½ miles east of Cornwall.

This section comprises the undermentioned shoals, which obstruct the fairway between the 10th and 11th miles east of Hamilton's Island Light, viz.:—

The Middle Ground	10 miles.
The Highlander shoal	10½ "
The Horseback	11 "

The contract was entered into with Messrs. Manning & Macdonald, May 24, 1898, to be completed November 30, 1898.

The time for completion has since been extended to May 1, 1899.

Work was commenced on the Middle Ground in June and is in progress.

The Island crib on the Middle Ground has been completed and in part protected. The dredging has also been completed.

The Highlander shoal has proved so difficult that a bare commencement has been made. The contractor's present intention is to postpone the work until his most powerful dredge can be obtained from the Soulanges works.

The Horseback shoal has not yet been commenced as the necessity for its removal is still undecided.

ST. LAWRENCE RIVER AND CANALS.

SURVEYS.

The River and Lake St. Francis, between Cornwall and Coteau, was thoroughly examined, sounded and swept during the month of September, 1898.

The sweep was set at 16 feet during the preliminary trials and afterwards at 18 feet, both with reference to normal water, which is the level of 9 feet above the mitre sill of old lock No. 15.

In the new channel examined, the minimum depth shown by soundings was 20 feet.

This survey confirms my previous work of 1873, and establishes the fact that there is a good navigable channel of not less than 16 feet at low water between Cornwall and the foot of Lake St. Francis.

Surveys of the river between Cornwall and Glengarry Point have been made to test and correct the information obtained in connection with the new channel across the St. Régis Bar and the approaches thereto.

Surveys have also been made at the upper entrances of the Cornwall and Rapide Plat Canals, with a view to their improvement by widening and deepening, and also at a point midway between the upper entrance of the Galops Canal and the foot of the north channel.

Preparations are being made this season to sweep all the reaches of the river between the canals, and definitely locate the positions of the new series of buoys, which will be required to define the limits of a 14-foot channel at the opening of navigation in May, 1900.

I have the honour to be, sir,

Your obedient servant,

TOM S. RUBIDGE,

Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer,
Railways and Canals.

ST. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,
CORNWALL, July 1, 1899.

SIR,—I have the honour to report on the maintenance of the canals under my charge during the fiscal year ending June 30, 1899.

The St. Lawrence District includes the Cornwall, Farran's Point, Rapide Plat and Galops Canals; the Murray Canal, and the improvement in the rapids and channels of the navigable reaches of the River St. Lawrence and Lake St. Francis.

CORNWALL CANAL.

General navigation for the season of 1898 closed on December 9, 1898.

Water was drawn off the canal on April 9, 1899, for the usual spring repairs, and remained unwatered until opened for traffic on April 24, 1899.

The new and old locks at the lower entrance were dismantled and secured for winter.

The dry dock or basin between old locks 16 and 17 was used to its full capacity during the winter by contractor's tugs and dredging plant undergoing repairs, and also by local steamboats and tugs.

This dry dock is also constantly used during the season of navigation, and a charge sufficient to cover the expense of operating and keeping it in repair should be exacted from vessel owners.

The winter work at the shops in preparation for spring repairs and renewals was carried on as usual.

The foundations of the workshops were also renewed, and the buildings raised and thoroughly repaired during the winter.

Watch houses for the guard gates, bridges and lock 15 have been completed.

Life buoys have been provided at all locks and bridges.

Navigation was maintained without interruption during the past year, notwithstanding the closing of new locks 15 and 17 during the months of July and August, 1898, for extensive repairs and renewals to foundations.

The water supply to the mills was not interfered with.

On the afternoon of July 9, the lower mitre sill of lock No. 17 was found to be detached from its anchorage and partially afloat. This necessitated the immediate closing of locks No. 15 and 17 at the new entrace.

As stated above, navigation was not interfered with, as the operating staff were at once transferred to the old entrance locks 15, 16 and 17, and traffic resumed practically without delay.

In order to repair the mitre sill dams were constructed above lock 17 and below lock 15 and the locks and basin unwatered.

Advantage was taken of the unwatering to thoroughly repair the mitre sills and foundations of all structures, and to partially reduce the bottom of the basin to its original level.

The work was completed and the new entrance re-opened for navigation on the 28th of August.

The cribwork of lower river wharf which was partially destroyed by ice shoves in the spring was repaired soon after the opening of navigation.

New valves were put in gates for lock 15, and old lock 19, and new worm gear on regulating weirs at 19 and 20.

New foot bridges were placed on gates for old lock 19 and all others repaired.

The banks, ditches and all structures have been kept in good repair.

Extensive repairs are required at the lower entrance to ice-breaker and piers.

A new regulating and supply weir at the head race to the lower mills at lock 17 and extensive repairs to north bank between Pitt to Amelia Streets are urgently required.

There have been no superannuations during the year.

The fines imposed during the year 1898-9 are as follows:—

1898.	July 4	Damages	Str. "Passport"	$20 00	paid
1898.	July 9	"	Str. "Columbian"	25 00	"
1898.	July 18	"	Str. "Algerian"	10 00	"
1898.	July 30	Fine	Str. "Algerian"	5 00	"
1898.	Aug. 15	Damages	Str. "Spartan"	10 00	"
1898.	Aug. 25	"	Str. "Corsican"	10 00	"
1898.	Sep. 26	"	Barge "Mohawk"	5 00	"
1898.	Oct. 7	"	Barge "Toledo"	5 00	"
1898.	Oct. 11	"	Str. "Lake Michigan"	10 00	"
1898.	Oct. 26	"	Sch. "F. D. Ewen"	35 00	"
1898.	Oct. 31	"	Sch. "Emma M. Ash"	10 00	paid in
1898.	Oct. 31	Fine	Sch. " "	5 00	Montreal.
1899.	May 10	Damages	Tug "McNaughton"	10 00	paid
1899.	May 23	"	Str. "Melbourne"	20 00	"
1899.	May 31	"	Sch. "Helvetia"	15 00	paid at
1899.	June 2	"	Str. "Cuba"	10 00	Cardinal.
1899.	June 5	"	Barge "Whitbeck"	15 00	"
1899.	June 16	"	Str "Columbian"	10 00	"

The highest water recorded during the season of navigation at lock 15, lower entrance, was 10 ft. 4 in. and the lowest 8 ft. 9 in.

The highest water during the season of navigation at lock 21, upper entrance, was 10 ft. 2 in. and the lowest 8 ft. 1 in.

The highest and lowest water during the year ending June, 30, 1899, at locks No. 15 and 21, is as under, viz.:—

Lock 15, highest. 23 ft. 2 in.....March 19.
Lock 15, lowest, 9 ft. 2 in. .....October 11.
Lock 21, highest, 10 ft. 8 in.....March 20.
Lock 21, lowest, 7 ft. 1 in.....December 5.

The above levels are with reference to the mitre sill of the old locks 15 and 21 respectively.

WILLIAMSBURG CANALS.

The several divisions of these canals, viz., Farran's Point Canal, Rapide Plat Canal and the Point Iroquois, the Junction and the old Galops Canal, collectively known as the 'Galops Canal,' were closed on December 13, 1898, and reopened for the season of 1899 on April 13, but the actual date on which the several locks were opened was varied to suit the requirements of the contractors for the enlargement.

Navigation was maintained in a fairly satisfactory manner during the past year in view of the extensive works of enlargement now in progress.

No accidents have occurred during the season of 1898-9, nor has the water supply to the mills been interfered with for any length of time, except at Iroquois where in order to facilitate the contractors, operations in connection with the new structures at the basin and lock, it became necessary to close down the grist mill and waterworks in December, 1898.

The repairs staff has been chiefly occupied in maintaining the old locks in working order, a difficult task requiring constant and careful attention, owing to their almost constant use by the contractors for the enlargement.

During the winter general repairs were made to the buoy boat, scows, &c., and spare buoys prepared and ironed, also spare gates rebuilt for lock 26, Cardinal.

The buoy service from Cornwall to Prescott was duly performed at the close of the season in December, 1898, and again at the opening of navigation in April, 1899, and additional buoys were placed at the following points, viz. :—North Channel, Jackass Shoal, Cornwall, and Lake St. Francis in May, after the opening of navigation.

The following fines were imposed during the year :—

1898. Sept. 12.... Damages..... Tug "Curtis"..... $10.00 paid
1899. June 15..... " ..... Barge "Alberta"..... 15.00 "

The lowest water on the mitre sill of old lock 23 formerly the governing point on the canals in this district during the season of navigation was 8 ft. 5 in. on December 5.

The lowest water on the mitre sill of old guard lock No. 27, during navigation was 7 ft. 2 in., November 26, and the highest 10 ft. 4 in. May 30.

MURRAY CANAL.

Navigation closed on December 6, and opened again on April 13, 1899.

The number of vessels passed through canal from July 1, 1898, to June 30, 1899, was 685.

There were no accidents during this period.

The towpath ditches were kept cleaned out and repaired as usual in the fall and spring.

Back ditches were cleaned out and one, 74 rods long, was dug on north side, east of Brighton Road bridge.

All weeds and brush were cut and grass seed sown on the bare places as usual.

The railway swing bridge was repaired and well painted and the other bridges put in order.

The buildings have been painted and repaired where necessary and an ice-house built.

Stone scow was painted and overhauled.

Signs on bridges and offices were repainted and all tools were repaired during the winter.

The planking was renewed where required on the eastern and western entrance piers.

The floors on all the road bridges were partially renewed.

The rip-rap was repaired for a length of 3,600 feet and 1,385 cubic yards of broken stone used thereon.

The towpath was repaired and 1,270 cubic yards of gravel spread.

Mooring posts were put in where required, also new posts for boom chains.

A large amount of stone has been broken suitable for rip-rap.

The culverts are commencing to decay and have been temporarily repaired but must be renewed next season.

The lighthouses erected on the east and west end of piers and the semaphore on railway swing bridge are giving great satisfaction and complete the proper lighting of this canal.

Attention is again drawn to the necessity for a wharf at the collector's office.

The highest water recorded during the season of navigation, 1898–9, was 13 ft. 5 in., June 9, and the lowest 11 ft. 9 in., October 27.

I append a statement showing the highest and lowest water during the past year on each ofthe canals in my district, also a condensed statement of the highest and lowest water during the season of navigation from the year 1892 to 1898 both inclusive.

I have the honour, to be, sir,

Your obedient servant,

TOM S. RUBIDGE,

Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer, Railways and Canals,
Ottawa, Ont.

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District for the Year ended June 30, 1899.

MONTH.	CORNWALL CANAL.				WILLIAMSBURG CANALS.										LAKE ONTARIO.	
	Lock 15.		Lock 21.		Lock 22.		Lock 23.		Lock 24.		Lock 25.		Lock 27.		Murray Canal.	
	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High	Low.
	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.
1898.																
July	11 3	9 8	10 0	9 2	9 6	8 6	9 1	8 0	9 5	8 3	12 0	10 10	9 7	8 10	13 4	12 9
August	9 11	9 7	9 9	9 0	9 0	8 4	8 7	7 10	8 9	8 0	11 6	10 0	9 8	8 8	12 11	12 5
September	9 8	9 2	9 5	8 9	8 9	7 5	8 1	6 6	8 5	7 5	10 10	8 7	9 3	8 0	12 5	11 11
October	9 7	8 11	9 6	8 1	8 9	7 5	8 4	6 7	8 5	6 7	10 8	8 10	9 4	8 0	12 6	11 9
November	9 9	8 9	9 8	8 3	8 11	6 11	8 4	6 0	8 5	6 0	10 10	8 0	9 1	7 2	12 2	11 9
December	11 0	8 9	9 9	7 1	9 1	6 0	8 8	5 5	9 0	6 5	11 3	8 9	9 4	7 0	12 1	11 0
1899.																
January	22 9	10 7	9 6	7 6	9 1	7 3	8 9	5 9	8 8	5 6	11 4	7 4	10 0	8 0	12 3	11 11
February	23 0	17 8	9 2	8 1	8 10	6 10	8 5	6 3	7 5	5 2	9 9	7 6	8 7	7 2	12 2	11 11
March	23 2	15 6	10 8	8 5	10 2	7 6	8 10	6 11	9 5	6 5	11 4	8 5	9 7	8 1	12 7	12 0
April	16 8	10 3	9 9	9 1	9 1	8 0	8 8	8 0	9 0	8 0	11 4	10 0	9 6	8 9	13 2	12 7
May	10 7	9 8	10 4	9 0	9 6	8 1	9 4	8 0	9 9	8 5	12 3	10 3	10 4	9 2	13 4	12 11
June	10 5	9 9	10 1	9 8	9 6	8 11	9 4	8 8	9 6	8 8	12 2	11 0	10 2	9 2	13 5	13 0

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, May to November in each year.

YEAR.	CORNWALL CANAL.								WILLIAMSBURG CANALS.							
	Lock No. 15.				Lock No. 21.				Lock No. 22.				Lock No. 23.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.
1892.	August.	12 1	May ...	9 4	August.	10 10	Nov....	8 10	July....	10 3	Nov....	7 10	July....	9 9	May ..	7 6
1893.	May. ..	12 5	Nov....	9 7	May ...	11 9	"	9 0	May....	11 2	"	8 3	May ...	11 1	Nov....	7 1
1894.	June....	11 0	"	9 2	June...	10 11	"	8 6	June....	10 6	" ...	7 10	June....	10 1	" ...	6 0
1895.	May....	9 10	"	8 0	May ...	9 4	"	7 4	May ...	8 9	"	5 10	" ...	8 0	"	4 10
1896.	" ...	10 2½	Oct.....	8 6½	" ...	9 11	" ...	7 8	" ...	9 4	"	6 11	" ...	8 11	" ...	5 9
1897.	August.	10 3	Nov....	8 5	" ..	10 0	"	7 5	" ...	9 10	" ...	7 2	" ..	8 11	"	4 9
1898.	May ...	10 4	" ..	8 9	June....	10 2	Oct.....	8 1	" ...	9 7	"	6 11	...	9 3	" ...	6 0

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, May to November in each year (*Continued*).

YEAR.	WILLIAMSBURG CANALS (*Continued*).								LAKE ONTARIO.			
	Lock No. 24.				Lock No. 25.				Lock No. 27.				Murray Canal.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.
1892.	Sept....	10 0	Nov....	7 0	July....	12 8	Nov....	9 4	July....	10 3	Nov....	8 3	July....	13 6	Nov....	12 1
1893.	May ...	11 2	August.	7 4	May ...	13 10	"	10 0	May ...	11 6	" ...	8 2	June....	14 9	"	12 2
1894.	June....	10 5	Nov....	6 9	July....	13 3	"	9 1	July...	10 9	"	9 1	" ...	14 0	"	12 2
1895.	May ...	8 3	"	4 5	May ...	10 10	"	6 8	May ...	9 10	" ...	6 9	May ...	12 5	"	12 4
1896.	" ...	9 3	"	5 7	" ...	12 0	"	8 3	" ...	10 6	"	7 6	" ...	12 10	"	11 1
1897.	July....	9 3	"	4 8	June....	11 8	"	6 6	June....	10 0	" ...	6 8	July....	13 5	" ...	11 2
1898.	June....	9 6	"	6 0	" ..	12 9	"	8 0	" ...	10 0	"	7 2	June....	13 6	"	11 9

SESSIONAL PAPER No. 10

WELLAND CANAL.

OFFICE OF SUPERINTENDING ENGINEER,
ST. CATHARINES, ONT., September 13, 1899.

SIR,—I have the honour to report upon the Welland Canal and its branches for the fiscal year ending June 30, 1899.

A few words describing the Welland Canal system may interest those who have not read former reports.

The main line of canal connects Lake Ontario at Port Dalhousie with Lake Erie at Port Colborne, its length being 26¾ miles, the difference in level between Lakes Ontario and Erie which is 326¾ feet being overcome by 25 lift locks.

The locks are 45 feet in width at the level of the lower reach and 270 feet in length from hollow quoin to hollow quoin, allowing the passage of vessels from 250 to 260 feet in length according to their beam.

The depth of water on the lock mitre sills admits of the passage of vessels drawing 14 feet, except on rare occasions of short duration, when heavy gales on the lakes lower the surface of the water at Port Dalhousie or Port Colborne, and temporarily reduce the depth of water upon the entrance-lock mitre sills.

'The Old Canal' extends from Port Dalhousie to Allanburgh, a distance of 12½ miles, where a junction is made with the main line.

It has twenty-six lift locks 150 feet in length and 26 feet 6 inches in width, with 9 feet of water upon the mitre sills.

Except between Port Dalhousie and St. Catharines at Lock No. 2, from which point a steamer runs daily between St. Catharines and Toronto, 'the Old Canal' is seldom used for navigation, but furnishes a succession of excellent water powers, many of which are now used in various manufacturing establishments, and others are available if wanted.

The Welland Canal feeder connects the Grand River at Dunnville with the main line of the Welland Canal at 'the Junction,' a point about a mile and a quarter south of the town of Welland. It has a length of 21 miles, and a branch one mile and three-quarters in length from Stromness on the feeder, to Port Maitland on Lake Erie at the mouth of the Grand River, affords communication between Lake Erie and the Grand River above the Dunnville dam.

In the early days of the Welland Canal, the Grand River was the source of supply, the Dunnville dam being constructed for that purpose, and vessels locked in or out of the canal at Port Maitland on Lake Erie.

Since the enlargement of the Welland Canal and the deepening of the summit level so as to admit of the canal being being fed direct from Lake Erie at Port Colborne, the Welland Canal feeder and Dunnville dam and works in connection with it have ceased to be necessary for the purposes of supply, and now serve only for the passage of an occasional scow or small boat drawing five feet of water or less, and for furnishing an uncertain power for the mills at Dunnville, Marshville and Welland, which came into existence after the construction of the Dunnville dam

There are those who are of opinion that Dunnville dam and 'feeder,' being no longer necessary in connection with the Welland Canal, should be abandoned.

The residents on the Grand River above the Dunnville dam, from that point to Cayuga, agitate for the removal of the dam that the river may be allowed to recede to its original banks, and large areas of fertile land, now flooded, be brought under cultivation. They also believe that such action would materially benefit the health of the residents, by removing the cause of malarial diseases.

The residents below the Dunnville dam, on the lands adjoining 'the feeder,' see in the abandonment of the feeder an outlet for draining their lands, which is much needed.

The millers, on the other hand, desire to see the dam maintained.

At Port Robinson, on the main line of canal, a lock 150 feet in length by 26 feet 6 inches in width, and a cut below it, connects the Welland Canal and Chippawa River, which at a distance of 8¼ miles below Port Robinson, enters the Niagara River, and has a depth of 9 feet.

At the town of Welland, on the main line of the canal, a lock 150 feet in length and 26½ feet in width, with 9 feet of water upon the mitre sill, connects the Welland Canal with the upper waters of the Chippawa River, making that stream practically navigable from its mouth to above the Welland aqueduct, and thence upwards.

RENEWALS UNDER INCOME APPROPRIATIONS.

Under date of September 8, 1898, a contract was entered into with Mr. John Riley for renewing the superstructure of the west pier at Port Dalhousie, where required.

The pier had been originally constructed of timber, and the superstructure was to be renewed with concrete, from a foot below the low water line.

This was done by placing blocks of Portland cement concrete, 4 ft. x 4 ft. x 6 ft. on each face of the pier, at the level of one foot below the low water line, after the timber superstructure had been removed in short stretches to the required depth.

The remaining height of the faces of the pier for a width of 2 ft. 6 in. was made up with Portland cement concrete formed behind moulds secured to the pier, and the space between the outside walls was filled with concrete made with natural cement. At date of June 30, 600 feet in length of the west pier superstructure had been so renewed.

At Port Robinson Bridge (No. 15) the centre range of crib fender works was taken down to sound timber at or near the water line, and the cribwork rebuilt and filled with stone.

At the Quaker Bridge (No. 16) a similar renewal was carried out.

At the Welland Bridge (No. 17) the centre range of crib fenders was also taken down, rebuilt, and filled with stone.

On the Welland Raceway, the bridges on the lines of West Main Street, and Denistown Streets were renewed, and the Welland Raceway was cleaned out to the original depth.

On the Welland Canal feeder the back ditches were cleaned out where most needed.

For removing slides on the summit level, a contract was entered into with Messrs. A. H. Irvine Company, of Toronto, on September 23, 1898, and the removal of slides was commenced in the rock cutting north of Humberstone.

A slide a short distance north of the Welland aqueduct was also removed when the dredge moved down to a slide in the deep cut

At date of June 30, 1899, 7,209 cubic yards of material had been removed from the points above mentioned, all of which was scowed to Lake Erie and dumped at the dumping ground east of Port Colborne.

The dredge is now continuing the removal of the slides in the deep cut.

REPAIRS.

The locks, weirs, bridges and fenders have been repaired, many of the repairs being extensive, particularly in the case of bridges, fenders and wales, where the wear and tear is greatest.

Rip-rap protection has been renewed where washed down or injured by small slides and other causes. The ditches have been cleaned out where necessary, embankments and roads made up as required, and lock and bridge houses and other buildings repaired as needed, all of which has consumed large quantities of materials and kept the repair force fully employed.

The interruptions to traffic and damages to the canal works have been unimportant, except in the case of the steamer '*George Spencer*' of Cleveland, which on October 30, 1898, at 12:30 p.m., when passing up the canal carried away three gates of Lock No. 8.

The damage was caused by the steamer entering the lock at a speed which prevented her being stopped before the head gates were reached.

Spare gates were got upon the ground with all possible despatch, and at night of November 1 locking was resumed, the repairs having been effected with a rapidity that was most creditable to the entire repair force employed.

A deposit receipt for $5,000 having been received from the owners to cover the estimated cost of making good the damage done, the vessel was allowed to proceed.

During the fiscal year three lock and bridge tenders were superannuated on account of physical inability to perform their duties, the vacancies being filled by younger men.

Two lock and bridge tenders died from natural causes, and one lock and bridge tender on the old canal lost his life by falling into the canal at the head of his lock. These death vacancies were filled by suitable men.

The canal was closed on December 13, 1898, and opened on April 22, 1899.

Appended will be found a statement of damages to canal property and amounts paid or to be paid for the same, and to whom paid. Also a statement of fines collected from vessel owners or canal employees for breaches of canal rules and regulations.

Also a statement of the highest and lowest recorded depths of water monthly on the mitre sills of the new locks at Port Dalhousie and Port Colborne.

I have the honour to be, sir,

Your obedient servant,

W. G. THOMPSON, M. Inst. C.E.,

Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,
Deputy Minister and Chief Engineer Railways and Canals,
Ottawa.

STATEMENT of Damages to Welland Canal property during the fiscal year ending June 30, 1899, and the amount paid and unpaid on account of said damages.

Date of Damage.	Name of Vessel.	Amount of Damages.		Date paid.	Where Paid.
		Paid.	Unpaid.		Collector's Office.
1897.		$ cts.	$ cts.	1898.	
May 14	Schooner Geo. Farrell	5 13		Nov. 22	Port Dalhousie.
1898.					
May 13	Steamer Aragon	17 00		Sept. 9	"
June 11	Barge Celtic	10 25		July 24	"
" 11	Steamer Samoa	10 98		" 22	"
July 2	" Algonquin	9 31		" 23	"
				1899.	
" 30	" Empire State	24 56		May 16	"
Aug. 10	Barge Iron Cliff	6 90		" 31	"
" 15	Steamer S. Langell		17 50		
				1898.	
Sept. 9	" Aragon	7 49		Sept. 30	"
				1899.	
" 10	Barge Iron Cliff	3 99		May 31	"
" 24	Steamer Hecla	4 12		" 19	"
Oct. 3	Barge Wadena	50 00		Oct. 4	"
" 6	" H. D. Alvinston	25 00		" 6	"
" 17	" F. D. Ewan	50 00		" 18	"
" 30	Steamer Geo. Spencer	5,000 00			Deposited on acct.
1899.					
June 7	Barge Helvetia	10 00		June 8	Port Colborne.
		5,234 73	17 50		

SEATEMENT of Fines collected from Vessels contravening Canal Rules and Regulations, and for use of Government property for the fiscal year ending June 30, 1899.

Date of Fine.	Name of Vessel.	Amount of Fines.		Date paid.	Where Paid.
		Paid.	Unpaid.		Collector's Office.
1897.		$ cts.	$ cts.	1898.	
Sept. 11	Steamer Escanaba	5 00		Nov. 14	Port Dalhousie.
1898.					
July 1	" Samoa	10 00		July 22	"
Aug. 31	" Empire State	20 00		Sept. 18	"
1899.				1899.	
June 20	Barge Minnedosa for use of diving apparatus and attendants	30 00		June 26	"
		65 00			

SESSIONAL PAPER No. 10

STATEMENT showing the Highest and Lowest Depth of Water on the Lower Mitre Sill of Lock No. 1, New Welland Canal, Port Dalhousie, for the fiscal year ending June 30, 1899.

MONTHS.	LOWER SILL.				MONTHS.	LOWER SILL.			
	Highest.		Lowest.			Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	1899.	Ft.	In.	Ft.	In.
July	16	0	15	7	January	15	3	14	7
August	15	7	15	1	February	14	11	14	6
September	15	7	14	9	March	15	7	14	8
October	15	2	14	8	April	15	11	15	3
November	15	0	14	7	May	16	3	15	10
December	14	10	14	2	June	16	4	15	11

STATEMENT showing the Highest and Lowest Depth of Water on the Upper Mitre Sill of Lock No. 27, New Welland Canal, Port Colborne, for the fiscal year ending June 30, 1899.

MONTHL.	UPPER SILL.				MONTHS.	UPPER SILL.			
	Highest.		Lowest.			Highest.		Lowest.	
1898.	Ft.	In.	Ft.	In.	1899.	Ft.	In.	Ft.	In.
July	15	3	14	6	January	16	6	13	1
August	15	8	14	5	February	14	4	13	5
September	15	5	14	1	March	15	9	13	0
October	16	2	13	5	April	14	9	14	2
November	14	11	12	5	May	15	5	14	1
December	15	10	12	11	June	15	4	14	8

ST. PETER'S CANAL.

ST. PETER'S, C.B., June 30, 1899.

SIR,—I beg to submit to you the following report :—

Since July 1, 1899, $490 have been appropriated for repairs on St. Peter's Canal, of which $441.61 have been expended, and the following work has been completed :

Section No. 1.—Begins at a point where the fendered portion of the wall ends, about 1,165 feet above north end of the lock and extending southerly a distance of 150 feet. This section was 135 feet, average 2 feet height of cribwork. The last 15 feet is where a large gap occurred in the rock, and stone and earth were sliding down into the canal. This required substantial cribwork from the rock, a little below the surface of the water.

Section No. 2.—Extends from a point 385 feet from place of beginning, or 235 feet from the south end of Section No. 1 to 820 feet, a distance of 435 feet and averaged about 2 feet of cribwork.

Section No. 3.—Extends from 820 feet to 920 feet and would average 6 feet of cribwork.

Section No. 4.—Was not worked at all owing to the fact that I could not get timber, it being so late in the season. The drawbridge has been covered 10 feet in the centre with timber flooring 8 x 4 ; also one coat of white lead, and it requires another coat to complete it.

One headlight has been placed at the northern entrance of the canal which proves of great benefit to steamers and vessels approaching the canal at night.

There are still considerable repairs required, such as wooden walls and hanging fenders, warping posts, &c.

The lock-house and kitchen is still in need of a thorough repair as well as painting. In fact if not looked after soon some of it will be a mass of rotten timber and boards.

One thousand seven hundred and two steamers and vessels passed through St. Peter's Canal in 1898 ; and from the opening of navigation this year, 1899, until June 30, 380.

Navigation opened this year on April 24.

In 1898 navigation opened on St. Peter's Canal on April 2 and closed on January 7, 1899.

There is one tidal lock and four pairs of gates on St. Peter's Canal.

I have the honour to be, sir,

Your obedient servant,

JNO. H. DURAND.

COLLINGWOOD SCHREIBER, Esq., C M.G.,
Chief Engineer and Deputy Minister of Railways and Canals,
Ottawa.

REPORT

OF THE

SECRETARY OF THE RAILWAY COMMITTEE

OF THE

PRIVY COUNCIL

RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The Minister of Railways and Canals being Chairman of the Railway Committee of the Privy Council, on which certain extensive duties are imposed by the Railway Act, 1888, and its amendments, it seems proper that a brief record should here be made of the matters submitted to the Committee during the period from November 15, 1898, to November 1, 1899, and the decisions arrived at.

They are as follows:—

Application of the Ottawa, Arnprior and Parry Sound Railway Company for a reconsideration of the decision in the matter of the application of the Ottawa and New York Railway Company with regard to right of way to their freight terminals, Ottawa. —Under consideration.

Application of the Canadian Pacific Railway Company for the Committee to fix the terms and conditions set out in schedule submitted as those on which the said company may use, jointly with other parties, the passenger station and tracks, and approaches thereto near Sappers' Bridge, Ottawa, after May 1, 1916.—Under consideration.

Application of the Ottawa and New York Railway Company for the Committee to fix the terms and conditions set out in the schedule submitted as those on which the said company may use, jointly with other parties, the passenger station and tracks, and approaches thereto near Sappers' Bridge, Ottawa, after May 1, 1916.—Under consideration.

Application of the Grand Trunk Railway Company, *re* the fixing of the additional expense at the crossings of the Grand Trunk Railway by the Montreal Street Railway. —Settled by parties interested.

Application of the parish of St. Blaise to have the costs in connection with its petition for a highway crossing over the Grand Trunk Railway, taxed by the Committee against the railway company.—Dismissed.

Petition of residents on road between Torendale and Barrie, in the township of Innisfil, asking that the Grand Trunk Railway Company and the township, or either, be directed to construct an overhead crossing where the railway crosses the highway about one mile from Allandale station.—Granted.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plans and profiles of crossings of highways on the Ridgeville Branch, in the township of Pelham.—Approved.

Messrs. Chisholm and Logie submit a memorandum giving reasons why the Toronto, Hamilton and Buffalo Railway Company should pay to Mrs. Powell her expenses in connection with variation of order *re* closing of Hughson Street, Hamilton.—Under consideration.

Petition of the Toronto, Hamilton and Buffalo Railway Company asking that order No. 7447, *re* highway crossing at station, 100 x 12, be rescinded, and that the matter be reconsidered.—Under consideration.

Application of the Corporation of the City of St. Henri *re* opening of Gareau Street, across the tracks of the Grand Trunk Railway.—Under consideration.

Application of the Canadian Pacific Railway Company for approval of plan of certain proposed changes in their bridge at Sicamous Narrows, B.C.—Under consideration.

Application of the Ontario and Quebec Railway Company (C.P.R.), for permission to change the location of their line between Mono Road and Melville Junction, in township of Caledon.—Withdrawn.

Application of the Corporation of the Town of Galt for permission to make a crossing over the track of the Canadian Pacific Railway at Myrtle Avenue.—Under consideration.

Application of the Winnipeg Street Railway Company for permission to cross, at rail level, the Canadian Pacific Railway at Main Street and Higgins' Avenue, in the city of Winnipeg.—Under consideration.

Application of the United Counties Railway Company for permission to cross, at rail level, the Central Vermont Railway at Iberville.—Dismissed.

Re protection to be provided at the crossing of the Intercolonial Railway by the St. John Electric Street Railway, in St. John, N.B.—Under consideration.

Application of the Kingston, Napanee and Western Railway Company for permission to cross, at rail level, the Canadian Pacific Railway at Tweed.—Postponed.

Application of the Hamilton and Dundas Street Railway Company for an order authorizing the construction of a connection between their tracks and those of the Toronto, Hamilton and Buffalo Railway Company ; also, the use of their tracks by the Toronto, Hamilton and Buffalo Railway Company into and through the town of Dundas, and for approval of agreements between the two companies and the town of Dundas in regard thereto.—Granted.

Application of the Central Ontario Railway Company for permission to remove the packing from the frogs and wing rails from the month of December to the month of April of each year, both months included.—Under consideration.

Application of the Brandon and South-western Railway Company for approval of plans of crossings of Pembina and South-western branches of the Canadian Pacific Railway Company.—Under consideration.

Application of the Northern Pacific and Manitoba Railway Company for approval of the place and mode of junction of its railway with the Canadian Pacific Railway.—Approved.

Application of the Bedlington and Nelson Railway Company for running powers of the Crow's Nest Line of the Canadian Pacific Railway Company.—Granted.

Complaint of the Sun Oil Refining Company against the tariffs of the Grand Trunk and Canadian Pacific Railway Companies upon oil and the discrimination against them.—Under consideration

Application of the Montreal Island Belt Line Railway Company for permission to construct a branch line from their main line to the Dominion Cotton Mills Company's Works, Montreal.—Granted.

SESSIONAL PAPER No. 10

Application of the Municipality of the Parish of St. Théophile du Lac à la Tortue asking that the Canadian Pacific Railway Company be compelled to construct a highway crossing at Cordon, St. Mathieu.—Dismissed.

Petition of the Municipal Council of the County of Frontenac asking that the Grand Trunk Railway Company be compelled to place electric alarms or other protection at the highway crossings at Collin's Bay, Cataraqui and Perth roads.—Under consideration.

Application of the Montreal Island Belt Line Railway Company for permission to cross, at rail level, the tracks of the Montreal Street Railway Company on St. Catherine and Notre Dame Streets, Montreal.—Granted.

Petition of the Lake Erie and Detroit River Railway Company for running powers over the Canada Southern Railway, between Ridgetown and St. Thomas, a distance of 44 miles.—Under consideration.

Application of the Montreal Island Belt Line Railway Company for certain modifications to be made in the Order of September 28, 1897, File No. 7157, approving of the Chateauguay and Northern Railway Company (now M. I. B. L. Ry.) crossing the Montreal Street Railway on Ontario Street, Montreal.—Under consideration.

Application of the Canadian Pacific Railway Company for permission to use the crossing of the Grand Trunk Railway, by its railway at St. Constant, P.Q.—Granted.

Application of the Calgary Irrigation Company for permission to cross the Calgary and Edmonton Railway with irrigation ditches.—Granted.

Application of the Canadian Pacific Railway Company for permission to cross the Grand Trunk Railway at St. Johns, P.Q., without stopping.—Granted.

Application of the Ottawa and New York Railway Company for permission to use the junction of its railway with the Montreal and Ottawa Railway, near the city of Ottawa, before installation of the interlocking plant.—Granted.

Application of the Montreal and Ottawa Railway Company for permission to use the junction of its railway with the Ottawa, Arnprior and Parry Sound Railway before the installation of the interlocking plant.—Granted.

Application of the Montreal and Ottawa Railway Company for permission to use the junction of its railway with the St. Lawrence and Ottawa Railway, near the city of Ottawa, before the installation of the interlocking plant.—Granted.

Application of the Metropolitan Railway Company for approval of the place and mode of crossing of the Northern Branch of the Grand Trunk Railway Company in the township of Whitechurch.—Granted.

Order of the Committee directing that the Canadian Pacific Railway Company provide and maintain an interlocking plant at the crossing of the Canada Atlantic Railway by its railway at St. Polycarpe.

Application of the Columbia and Western Railway Company for approval of certain proposed changes in location of the line of its railway as shown on plans and profiles submitted.—Approved.

Order of the Committee determining that it has jurisdiction over through railway freight in so far as the portion which is applicable to carriage in Canada is concerned, and that such freight is subject to the provisions of the Railway Act of 1888.

Application of the Grand Trunk Railway Company for permission to lay a siding from its main line across Monck Street to the property of Mr. W. C. Butler, in the village of Brighton, Ont.—Granted.

Application of the Midland Railway Company of Nova Scotia for approval of the place and mode of junction of its railway with the Windsor Branch Railway at Windsor, Nova Scotia.—Approved.

Application of Mr. T. W. Robertson for permission to cross the Calgary and Edmonton Railway with an irrigation ditch.—Granted.

Application of Mr. A. T. Broderick for permission to cross the Calgary and Edmonton Railway with an irrigation ditch.—Granted.

Application of the St. Thomas Street Railway Company for permission to cross, at rail level, the tracks of the London and Port Stanley Railway Company at Talbot Street and Wellington Street, city of St. Thomas, and the line between the 7th and 8th concessions of township of Yarmouth.—Granted.

Application of the Bedlington and Nelson Railway Company for approval of the place and mode of its eastern junction with the Crow's Nest Line of the Canadian Pacific Railway Company.—Approved.

Application of the Bedlington and Nelson Railway Company for approval of the place and mode of its western junction with the Crow's Nest Line of the Canadian Pacific Railway Company.—Approved.

Application of the Portage and North-western Railway Company for approval of the place and mode of junction of its railway with the Manitoba and North-western Railway near the town of Portage la Prairie.—Approved.

Application of the Portage and North-western Railway Company for permission to cross, at rail level, the Manitoba and North-western Railway in the town of Portage la Prairie.—Granted.

Application of the Portage and North-western Railway Company for permission to cross, at rail level, the Canadian Pacific Railway Company on Pacific Avenue, in the town of Portage la Prairie.—Granted.

Application of the Corporation of the Town of Rat Portage for permission to construct an overhead bridge across the tracks of the Canadian Pacific Railway Company at Julius Street, in the said town.—Granted.

Application of the Corporation of the Town of Rat Portage for permission to construct an overhead bridge across the tracks of the Canadian Pacific Railway Company on Matheson Street, in the said town.—Granted.

Application of the Corporation of the Town of Rat Portage for permission to construct a subway under the tracks of the Canadian Pacific Railway Company on Argyle Street, in the said town.—Granted.

Application of the Midland Railway Company of Nova Scotia for approval of the place and mode of junction of its railway with the Intercolonial Railway at Truro, Nova Scotia.—Approved.

Application of the Pontiac Pacific Junction Railway Company for an interim order allowing the use of the crossing of the Hull Electric Railway in Aylmer by its construction trains, pending the installation of the interlocking plant.—Granted.

SESSIONAL PAPER No. 10

Application of the E. B. Eddy Company for permission to cross with its tramway the tracks of the Ottawa Electric Railway Company in the city of Hull.—Granted.

Application of the Calgary Irrigation Company for permission to construct an irrigation ditch under the Calgary and Edmonton Railway, in township 24, range 1, west of 5th meridian, district of Alberta, N.W.T.—Granted.

Application of the Portage and North-western Railway Company for an interim order allowing it to use the crossing of the Canadian Pacific Railway on Pacific Avenue, Portage la Prairie, pending the installation of the interlocking plant.—Granted.

Application of the Portage and North-western Railway Company for an interim order allowing it to use the crossing of the Manitoba and North-western Railway in the town of Portage la Prairie, pending the installation of the interlocking plant. —Granted.

Application of the Manitoba and South-eastern Railway Company for permission to cross the Pembina Branch of the Canadian Pacific Railway at St. Boniface.—Granted.

Application of the Corporation of the City of Toronto for a reconsideration of the application of the city with regard to Lansdowne Avenue crossing.—Under consideration.

Application of the Corporation of the City of Toronto for an order directing that gates and watchmen be placed at the crossing of Dunn Avenue by the Grand Trunk Railway, Toronto.—Under consideration.

Application of the Corporation of the City of Toronto for authority for the Toronto Railway Company to extend its tracks along Bloor Street across the tracks of the Grand Trunk Railway, (Northern Division), the Toronto, Grey and Bruce Railway, Grand Trunk Railway and the Canadian Pacific Railway, and for protection of the Northern Railway crossing by gates and watchmen.—Under consideration.

Application of the Corporation of the City of Toronto for an order directing that gates and watchmen be placed at the crossing of Cherry Street by the Grand Trunk Railway, Toronto.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for permission to run a branch line along Trolley Avenue, in the township of Barton, crossing the Grand Trunk Railway.—Under consideration.

Application of the Kaslo and Lardo-Duncan Railway Company for an order to restrain the Arrowhead and Kootenay Railway Company from trespassing or interfering with the workmen of the applicant on the right of way and line of the applicant as located in and in the neighbourhood of Duncan City Pass.—Settled by parties interested.

Application of the Toronto, Hamilton and Buffalo Railway Company for authority to build a branch line from a point on its main line, in or near lot 7, concession 3, township of Barton, to a point at or near Wellington Street, Hamilton, north of Grand Trunk Railway.—Under consideration.

Application of the Corporation of St. Andrews, P.Q., for an order compelling the Great Northern Railway Company to operate the Lachute and St. Andrews Railway without delay.—Under consideration.

Application of the Corporation of the City of Toronto for an order directing that gates and watchmen be placed at the crossing of Dowling Avenue by the Grand Trunk Railway, Toronto.—Under consideration.

Application of the Corporation of the City of Toronto for an order directing that gates and watchmen be placed at the crossing of Jamieson Avenue by the Grand Trunk Railway, Toronto.—Under consideration.

Complaint of Mr. George M. Way *re* Canada Atlantic Railway crossing on Grand Ile Lime Road, Valleyfield, being in a dangerous condition, and should be protected by gates.—Under consideration.

Complaint of the Sun Oil Refining Company and the Gall-Schneider Oil Company against the Grand Trunk and Canadian Pacific Railway Companies with regard to rates upon petroleum and its products.—Under consideration.

Complaint of Messrs. Thomas Conant and E. R. Mothersill that the Oshawa Electric Railway Company's tracks are too near their property at East Whitby, and ask that the railway company be compelled to remove the said tracks.—Under consideration.

Complaint of Mr. John Campbell that the Canadian Pacific, Grand Trunk and other railways have discriminated against him in freight rates on flour.—Under consideration.

Application of the Corporation of the Town of Richmond for permission to open Stanley Avenue across the Quebec line of the Grand Trank Railway.—Under consideration.

Application of the Municipal Council of the County of Richmond, P.Q., for a highway crossing over the track of the Grand Trunk Railway on the town line road between townships of Melbourne and Durham, at Gore Station.—Under consideration.

Application of the Great Northern Railway Company for approval of three proposed crossings, at rail level, of the Canadian Pacific Railway, at points north of Joliette, south of St. Jerome and west of Lachute, and also for approval of proposed crossing, at rail level, of the Carillon and Grenville Railway near Grenville.—Under consideration.

Application of the Canadian Pacific Railway for permission to construct a branch line from the line of the Ontario and Quebec Railway to the Marl Quarry in the township of Holland, County of Grey.—Under consideration.

Application of the Grand Trunk Railway Company for permission to construct a branch line to the Doherty Organ Factory in the town of Clinton.—Approved.

Application of the Grand Trunk Railway Company for permission to construct a siding across Esplanade Street to the premises of Firstbrook Brothers at the corner of Esplanade and Princess Streets, Toronto.—Granted.

Application of the Quebec Railway, Light and Power Company for approval of the crossing, at rail level, of the Canadian Pacific Railway, by its electric railway, on St. Valier Street, Quebec.—Under consideration.

Application of the St. Thomas Street Railway Company for a further extension of time for putting in the interlocking appliances at the crossings of the London and Port Stanley Railway directed to be installed by the order of June 29,1899.—Under consideration.

Application of the Canadian Pacific Railway Company for approval of certain proposed road diversions on school sections in Manitoba and the North-west Territories. —Under consideration.

SESSIONAL PAPER No. 10

Application of the Grand Trunk Railway Company for a re-hearing in the matter of the crossing of the Grand Trunk Railway by a branch line of the Canada Southern Railway leading to the Canada Peat Fuel Company's Works.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plan, profile and book of reference of a proposed branch line northerly and westerly from its main line on lot 7, concession 3, township of Barton, to a point a short distance west of Wellington Street and north of Simcoe Street, Hamilton.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plan and profile of crossings of Great Western and Northern and North-western Divisions of the Grand Trunk Railway, by its proposed branch line.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plan and profile of crossing, at rail level, the Hamilton Radial Electric Railway, by its proposed branch line.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plan and profile of proposed junctions of the main line of its railway with the railway and transfer track of the Hamilton, Grimsby and Beamsville Electric Railway, and of a crossing by the proposed branch line of the Hamilton, Grimsby and Beamsville Electric Railway.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plans and profiles of certain highway crossings by its proposed branch line.—Under consideration.

Petition from the Parish of St. Jerusalem d'Argenteuil asking that the Great Northern Railway Company be compelled to provide gates and watchmen at the proposed crossing of the front road on south side of the North River near Lachute.—Under consideration.

Application of the Metropolitan Railway Company for permission to connect its line by a switch with the Canadian Pacific Railway at North Toronto.—Granted.

COLLINGWOOD SCHREIBER,
Secretary, Railway Committee, P.C.

Prepared by
J. W. PUGSLEY,
Clerk of the Railway Committee, P.C.

PART II

STATEMENTS OF THE ACCOUNTANT

No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals, Dominion of Canada, during the Fiscal Year ending June 30, 1899.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	
			Staff.	Repairs.
CANALS.	$ cts.	$ cts.	$ cts.	$ cts.
Beauharnois		1,000 00	20,613 32	13,463 01
Carillon			11,919 27	11,478 88
Grenville	39,999 37			
Chambly		15,255 42	18,336 50	11,997 51
Cornwall	37,649 00	15,960 80	16,000 00	14,623 90
Lachine	162,351 83	3,103 99	55,990 00	35,776 90
Lake St. Louis	57,607 79			
Lake St. Francis	23,110 00	2,495 47		
Murray			5,073 70	3,533 68
Rideau		700 29	30,751 20	28,199 49
Sault Ste. Marie	63,935 48		13,840 24	6,564 40
Soulanges	1,442,824 22			
Ste. Anne's			1,920 12	1,997 96
St. Lawrence.. North Channel	461,979 50			
St. Lawrence.. Galops Channel	42,430 00			
St. Lawrence.. River Reaches	9,366 47			
St. Ours			2,244 12	1,494 93
St. Peters			2,819 86	456 61
Trent	166,611 49	6,179 79	5,048 72	6,454 49
Welland		30,099 84	86,110 88	56,270 60
Williamsburg: Galops	987,186 44			
" Rapide Plat	57,869 18	7,410 00	9,960 64	10,000 00
" Farran's Point	346,956 54			
Total	3,899,877 31	82,205 60	280,628 57	202,312 36
GENERAL ON CANALS.				
Dredge vessels, Lachine				2,802 92
" Rideau				5,960 24
Miscellaneous		100 00	8,990 36	4,444 71
Salaries and contingencies, canal officers			30,744 81	
Sunday labour			13,907 25	
Surveys and inspections		1,218 79		
Total		1,318 79	53,642 42	13,207 87
RAILWAYS.				
Canadian Pacific	8,418 53			
Crow's Nest Pass		2,234 68		
Intercolonial	1,081,929 94	210,000 00	3,465,686 21	
Prince Edward Island	22,000 00		218,053 01	
Windsor Branch			12,873 09	
Total	1,112,348 47	212,234 68	3,696,612 31	
GENERAL ON RAILWAYS.				
Exploratory survey to Klondike		39,469 97		
" " Stikine River and ocean port, B.C.		16,482 95		
Railway statistics		113 85		
Railway subsidies		*3,014,620 05		
Carried forward		3,070,686 82		

* This amount does not include annual payment of $183,600 to the Atlantic and North-west Railway Company.

STATEMENT showing the amount expended by the Department of Railways and Canals, &c.—*Concluded.*

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	
			Staff.	Repairs.
	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward		3,070,686 82		
GENERAL ON RAILWAYS—*Concluded.*				
Repairs to Governor General's car, "Victoria"		2,500 00		
Reporting evidence before Railway Committee of the Privy Council		199 30		
Subscription to Railway Congress, Brussels		97 33		
Surveys and inspections		7,534 46		
To defray expenses gathering information in reference to a railway commission		608 00		
Total		3,081,625 91		
MISCELLANEOUS.				
Costs of litigation		1,174 92		
Salaries of engineers, draughtsmen, &c		18,949 96		
" extra clerks, &c.		1,960 31		
Total		22,085 19		
RECAPITULATION.				
Total on Canals	3,899,877 31	82,205 60	280,628 57	202,312 36
" " general		1,318 79	53,642 42	13,207 87
Total on Canals	3,899,877 31	83,524 39	334,270 99	215,520 23
Total on Railways	1,112,348 47	212,234 68	3,696,612 31	
" " general		3,081,625 91		
Total on Railways	1,112,348 47	3,293,860 59	3,696,612 31	
Grand Total, Railways and Canals, including Miscellaneous	5,012,225 78	3,399,470 17	4,030,883 30	215,520 23

Total amount expended, $12,658,099.48.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

No. 2.

STATEMENTS showing the amounts expended on Construction, Renewals, Ordinary Repairs and Working Staff of the Canals of the Dominion of Canada, up to June 30, 1899.

ST. PETER'S CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	156,523 32	.....	.....	.....
" since " "	1868	21,519 72	.....	.....	.....
" " " "	1869	70,719 80	.....	.....	.....
" " " "	1870	.....	46,193 57	.....	.....
" " " "	1871	.....	.....	225 36	555 78
" " " "	1872	.....	.....	280 00	6,122 07
" " " "	1873	.....	.....	343 32	6,539 58
" " " "	1874	.....	.....	725 93	1,558 57
" " " "	1875	20 97	.....	560 00	889 35
" " " "	1876	11,125 00	.....	641 55	.....
" " " "	1877	63,330 18	.....	600 00	17 45
" " " "	1878	26,511 51	.....	600 00	.....
" " " "	1879	107,337 75	.....	631 50	.....
" " " "	1880	80,120 54	.....	400 00	.....
" " " "	1881	69,434 76	.....	959 58	.....
" " " "	1882	484 00	.....	1,920 54	200 63
" " " "	1883	.....	.....	2,089 19	232 42
" " " "	1884	2,471 40	.....	2,601 47	367 85
" " " "	1885	16,820 15	.....	1,929 11	183 11
" " " "	1886	2,316 85	.....	2,360 67	297 81
" " " "	1887	1,087 75	750 00	2,777 13	343 23
" " " "	1888	.....	.....	3,217 77	1,588 40
" " " "	1889	.....	500 00	3,085 29	353 38
" " " "	1890	.....	.....	3,110 15	255 34
" " " "	1891	972 65	510 53	3,255 30	312 02
" " " "	1892	14,387 00	30,936 82	3,007 70	1,461 24
" " " "	1893	811 59	9,987 78	2,938 15	1,856 30
" " " "	1894	437 05	3,852 21	2,935 94	1,986 70
" " " "	1895	868 44	26,222 46	2,499 81	353 55
" " " "	1896	1,455 21	16,743 64	2,182 04	260 90
" " " "	1897	.....	.....	2,728 38	1 20
" " " "	1898	.....	111 70	2,785 25	453 85
" " " "	1899	.....	.....	2,819 86	456 61
		648,755 64			
LESS—Refunds of previous years	.....	208 50			
Total	.....	*648,547 14	135,808 71	54,210 99	26,647 34

*Expenditure as above ..... $ 648,547 14
Less expenditure prior to Confederation 156,523 32

Agreeing with Public Accounts, 1899, page xvi..... $ 492,023 82

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

BAIE VERTE CANAL.

——	Year ending June 30.	Capital.	Income.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since " "	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		17,929 34
" " " "	1872		6,399 41
" " " "	1873		14,943 83
" " " "	1874		4,018 90
" " " "	1875		443 00
" " " "	1876		110 75
" " " "	1877		22 30
" " " "	1878		
" " " "	1879		
" " " "	1880		
" " " "	1881		520 00
" " " "	1882		
" " " "	1883		
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" " " "	1897		
" " " "	1898		
" " " "	1899		
Total			44,387 53

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

LACHINE CANAL.

——	Year ending June 30.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Expenditure by Imperial Government	....	40,000 00				
Government expenditure prior to Confederation	....	2,547,532 85				
Government expenditure since Confederation	1868			1,852 70	13,742 05	10,431 51
" "	1869	2,000 00			14,209 02	12,085 84
Cost of original construction and enlargement of 1843 to 1848			2,589,532 85			
Expenditure by Dominion Government	1870				15,834 49	13,302 39
" "	1871			12,231 40	17,478 52	15,093 25
" "	1872	36,708 15			16,076 93	12,334 69
" "	1873	7,824 28		35,158 21	23,601 03	34,300 60
" "	1874	158,618 35			25,811 07	22,828 66
" "	1875	197,420 52			28,592 01	30,057 34
" "	1876	327,769 39			33,797 73	29,103 65
" "	1877	1,439,375 73			33,148 86	19,824 33
" "	1878	1,484,619 63			39,062 97	13,646 41
" "	1879	958,053 30			42,338 84	12,400 78
" "	1880	369,566 74			38,950 90	10,223 62
" "	1881	292,165 51			39,027 99	19,888 33
" "	1882	252,821 33		2,978 66	41,158 90	17,116 46
" "	1883	396,496 96		1,859 68	45,554 91	18,199 59
" "	1884	188,266 18			48,624 51	19,683 24
" "	1885	111,215 23			49,004 85	20,199 78
" "	1886	210,509 42			50,969 10	19,199 18
" "	1887	28,772 52		12,981 59	53,113 97	22,567 81
" "	1888	19,414 34		7,996 38	52,229 61	19,999 64
" "	1889	76,032 96		972 71	54,110 67	22,957 71
" "	1890	7,448 03		8,238 46	53,114 34	22,999 38
" "	1891	217 53		16,155 75	50,721 69	36,292 98
" "	1892	87,852 35		27,480 80	57,729 37	67,499 62
" "	1893	445,983 21		50,937 40	53,185 00	51,616 79
" "	1894	64,345 14		15,856 74	60,174 03	40,939 70
" "	1895	189,944 36		32,405 20	56,337 44	25,891 45
" "	1896	184,998 25		8,193 15	58,342 96	24,950 20
" "	1897	282,052 48		14,664 21	57,533 20	25,820 73
" "	1898	216,717 44		819 62	57,282 50	33,391 92
" "	1899	162,351 83		3,103 99	55,990 00	35,776 90
Cost of enlargement			8,197,561 16			
Total			10,787,094 01	253,886 65	1,331,849 46	780,624 48

Total expenditure on capital account as above		$ 10,787,094 01
Less charged to St. Lawrence River and Canals, see page 9	$2,950,104 15	
Less expenditure by Imperial Government	40,000 00	
		2,990,104 15
Agreeing with Public Accounts balance sheet, 1899, page xvi		$ 7,796,989 86

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

BEAUHARNOIS CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
			$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		1,611,424 11			
" since " "	1868		63,193 75	9,349 99	6,216 98
" " " "	1869		55 00	9,626 99	6,498 57
" " " "	1870		27 50	10,117 57	6,384 81
" " " "	1871			12,316 53	5,722 36
" " " "	1872		27 50	11,792 46	15,733 38
" " " "	1873		5,122 50	12,210 73	9,882 06
" " " "	1874		26 00	15,392 51	10,990 56
" " " "	1875		36 00	14,399 32	12,253 01
" " " "	1876			14,465 86	17,170 83
" " " "	1877			14,377 63	15,207 36
" " " "	1878			14,383 37	9,861 05
" " " "	1879			15,015 86	10,370 71
" " " "	1880	266 15		15,362 61	8,997 34
" " " "	1881			17,659 93	10,770 67
" " " "	1882			18,804 53	20,813 86
" " " "	1883		6,727 44	18,287 77	15,826 71
" " " "	1884		3,277 98	19,107 38	16,232 61
" " " "	1885		7,999 79	18,960 40	14,637 70
" " " "	1886		8,491 80	19,228 90	14,356 00
" " " "	1887		3,633 57	18,867 45	14,999 88
" " " "	1888		14,411 97	19,325 05	14,285 98
" " " "	1889		10,993 52	20,019 11	14,982 54
" " " "	1890			19,847 42	14,999 20
" " " "	1891		17,085 68	18,886 86	12,537 39
" " " "	1892		1,696 23	20,050 01	14,999 80
" " " "	1893			20,348 34	14,107 11
" " " "	1894		6,547 72	20,574 53	13,903 46
" " " "	1895		27,982 93	20,128 59	12,299 49
" " " "	1896			20,725 47	15,050 85
" " " "	1897		9,813 15	21,012 64	14,862 98
" " " "	1898	25,000 00	5,799 34	20,650 00	16,164 92
" " " "	1899		1,000 00	20,613 22	13,463 01
Total		*1,636,690 26	193,949 37	542,209 13	414,583 18

*See page 9 for total cost of St. Lawrence River and Canals.

LEONARD SHANNON,
Accountant

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

ST. LAWRENCE RIVER AND CANALS, SURVEYS, &c.

	Year ending June 30.	Chargeable to Capital.	Chargeable to Income.
		$ cts.	$ cts.
Government expenditure prior to Confederation		18,442 85	98,378 46
" " since "	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873	33,241 69	
" " " "	1874	26,541 30	
" " " "	1875	20,611 36	
" " " "	1876	50,215 47	
" " " "	1877	47,377 31	
" " " "	1878	5,570 46	
" " " "	1879	9,265 77	
" " " "	1880	9,214 56	
" " " "	1881	6,927 96	
" " " "	1882	28,933 45	
" " " "	1883	44,874 31	
" " " "	1884	89,846 03	
" " " "	1885	115,110 17	
" " " "	1886	116,051 73	
" " " "	1887	74,437 31	
" " " "	1888	56,482 85	
" " " "	1889	18,493 92	
" " " "	1890	23,979 91	
" " " "	1891	35,137 25	
" " " "	1892	59,779 31	
" " " "	1893	52,643 39	
" " " "	1894	13,721 66	
" " " "	1895	182,775 75	
" " " "	1896	7,457 05	
" " " "	1897	12,347 31	
" " " "	1898	211,537 76	
" " " "	1899	513,775 97	
Total		1,884,793 86	98,378 46

ST. LAWRENCE RIVER AND CANALS.

St. Lawrence River and Canals, as above	$ 1,884,793 86
Beauharnois Canal, see page 8	1,636,690 26
Cornwall Canal " " 12	6,563,008 00
Williamsburg Canals " " 14	7,170,592 26
Lake St. Louis " " 10	250,066 48
Soulanges Canal " " 26	5,098,259 83
Lachine Canal, from prior to Confederation to June 30, 1875, see page 7	2,950,104 15
Lake St. Francis, see page 11	26,530 00
Agreeing with Public Accounts Balance Sheet, 1899, page xvi	$25,580,044 84

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

LAKE ST. LOUIS.

—	Year ending June 30.	Chargeable to Capital.	Chargeable to Income.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" " since "	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
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" " " "	1894		
" " " "	1895	4,753 14	
" " " "	1896	49,909 31	
" " " "	1897	73,300 41	
" " " "	1898	64,495 83	
" " " "	1899	57,607 79	
Total		*250,066 48	

* Included in total cost of St. Lawrence River and Canals, see page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

LAKE ST. FRANCIS.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.
		$ cts.	$ cts.
Government expenditure since Confederation	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
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" " " "	1897		
" " " "	1898	3,420 00	
" " " "	1899	23,110 00	
Total		*26,530 60	

* Included in total cost of St. Lawrence River and Canals, see page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CORNWALL CANAL.

—	Year ending June 30.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		1,933,152 69				
Government expenditure since Confederation	1868			2,786 00	11,244 47	3,774 18
" "	1869	10,692 04			10,347 91	3,859 14
" "	1870			17,780 05	10,368 16	7,145 42
" "	1871			7 50	11,848 39	8,891 61
" "	1872			10,000 21	10,594 30	8,163 70
" "	1873			1,011 75	13,042 25	12,467 65
" "	1874				13,405 20	7,610 70
" "	1875	1,780 00			13,351 91	7,097 34
Cost of original construction			1,945,624 73			
Expenditure by Dominion Government	1876				13,320 61	6,423 67
" "	1877	49,211 37			13,375 70	6,440 54
" "	1878	145,015 45			13,825 50	4,935 21
" "	1879	143,092 05			13,817 96	4,983 15
" "	1880	109,454 95			14,440 33	9,735 76
" "	1881	53,948 14			15,173 60	5,524 10
" "	1882	44,587 61			15,052 20	6,634 62
" "	1883	21,728 93			18,283 67	8,361 71
" "	1884	22,018 13			18,475 48	9,007 73
" "	1885	62,034 90		16,298 96	15,988 96	12,368 51
" "	1886	57,820 83		6,960 95	15,994 80	11,832 83
" "	1887	46,966 43			17,520 54	12,100 29
" "	1888	67,945 74			16,938 54	13,942 64
" "	1889	163,993 85			17,890 55	58,205 26
" "	1890	365,038 01		2,000 00	17,063 49	12,758 18
" "	1891	599,001 85		1,459 98	16,077 72	9,830 05
" "	1892	398,555 25		2,345 26	15,596 66	9,864 36
" "	1893	352,536 13			15,173 01	9,668 14
" "	1894	404,990 22			15,344 02	7,733 54
" "	1895	450,689 65		21,497 74	15,414 56	13,053 55
" "	1896	448,408 31		2,175 00	15,472 26	25,259 56
" "	1897	438,487 51			15,540 43	16,438 32
" "	1898	133,208 96			15,011 50	15,431 02
" "	1899	37,649 00		15,960 80	16,000 00	14,623 90
Cost of enlargement			4,617,383 27			
Total			*6,563,008 00	100,284 20	460,994 68	364,166 38

* Included in total cost of St. Lawrence River and Canals, see page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Continued.*

WILLIAMSBURG CANALS.

	Year ending June 30.	Capital.				Renewals Chargeable to Income.	Staff.	Repairs.
		Farran's Point.	Galops.	Rapide Plat.	Total.			
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation being amount of original construction					1,320,655 54			
Government expenditure since Confederation	1868						5,745 97	6,442 41
" " "	1869						5,769 81	5,670 88
" " "	1870						5,573 13	6,546 16
" " "	1871						6,382 17	5,308 41
" " "	1872					1,077 00	5,542 94	3,230 07
" " "	1873						6,424 49	7,347 75
" " "	1874						6,857 19	7,395 92
" " "	1875						6,547 62	4,110 29
" " "	1876						7,418 39	11,690 98
" " "	1877						7,388 08	10,053 61
" " "	1878						7,430 11	4,449 78
" " "	1879						7,517 20	3,549 71
" " "	1880						7,590 15	3,999 77
" " "	1881						7,572 35	5,020 73
" " "	1882						7,589 44	7,447 69
" " "	1883				13 19		7,423 48	7,299 39
" " "	1884				2,473 44		7,757 04	7,349 37
" " "	1885		70,764 07	32,473 05	103,237 12		7,696 67	8,198 03
" " "	1886		78,014 92	71,820 79	149,835 71		7,671 54	7,847 05
" " "	1887		32,862 02	82,990 98	115,853 00		7,635 54	7,904 76
" " "	1888		16,628 95	53,499 34	70,128 29	1,613 67	7,646 79	8,190 13
" " "	1889		37,661 15	22,206 11	59,867 26		7,485 28	8,794 61
" " "	1890		126,417 42	12,660 95	139,078 37		8,954 53	8,191 69
" " "	1891	2,853 76	172,779 88	55,036 96	230,670 60		8,678 25	7,987 40
" " "	1892		218,511 17	158,034 15	376,545 32	797 83	9,458 33	8,551 32
" " "	1893		154,524 01	217,669 28	372,193 29	3,675 00	8,676 03	8,347 97
" " "	1894		223,992 81	274,397 42	498,390 23		10,230 09	7,029 95
" " "	1895		118,464 53	228,892 70	347,357 23	13,720 36	9,675 09	7,371 37

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Concluded.*

WILLIAMSBURG CANALS—*Concluded.*

——	Year ending June 30.	Capital.				Renewals Chargeable to Income.	Staff.	Repairs.
		Farran's Point.	Galops.	Rapide Plat.	Total.			
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1896	4,980 00	150,744 16	286,396 96	442,121 12	8,607 04	9,588 51	9,036 00
" " "	1897	.....	262,795 78	205,480 55	468,274 33	3,880 76	8,697 54	8,210 71
" " "	1898	231,321 44	734,492 07	116,072 55	1,081,886 06	.....	10,708 66	8,032 84
" " "	1899	346,956 54	987,186 44	57,869 18	1,392,012 16	7,410 00	9,960 64	10,000 00
Total.....	...	586,111 74	3,385,837 38	1,875,500 97	*7,170,592 26	40,781 66	249,293 05	230,606 75

* Original construction..... $ 1,320,655 54
Cost of enlargement... . ... 5,849,936 72

Total..... .... $ 7,170,592 26

Included in total cost of St. Lawrence River and Canals, page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Con.*

WELLAND CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government		222,220 00			
Government expenditure prior to Confederation		7,416,019 83			
" since "	1868	12,097 84		37,679 05	38,852 96
" " "	1869	43,486 36		39,060 61	50,773 03
" " "	1870		22,173 72	40,340 45	65,009 19
" " "	1871		48,569 10	42,383 33	53,381 02
" " "	1872	53,680 32	6,022 44	37,085 37	50,276 90
" " "	1873	82,282 20	47,876 27	45,382 99	66,550 73
" " "	1874	746,420 61		50,966 48	103,666 99
" " "	1875	1,047,119 91		52,595 00	88,539 99
" " "	1876	1,569,478 19	700 00	57,623 31	81,376 12
" " "	1877	2,199,962 61		59,963 47	49,783 93
" " "	1878	2,138,392 99		60,138 59	66,393 53
" " "	1879	1,552,697 41		59,942 23	56,755 57
" " "	1880	1,252,924 75		63,198 10	76,535 25
" " "	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
" " "	1882	603,402 17	13,664 80	74,641 51	84,374 97
" " "	1883	549,433 29	5,979 03	109,207 21	72,707 62
" " "	1884	432,336 21		113,276 87	90,926 97
" " "	1885	463,505 38	6,150 21	112,670 00	91,534 66
" " "	1886	215,380 75	1,359 00	111,660 22	69,507 48
" " "	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
" " "	1888	429,720 94	10,740 86	110,806 01	86,518 97
" " "	1889	225,910 21	43,803 80	113,587 05	77,547 77
" " "	1890	117,633 22	51,648 28	109,202 02	72,686 19
" " "	1891	36,371 03	19,767 73	107,662 63	82,548 30
" " "	1892	29,541 21	9,008 80	104,673 73	73,771 87
" " "	1893	8,259 94	25,103 13	104,926 73	65,016 84
" " "	1894	1,571 78	13,430 20	102,018 80	53,053 71
" " "	1895	3,809 35	24,245 02	90,438 07	48,270 94
" " "	1896	1,677 67	18,768 99	87,988 11	62,542 64
" " "	1897	2,282 35	22,283 06	88,095 20	41,247 81
" " "	1898		34,803 25	84,806 54	59,571 66
" " "	1899		30,099 84	86,110 88	56,270 60
Total		*23,771,635 76	466,619 39	2,523,900 29	2,182,684 54

*Total expenditure as above	$ 23,771,635 76
Less expenditure by Imperial Government	222,220 00
Agreeing with Public Accounts Balance Sheet, 1899, page xvi.	$ 23,549,415 76

Original cost of construction, including first enlargement	$ 7,693,824 03
Enlargement, including new Welland Canal	16,077,811 73
Total expenditure as above	$ 23,771,635 76

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

STE. ANNE'S LOCK AND CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		134,456 51			
" since "	1868			778 16	432 47
" " "	1869			1,062 96	1,873 51
" " "	1870			1,136 54	1,280 36
" " "	1871			1,285 84	1,539 02
" " "	1872		1,939 46	1,106 80	1,393 63
" " "	1873		540 11	2,199 64	1,264 40
" " "	1874	12,753 27		2,614 90	7,208 63
" " "	1875	32,627 71		1,859 20	4,506 68
" " "	1876	24,935 85		1,952 14	4,033 72
" " "	1877	30,003 08		1,982 65	1,756 93
" " "	1878	14,618 85		2,057 32	541 95
" " "	1879	22,113 02		2,202 03	3,259 70
" " "	1880	3,054 68		2,152 57	1,704 71
" " "	1881	69,042 76		2,553 02	3,257 92
" " "	1882	193,158 36		2,611 30	2,343 99
" " "	1883	172,959 95		2,569 86	3,448 83
" " "	1884	142,006 25		2,775 32	2,725 49
" " "	1885	93,679 57		2,618 60	4,042 04
" " "	1886	129,681 67		2,611 90	5,803 01
" " "	1887	45,276 08	6,054 10	2,537 41	1,499 96
" " "	1888	18,910 55	1,372 59	2,505 61	1,380 75
" " "	1889	24,786 33		2,569 22	1,730 79
" " "	1890	6,151 14		2,571 04	1,525 51
" " "	1891		8,173 69	2,505 69	1,503 56
" " "	1892		25,471 61	2,571 28	1,666 21
" " "	1893		6,521 88	2,581 08	2,800 03
" " "	1894		3,497 56	2,640 00	2,799 63
" " "	1895		3,694 33	2,508 14	3,025 91
" " "	1896			2,495 54	4,993 89
" " "	1897			2,357 51	1,688 12
" " "	1898			1,904 10	1,699 44
" " "	1899			1,920 12	1,997 96
Total		*1,170,215 63	57,265 33	69,797 49	70,728 75

* Included in total cost of Ottawa River Works, see page 19.

Original construction	$ 134,456 51
Enlargement, including new lock	1,035,759 12
	$ 1,170,215 63

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CARILLON AND GRENVILLE CANAL.

—	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government		*			
Government expenditure prior to Confederation		63,053 64			
" since " "	1868		19,817 22	6,301 88	8,911 28
" " " "	1869			6,549 38	10,157 42
" " " "	1870		4,167 96	6,617 81	9,852 09
" " " "	1871		23,119 37	8,676 90	8,218 24
" " " "	1872	165,257 28		8,324 51	17,235 31
" " " "	1873	133,199 10	3,051 38	10,068 28	8,781 50
" " " "	1874	245,258 38		10,710 88	10,605 82
" " " "	1875	339,864 76		10,378 57	18,520 44
" " " "	1876	326,203 16		10,764 38	11,475 96
" " " "	1877	245,738 04		11,050 27	10,304 06
" " " "	1878	22,676 20		11,401 30	5,082 72
" " " "	1879	243,141 24		11,501 52	7,629 98
" " " "	1880	281,514 27		11,959 14	7,625 54
" " " "	1881	336,707 53		13,059 18	8,076 91
" " " "	1882	433,084 39		14,387 49	7,582 68
" " " "	1883	433,575 10		17,479 58	8,310 02
" " " "	1884	399,267 16		17,393 91	7,918 42
" " " "	1885	157,187 72		19,702 30	10,429 26
" " " "	1886	104,973 24	75 00	20,597 82	9,303 31
" " " "	1887	20,747 11		20,011 36	10,554 41
" " " "	1888	38,996 29		21,531 12	10,036 62
" " " "	1889	298 17		22,098 88	10,135 66
" " " "	1890	17 58	4,526 61	15,896 16	7,582 38
" " " "	1891		4,395 25	21,230 22	10,796 68
" " " "	1892	34,585 64	15,036 48	17,458 69	8,620 15
" " " "	1893	207 00	42,298 74	16,762 71	10,669 28
" " " "	1894	385 55	20,034 94	14,144 98	11,620 09
" " " "	1895		5,963 76	15,453 21	12,303 25
" " " "	1896	3,850 31		13,995 69	12,161 10
" " " "	1897	1,908 44	4,939 20	13,780 29	11,607 95
" " " "	1898	82,663 37	5,082 03	11,697 81	10,993 61
" " " "	1899	39,999 37		11,919 27	11,478 88
Total		†4,154,360 04	152,507 94	442,905 19	324,581 02

* Expenditure not given—records relating to same were kept in Ordnance Office at Montreal and were destroyed by fire in 1852.

† Included in total cost of Ottawa River Works, see page 19, cost of enlargement $4,091,306.40.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CULBUTE LOCK AND DAM.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1868				
" " " ..	1869				
" " " ..	1870				
" " " ..	1871				
" " " ..	1872				
" " " ..	1873		835 53		
" " " ..	1874		38,388 99		
" " " ..	1875	63,659 29			
" " " ..	1876	76,842 44			
" " " ..	1877	56,081 87			
" " " ..	1878	5,933 53			
" " " ..	1879	20,694 19			
" " " ..	1880	16,688 20		202 50	259 31
" " " ..	1881	4,721 62		962 85	
" " " ..	1882	29,567 15		790 00	162 33
" " " ..	1883	14,249 60		695 00	288 99
" " " ..	1884	8,151 16		733 50	
" " " ..	1885	19,071 76		730 00	572 75
" " " ..	1886	26,385 27		730 00	2,396 14
" " " ..	1887	7,760 88		730 00	967 33
" " " ..	1888	7,573 99		739 50	730 60
" " " .	1889	17,112 01		1,050 00	116 53
" " " ..	1890	2,818 35		747 83	
" " " ..	1891	2,183 15	9,122 05	745 25	499 91
" " " ..	1892		1,546 25	736 00	
" " " ..	1893		1,420 65	749 00	13 55
" " " ..	1894		2,540 14	730 00	494 43
" " " ..	1895		1,475 26	436 05	434 28
" " " ..	1896				
" " " ..	1897				
" " " ..	1898				100 00
" " " ..	1899				
Total.....	.....	*379,494 46	55,328 87	11,507 48	7,036 15

* Included in total cost of Ottawa River Works, see page 19.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

RIDEAU CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government	....	3,911,701 47	.....	.....	.....
Government expenditure prior to Confederation	.....	153,062 60	.....	.....	.....
" since " "	1868	166 50	7,298 12	18,397 28	16,475 21
" " " "	1869	.....	.....	19,250 71	13,140 77
" " " "	1870	.....	13 16	20,022 37	19,469 33
" " " "	1871	.....	11,732 98	22,814 58	18,120 52
" " " "	1872	.....	4,967 50	22,139 48	14,005 32
" " " "	1873	.....	18,070 97	22,841 51	26,074 49
" " " "	1874	.....	5,793 16	26,815 44	22,957 40
" " " "	1875	9,310 85	.....	26,553 37	19,699 81
" " " "	1876	2,163 96	.....	26,430 77	14,428 25
" " " "	1877	214 11	.....	25,959 56	14,198 18
" " " "	1878	.....	.....	26,651 51	11,034 22
" " " "	1879	7,703 88	.....	26,042 52	7,134 55
" " " "	1880	.....	.....	26,463 88	11,434 05
" " " "	1881	.....	133 50	26,024 71	8,627 00
" " " "	1882	.....	.....	26,915 29	13,860 28
" " " "	1883	.....	70 65	27 322 81	23,524 84
" " " "	1884	.....	4,597 50	26,938 95	19,245 02
" " " "	1885	.....	2,098 76	26,971 32	18,189 55
" " " "	1886	.....	550 00	27,045 95	35,648 04
" " " "	1887	.....	20,823 96	29,440 46	18,565 34
" " " "	1888	.....	18,889 48	33,458 83	25,478 87
" " " "	1889	.....	6,665 22	33,801 77	18,106 36
" " " "	1890	.....	21,124 10	34,270 57	18,025 21
" " " "	1891	.....	20,967 25	34,641 98	21,537 56
" " " "	1892	.....	31,363 23	35,500 82	21,507 16
" " " "	1893	.....	24,274 71	35,022 49	18,789 50
" " " "	1894	.....	14,485 11	34,943 35	16,939 47
" " " "	1895	.....	31,559 48	33,827 08	19,897 32
" " " "	1896	.....	21,452 29	34,052 77	30,196 38
" " " "	1897	10,720 50	19,079 11	31,461 55	29,535 94
" " " "	1898	.....	13,608 39	30,759 05	26,599 93
" " " "	1899	.....	700 29	30,751 20	28,199 49
Total	....	*4,095,043 87	300,318 92	903,533 93	620,645 36

* Ottawa River Works.

Ste. Anne's Lock, page 16		$ 1,170,215 63
Carillon and Grenville Canals, page 17		1,154,360 04
Culbute Canal, page 18		379,494 46
Rideau Canal as above	$ 4,095,043 87	
Less expenditure by Imperial Government	3,911,701 47	
		183,342 40
Total Ottawa Works (Capital)		$ 5,887,412 53
Add expenditure on slides and booms prior to Confederation	$ 719,247 13	
Since Confederation	7,243 60	
Add expenditure on Chats Canals prior to Confederation	482,950 81	
Add expenditure in 1881, charged to Miscellaneous, *see* page 229, part ii Public Accounts	1,136 84	
Add amount transferred, *see* page xxxvi Public Accounts, Balance sheet, 1881	233,555 85	
		1,444,134 23
Less expenditure prior to Confederation, transferred to Income Accounts	$ 320,618 28	$ 7,331,546 76
Less expenditure, 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous	165,257 28	
		485,875 56
Agreeing with Balance Sheet, Public Accounts, 1899, page xvi		$ 6,845,671 20

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

LEONARD SHANNON,
Accountant.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

ST. OURS LOCK.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	....	121,537 65	....	....	....
" since " "	1868	....	....	1,532 75	753 74
" " " "	1869	....	....	1,755 15	1,399 18
" " " "	1870	....	....	1,458 09	1,006 22
" " " "	1871	....	....	1,414 48	1,210 98
" " " "	1872	....	....	1,565 80	1,263 19
" " " "	1873	....	....	2,076 50	1,575 10
" " " "	1874	....	....	2,219 13	2,363 42
" " " "	1875	....	....	1,362 22	1,245 69
" " " "	1876	....	....	1,403 92	1,601 71
" " " "	1877	....	....	1,533 40	750 80
" " " "	1878	....	....	1,556 65	283 77
" " " "	1879	....	....	1,581 55	456 07
" " " "	1880	....	....	1,614 01	705 54
" " " "	1881	....	....	1,741 97	1,299 77
" " " "	1882	....	....	2,002 71	1,902 41
" " " "	1883	....	17,230 32	2,361 65	2,188 08
" " " "	1884	....	5,279 17	2,315 37	1,494 99
" " " "	1885	....	4,700 64	2,271 57	3,652 63
" " " "	1886	....	....	2,311 70	4,143 47
" " " "	1887	....	....	2,175 37	5,864 78
" " " "	1888	....	....	2,216 04	2,801 17
" " " "	1889	....	17,964 45	2,421 14	2,002 63
" " " "	1890	....	24,571 96	2,138 40	1,935 44
" " " "	1891	....	21,696 74	2,011 08	4,460 16
" " " "	1892	....	3,585 34	2,168 44	1,944 33
" " " "	1893	....	....	2,136 66	1,994 34
" " " "	1894	....	....	2,216 68	924 55
" " " "	1895	....	....	2,161 63	915 50
" " " "	1896	....	....	2,094 91	1,678 49
" " " "	1897	....	....	2,135 60	707 06
" " " "	1898	....	....	2,049 67	692 04
" " " "	1899	....	....	2,244 12	1,494 93
Total	....	*121,537 65	95,028 62	62,248 36	56,712 18

* Included in total cost of Chambly Canal and River Richelieu, see page 21.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CHAMBLY CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	..	634,711 76	.....	.....	.....
" since " "	1868	.....	.....	8,312 90	9,355 70
" " " "	1869	.....	.....	8,437 22	13,120 97
" " " "	1870	.....	.....	8,934 41	20,180 73
" " " "	1871	.....	2,839 85	10,214 71	22,426 33
" " " "	1872	.....	1,906 40	9,628 50	22,327 99
" " " "	1873	.....	759 00	10,390 44	11,789 27
" " " "	1874	.....	2,810 00	11,675 67	16,427 19
" " " "	1875	2,415 00	.....	12,201 99	16,306 91
" " " "	1876	.....	.....	10,593 14	13,273 56
" " " "	1877	80 00	.....	10,281 78	10,111 32
" " " "	1878	.....	.....	10,413 99	6,022 96
" " " "	1879	.....	.....	11,301 53	8,809 77
" " " "	1880	.....	.....	11,516 22	12,377 74
" " " "	1881	.....	.....	13,950 47	20,705 17
" " " "	1882	.....	31,796 41	16,686 78	16,843 60
" " " "	1883	.....	21,332 36	15,904 38	15,182 24
" " " "	1884	.....	41,640 77	18,448 85	12,003 34
" " " "	1885	.....	21,049 23	18,378 55	13,046 95
" " " "	1886	.....	14,547 27	19,501 28	11,999 77
" " " "	1887	.....	17,911 17	19,053 62	20,071 37
" " " "	1888	.....	65,536 64	20,073 60	11,823 74
" " " "	1889	.....	51,437 87	19,679 22	19,392 18
" " " "	1890	.....	23,221 48	19,655 38	14,399 93
" " " "	1891	.....	43,344 41	19,204 76	11,399 93
" " " "	1892	.....	38,353 99	19,665 22	12,976 48
" " " "	1893	.....	21,127 65	19,310 29	12,451 63
" " " "	1894	.....	8,567 78	19,040 93	11,920 74
" " " "	1895	.....	6,147 63	19,325 49	11,779 12
" " " "	1896	.....	3,694 63	19,349 65	11,801 12
" " " "	1897	.....	12,665 88	18,754 17	13,128 55
" " " "	1898	.....	13,184 68	17,992 90	12,466 51
" " " "	1899	.....	15,255 42	18,336 50	11,997 51
		637,206 76			
Less proceeds of sale of piece of land...		150 00			
Total		*637,056 76	459,130 52	486,214 54	447,919 72

* Chambly Canal and River Richelieu.

Chambly Canal as above		$ 637,056 76
St. Ours Lock, see page 20		121,537 65
		$ 758,594 41
Less amount deducted at Confederation, see Public Accounts, 1868, part i, page 9.		
Government expenditure prior to Confederation.		
Chambly Canal as above	$ 634,711 76	
St. Ours Lock, page 20	121,537 65	
	$ 756,249 41	
Returned as an asset in Public Accounts, 1868.	433,807 83	
		$ 322,441 58
Agreeing with Public Accounts, 1899, page xvi		$ 436,152 83

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

MURRAY CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	.....	.....	.....	.....
" since " ..	1868	.....	400 00	.....	.....
" " " ..	1869	.....	.....	.....	.....
" " " ..	1870	.....	.....	.....	.....
" " " ..	1871	.....	.....	.....	.....
" " " ..	1872	.....	.....	.....	.....
" " " ..	1873	.....	.....	.....	.....
" " " ..	1874	.....	.....	.....	.....
" " " ..	1875	.....	.....	.....	.....
" " " ..	1876	.....	.....	.....	.....
" " " ..	1877	.....	.....	.....	.....
" " " ..	1878	.....	.....	.....	.....
" " " ..	1879	.....	.....	.....	.....
" " " ..	1880	.....	.....	.....	.....
" " " ..	1881	.....	.....	.....	.....
" " " ..	1882	7,135 63	.....	.....	.....
" " " ..	1883	84,071 68	.....	.....	.....
" " " ..	1884	118,187 43	.....	.....	.....
" " " ..	1885	148,902 66	.....	.....	.....
" " " ..	1886	179,704 52	.....	.....	.....
" " " ..	1887	142,563 66	.....	.....	.....
" " " ..	1888	146,754 37	.....	.....	.....
" " " ..	1889	215.326 46	.....	.....	.....
" " " ..	1890	106,760 35	.....	494 31	.....
" " " ..	1891	61,260 49	.....	5,137 03	173 53
" " " ..	1892	5,964 22	.....	5,803 48	3,505 15
" " " ..	1893	30,838 79	.....	5,499 62	5,341 34
" " " ..	1894	.....	.....	5,667 52	5,295 57
" " " ..	1895	.....	.....	5,354 97	5,063 49
" " " ..	1896	.....	.....	5,409 10	5,410 33
" " " ..	1897	.....	.....	5,526 87	3,966 41
" " " ..	1898	.....	.....	5,799 94	4,710 23
" " " ..	1899	.....	.....	5,073 70	3,533 68
Total	....	*1,247,470 26	400 00	49,766 54	36,999 73

* Agreeing with Public Accounts Balance Sheet, 1899, page xvi.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

TRENT CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		309,371 31			
" since " "	1868				
" " " "	1869				
" " " "	1870				
" " " "	1871				
" " " "	1872				
" " " "	1873				
" " " "	1874				
" " " "	1875				
" " " "	1876				
" " " "	1877				
" " " "	1878				
" " " "	1879				
" " " "	1880	561 50		1,188 92	3,568 89
" " " "	1881			2,489 93	2,233 50
" " " "	1882		5,836 51	2,011 92	8,115 50
" " " "	1883	40,767 16	9,303 66	2,235 50	3,047 42
" " " "	1884	120,393 91	6,198 57	2,208 64	5,264 35
" " " "	1885	121,382 84		3,303 87	4,653 50
" " " "	1886	75,103 30		1,639 75	5,917 88
" " " "	1887	179,541 63		1,938 08	6,008 88
" " " "	1888	114,879 35		1,770 29	5,151 42
" " " "	1889	47,592 13	29,677 92	3,242 05	5,935 94
" " " "	1890	58,644 50	11,522 65	3,450 99	730 55
" " " "	1891	9,826 49	3,164 81	3,803 66	4,888 98
" " " "	1892	4,457 28	6,506 97	3,695 85	4,721 85
" " " "	1893	5,962 47	10,838 90	3,739 86	2,087 17
" " " "	1894	3,412 32	20,403 93	3,785 47	4,988 59
" " " "	1895	53,907 70	21,143 41	4,184 18	3,374 49
" " " "	1896	392,976 08	6,185 75	4,349 34	3,329 97
" " " "	1897	486,575 70	13,880 37	4,965 39	3,497 90
" " " "	1898	351,273 31	8,991 54	5,034 60	4,998 80
" " " "	1899	166,611 49	6,179 79	5,048 72	6,454 49
Total		2,543,240 47	159,834 78	64,087 01	88,970 07

Total expenditure on Capital account as above		$ 2,543,240 47
LESS—Expenditure prior to Confederation	$ 309,371 31	
" Year 1880	561 50	
		309,932 81
Agreeing with Public Accounts Balance Sheet, 1899, page xvi.		$ 2,233,307 66

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

TAY CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation	1868				
" " "	1869				
" " "	1870				
" "	1871				
" " "	1872				
" " "	1873				
" " "	1874				
" " "	1875				
" " "	1876				
" " "	1877				
" " "	1878				
" " "	1879				
" " "	1880				
" " "	1881				
" " "	1882		748 65		
" " "	1883	4,831 80			
" " "	1884	50,878 12			
" " "	1885	92,473 97			
" " "	1886	65,561 51			
" " "	1887	49,617 92			
" " "	1888	54,166 57			
" " "	1889	89,486 18			
" " "	1890	22,226 23		*	*
" " "	1891	17,114 78		*	*
" " "	1892	29,771 64		*	*
" " "	1893			*	*
" " "	1894			*	*
" " "	1895			*	*
" " "	1896			*	*
" " "	1897			*	*
" " "	1898			*	*
" " "	1899			*	*
Total		†476,128 73	748 65	*	*

* Included in Rideau Canal.
† Agreeing with Public Accounts, 1899, page xvi.

Cost of Canal as above	$ 476,128 73
Paid in 1896-97 but charged as voted under Rideau Canal Capital—Final Estimate, Wm. Davis & Sons	10,720 50
Total cost of Tay Canal	$ 486,849 23

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

SAULT STE. MARIE CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872		949 35		
" " "	1873				
" " "	1874				
" " "	1875				
" " "	1876				
" " "	1877				
" " "	1878				
" " "	1879				
" " "	1880				
" " "	1881				
" " "	1882				
" " "	1883				
" " "	1884				
" " "	1885				
" " "	1886				
" " "	1887				
" " "	1888	8,145 06			
" " "	1889	34,018 95			
" " "	1890	176,568 55			
" " "	1891	325,336 33			
" " "	1892	341,474 31			
" " "	1893	589,801 25			
" " "	1894	1,316,529 29			
" " "	1895	466,151 50		3,432 73	
" " "	1896	189,986 59		16,074 70	2,650 17
" " "	1897	209,561 82		15,381 59	7,671 79
" " "	1898	21,004 56		14,389 92	8,172 09
" " "	1899	63,935 48		13,840 24	6,564 40
Total		*3,742,513 69	949 35	63,119 18	25,058 45

* Agreeing with Public Accounts, 1899, page xvi.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

SOULANGES CANAL.

——	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	...	.....	.....	.....	.....
" since " "	1868	.....	.....	.....	.....
" " " "	1869	.....	.....	.....	.....
" " " "	1870	.....	.....	.....	.....
" " " "	1871	.....	.....	.....	.....
" " " "	1872	.....	.....	.....	.....
" " " "	1873	.....	.....	.....	.....
" " " "	1874	.....	.....	.....	.....
" " " "	1875	.....	.....	.....	.....
" " " "	1876	.....	.....	.....	.....
" " " "	1877	.....	.....	.....	.....
" " " "	1878	.....	.....	.....	.....
" " " "	1879	.....	.....	.....	.....
" " " "	1880	.....	.....	.....	.....
" " " "	1881	.....	.....	.....	.....
" " " "	1882	.....	.....	.....	.....
" " " "	1883	.....	.....	.....	.....
" " " "	1884	.....	.....	.....	.....
" " " "	1885	.....	.....	.....	.....
" " " "	1886	.....	.....	.....	.....
" " " "	1887	.....	.....	.....	.....
" " " "	1888	.....	.....	.....	.....
" " " "	1889	.....	.....	.....	.....
" " " "	1890	.....	.....	.....	.....
" " " "	1891	.....	.....	.....	.....
" " " "	1892	54,235 76	.....	.....	.....
" " " "	1893	210,336 24	.....	.....	.....
" " " "	1894	723,380 95	.....	.....	.....
" " " "	1895	752,016 53	.....	.....	.....
" " " "	1896	535,939 07	.....	.....	.....
" " " "	1897	363,126 06	.....	.....	.....
" " " "	1898	1,016,401 00	.....	.....	.....
" " "	1899	1,442,824 22	.....	.....	.....
Total.....	.....	*5,098,259 83	.....	.....	.....

Included in total cost of St. Lawrence River and Canals, *see* part ii, page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

STATEMENT showing amount expended on Construction and Enlargement of Canals, to June 30, 1899.

Canal.	Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Peters	248,762 84	399,784 30	648,547 14
Lachine	2,589,532 85	8,197,561 16	10,787,094 01
Beauharnois	1,636,690 26		1,636,690 26
St. Lawrence River and Canals	18,442 85	1,866,351 01	1,884,793 86
Lake St. Louis		250,066 48	250,066 48
Lake St. Francis		26,530 00	26,530 00
Cornwall	1,945,624 73	4,617,383 27	6,563,008 00
Williamsburg: Farran's Point		586,111 74	7,170,592 26
Williamsburg: Galops		3,385,837 38	
Williamsburg: Rapide Plat		1,875,500 97	
Williamsburg: Williamsburg	1,320,655 54	2,486 63	
Welland	7,693,824 03	16,077,811 73	23,771,635 76
St. Anne's	134,456 51	1,035,759 12	1,170,215 63
*Carillon and Grenville	63,053 64	4,091,306 40	4,154,360 04
Culbute	379,494 46		379,494 46
Rideau	4,095,043 87		4,095,043 87
St. Ours	121,537 65		121,537 65
Chambly	637,056 76		637,056 76
Murray	1,247,470 26		1,247,470 26
Trent	2,543,240 47		2,543,240 47
Tay	476,128 73		476,128 73
Sault Ste. Marie	3,742,513 69		3,742,513 69
Soulanges	5,098,259 83		5,098,259 83
	33,991,788 97	42,412,490 19	76,404,279 16

*Construction by Imperial Government not included, records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

*RECAPITULATION—EXPENDITURE on Canals, also showing Revenue received.

——	Year ending June 30.	Capital.	Income.	Staff.	Repairs.	Revenue received.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation, including Imperial Government	.....	20,593,866 13	98,378 46	.....	.....	.....
Government expenditure since Confederation	1868	33,784 06	95,347 79	113,084 50	101,646 44	403,879 19
" "	1869	126,898 20	55 00	116,069 76	118,579 31	400,263 32
" "	1870	.....	90,355 96	120,403 02	150,176 70	414,687 02
" "	1871	.....	116,429 54	135,040 81	140,467 52	488,538 76
" "	1872	255,645 75	33,289 27	124,137 09	152,086 25	466,847 52
" "	1873	256,547 27	127,369 55	148,581 18	186,573 13	486,433 26
" "	1874	1,189,591 91	51,037 05	167,194 40	213,613 86	510,755 99
" "	1875	1,714,830 37	479 00	168,401 21	203,226 85	414,979 59
" "	1876	2,388,733 46	810 75	178,411 80	190,578 45	390,337 04
" "	1877	4,131,374 30	22 30	179,661 40	138,448 51	390,857 37
" "	1878	3,843,338 62	.....	187,521 31	122,251 60	373,814 17
" "	1879	3,064,098 61	.....	191,892 44	115,349 99	337,675 13
" "	1880	2,123,366 34	.....	195,039 33	147,167 52	341,598 14
" "	1881	2,075,891 65	7,246 69	197,573 62	154,653 63	361,558 17
" "	1882	1,593,174 09	55,025 03	224,572 61	187,399 02	325,231 54
" "	1883	1,763,001 97	62,503 14	269,415 01	178,617 86	361,604 01
" "	1884	1,577,295 42	60,993 99	280,657 29	192,219 38	372,561 69
" "	1885	1,504,621 47	58,297 59	280,226 20	201,708 47	321,289 47
" "	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
" "	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
" "	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
" "	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
" "	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
" "	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
" "	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
" "	1893	2,069,573 30	196,185 84	291,588 97	204,759 39	357,089 87
" "	1894	3,027,164 19	109,216 33	294,446 34	179,630 13	387,788 97
" "	1895	2,452,273 65	216,057 58	281,477 04	164,033 71	339,890 49
" "	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	339,538 72
" "	1897	2,341,016 16	101,205 74	287,970 36	178,385 47	384,780 53
" "	1898	3,207,249 79	82,400 55	280,872 44	203,478 86	407,652 81
" "	1899	3,899,877 31	82,205 60	280,628 57	202,312 36	369,044 38
Total	....	76,404,279 16	2,618,104 42	7,326,174 32	5,687,964 10	12,079,274 46

*This does not include expenditure which has been charged to Canals—General—but amounts expended on specified Canals.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

LEONARD SHANNON,
Accountant.

HYDRAULIC AND OTHER RENTS.

Balances due July 1, 1898.	Accrued during the Year ended June 30, 1899.	Totals.	—	Abatement.	Deposited to the Credit of the Receiver General.	Balance due June 30, 1899.	Totals.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
28,020 96	12,417 28	40,438 34	Welland Canal	178 93	8,996 35	31,263 06	40,438 34
781 00	708 00	1,489 00	Williamsburg Canal		95 00	1,394 00	1,489 00
2,372 50	5,170 00	7,542 50	Cornwall "		4,115 00	3,427 50	7,542 50
7,497 83	2,703 00	10,200 83	Beauharnois "		2,532 50	7,668 33	10,200 83
17,105 61	27,661 90	44,767 51	Lachine "		27,619 86	17,147 65	44,767 51
386 84	86 50	473 34	Chambly "	60 00	62 50	350 84	473 34
2,028 39	3,101 70	5,130 09	Rideau "	2 00	2,973 05	2,155 04	5,130 09
124 00	55 00	179 00	Trent Valley "		107 00	72 00	179 00
5 00	25 00	30 00	Sault Ste. Marie "		30 00		30 00
108 00	2,133 00	2,241 00	Carillon and Grenville Canal	3 00	128 00	2,100 00	2,241 00
4 00		4 00	Sundry Canals			4 00	4 00
58,434 13	54,061 48	112,495 61	Totals	243 93	46,659 26	65,592 42	112,495 61

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

CANALS, 1898-9.

Collectors of Canal Tolls in Account with Revenue.

Canal Revenue.				Total Canal Revenue Accrued.	Hydraulic and other Rents, &c.	Total.	Collection Divisions.	Deposits to the Credit of the Receiver General.		Total.	Cost of Staff, Repairs and Offices of Collection, Chargeable to Revenue.
Tolls.	Wharfage and Storage.	Fines.	Other Receipts.					On account, Canal Revenue.	On account, Hydraulic Rents.		
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
.....	.....	.....	.....	.....	.....	.....	*Welland Canal*.....	.....	.....	.....	146,978 23
96,779 29	.....	.....	38 58	96,817 87	964 50	97,782 37	Port Colborne	96,817 87	964 50	97,782 37	3,300 59
51,903 96	.....	35 00	9 70	51,948 66	1,000 10	52,948 76	Port Dalhousie.....	51,948 66	1,000 10	52,948 76	2,162 03
347 29	.....	.....	.....	347 29	200 00	547 29	Dunnville	347 29	200 00	547 29	781 00
479 69	.....	.....	.....	479 69	6,826 75	7,306 44	St. Catharines.....	479 69	6,826 75	7,306 44	211 75
54 16	.....	.....	.....	54 16	5 00	59 16	Chippawa	54 16	5 00	59 16	123 00
149,564 39	.....	35 00	48 28	149,647 67	8,996 35	158,644 02	.. Totals.....	149,647 67	8,996 35	158,644 02	153,556 60
.....	.....	.....	.....	.....	.....	.....	*St. Lawrence Canals*.....	.....	.....	.....	183,166 52
17,308 67	6 00	35 00	.....	17,349 67	2,532 50	19,882 17	Beauharnois.....	17,349 67	2,532 50	19,882 17	1,057 30
30,390 68	.....	5 00	.....	30,395 68	4,115 00	34,510 68	Cornwall	30,300 37	4,115 00	34,415 37	1,740 45
305 46	.....	25 00	.....	330 46	95 00	425 46	Cardinal..	330 46	95 00	425 46	492 21
2,578 56	10 05	.....	863 35	3,451 96	.....	3,451 96	Lachine	3,451 96	.....	3,451 96	2,246 52
28,516 13	2,343 84	82 00	12,690 80	43,632 77	27,619 86	71,252 63	Montreal	43,632 77	27,619 86	71,252 63	7,890 36
12,551 96	.....	.....	.....	12,551 96	.....	12,551 96	Kingston	12,551 96	.....	12,551 96	681 80
91,651 46	2,359 89	147 00	13,554 15	107,712 50	34,362 36	142,074 86	.. Totals..	107,617 19	34,362 36	141,979 55	197,275 16
.....	.....	.....	.....	.....	.....	.....	*Chambly Canal*.....	.....	.....	.....	34,073 06
7,964 32	.....	.....	.....	7,964 32	.....	7,964 32	Chambly.	7,964 32	.....	7,964 32	1,556 50
12,008 04	.....	.....	.....	12,008 04	62 50	12,070 54	St. Johns	12,008 04	62 50	12,070 54	1,705 48
587 23	.....	.....	.....	587 23	.....	587 23	St. Ours	587 23	.....	587 23	621 75
20,559 59	.....	.....	.....	20,559 59	62 50	20,622 09	.... Totals	20,559 59	62 50	20,622 09	37,956 79
.....	.....	.....	.....	.....	.....	.....	*Ottawa Canals*	.....	.....	.....	27,503 88
29,993 38	.....	.....	.....	29,993 38	.....	29,993 38	Ottawa.....	29,993 38	.....	29,993 38	.....
5,795 32	.....	.....	8 00	5,803 32	105 00	5,908 32	Grenville.	5,803 32	105 00	5,908 32	455 85
46 09	.....	.....	.....	46 09	23 00	69 09	Carillon.	46 09	23 00	69 09	627 65
1,102 31	.....	.....	.....	1,102 31	.....	1,102 31	St. Anne's Lock..	1,102 31	.....	1,102 31	688 04
36,937 10	.....	.....	8 00	36,945 10	128 00	37,073 10	.....Totals.....	36,945 10	128 00	37,073 10	29,275 42

											58,950 69
3,651 22	9 20		220 00	3,880 42	2,677 70	6,558 12	Ottawa	3,880 42	2,677 70	6,558 12	2,394 18
915 49			15 00	930 49	230 00	1,160 49	Kingston Mills	930 49	230 00	1,160 49	449 08
595 45			46 32	641 77	65 35	707 12	Smith's Falls	641 77	65 35	707 12	334 13
5,162 16	9 20		281 32	5,452 68	2,973 05	8,425 73	Totals	5,452 68	2,973 05	8,425 73	62,128 08
											3,276 47
2,747 15				2,747 15		2,747 15	*St. Peter's Canal*	2,747 15		2,747 15	132 05
2,747 15				2,747 15		2,747 15	Totals	2,747 15		2,747 15	3,408 52
											9,111 38
667 14				667 14		667 14	*Murray Canal* Brighton	667 14		667 14	384 70
667 14				667 14		667 14	Totals	667 14		667 14	9,496 08
											11,503 21
67 14				67 14		67 14	*Trent Valley Canal* Burleigh	67 14		67 14	
266 93			46 00	312 93		312 93	Bobcaygeon	312 93		312 93	
131 33				131 33	104 00	235 33	Fenelon Falls	131 33	104 00	235 33	
32 57				32 57		32 57	Hastings	32 57		32 57	10 00
355 72				355 72	3 00	358 72	Peterborough	355 72	3 00	358 72	29 66
95 58				95 58		95 58	Buckhorn	95 58		95 58	21 03
949 27			46 00	995 27	107 00	1,102 27	Totals	995 27	107 00	1,102 27	11,563 90
					30 00	30 00	*Sault Ste. Marie Canal*		30 00	30 00	21,650 39
							Dredge Vessels				8,763 16
							Inspection				187 02
							Department of Public Printing and Stationery				1,026 77
							General				13,503 33
							Totals				23,480 28
368,238 26	2,369 09	182 00	13,937 75	324,727 10	46,659 26	371,386 36	Grand totals	324,631 79	46,659 26	371,291 05	549,791 22
							Less refunds			2,246 67	
							Net revenue collected			369,044 38	549,791 22

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENT showing Refunds of Canal Tolls paid during the Year ending June 30, 1899.

Date.	To whom paid.	Refund of Tolls on	Canal.	Amount.
1898.				$ cts.
July 22	Montreal Transportation Co	Coal for Govt. work.	St. Lawrence	208 24
Aug. 12	" "	" "	"	122 39
" 24	Canadian Forwarding and Export Co	Cement "	"	146 41
" 29	" " "	Coal, lumber and cement for Govt. work	"	239 89
Sept. 16	Montreal Transportation Co	Coal for Govt. work.	"	230 84
" 16	Canadian Forwarding and Export Co	" "	"	94 41
Oct. 1	" " "	Coal overpaid	"	21 71
" 8	Montreal Transportation Co.	Cement for Govt. work	"	24 06
Nov. 28	Bartlett, Frazier & Co., Ltd	Twice paid on corn	Welland	151 20
Dec. 6	W. A. McCaffrey & Co.	Sand for Govt. work	Grenville	10 42
" 15	Canadian Forwarding and Export Co	Cement "	St. Lawrence	125 54
" 22	John Read.	Timber "	Welland	68 84
" 22	Canadian Forwarding and Export Co	Cement and timber for Govt. work	St. Lawrence	508 42
" 30	Alex. Laplante	" "	"	167 91
Mar. 27	Larkin & Sangster	" "	Lachine	62 50
July 5	Montreal Transportation Co	Coal for Govt. work.	St. Lawrence	40 61
" 21	Ogdensburg Coal and Towing Co.	Unused portion of let pass	"	23 28
				2,246 67

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

INTERCOLONIAL RAILWAY.

(Including amounts paid to Nova Scotia Railway and European and North American Railway, N.B.)

——	Year.	Construction.	Income.	Working Expenses including Windsor Branch Ry.	Revenue received, including Windsor Branch Ry.
		$ cts.	$ cts.	$ cts.	$ cts.
Expenditure prior to Confederation		10,766,725 54			
" since "	1868	483,353 65		359,961 08	420,752 58
" " "	1869	282,615 18		387,548 47	455,022 76
" " "	1870	1,729,381 49		445,208 75	471,245 09
" " "	1871	2,916,782 13		442,993 31	565,713 52
" " "	1872	5,131,141 51		595,076 22	622,900 56
" " "	1873	5,201,450 37		1,011,892 60	703,458 26
" " "	1874	3,614,898 81		1,847,175 24	893,430 17
" " "	1875	3,426,099 55		1,532,589 62	861,593 43
" " "	1876	1,108,321 59		1,277,197 79	848,861 46
" " "	1877	1,318,352 19		1,661,673 55	1,154,445 35
" " "	1878	408,816 74		1,811,273 56	1,378,946 78
" " "	1879	226,639 19		2,010,183 22	1,294,099 69
" " "	1880	2,048,014 60		1,607,956 70	1,520,310 45
" " "	1881	608,732 80		1,780,353 53	1,777,856 76
" " "	1882	585,568 79		2,080,592 37	2,100,315 85
" " "	1883	1,616,632 96		2,383,477 20	2,395,034 99
" " "	1884	1,405,377 52		2,366,719 95	2,376,666 19
" " "	1885	1,195,363 08		2,460,229 87	2,392,605 00
" " "	1886	544,958 17		2,508,473 10	2,406,858 88
" " "	1887	823,070 86		2,854,158 91	2,621,337 41
" " "	1888	742,203 09		3,300,481 94	2,937,337 40
" " "	1889	655,228 13		3,174,785 19	2,923,736 46
" " "	1890	365,246 48		3,500,455 80	2,958,243 38
" " "	1891	79,929 34		3,691,273 65	3,007,630 51
" " "	1892	168,101 77		3,458,891 39	2,978,950 82
" " "	1893	228,984 79		3,062,207 45	3,099,815 20
" " "	1894	166,362 43		2,999,317 07	3,020,485 74
" " "	1895	327,034 51		2,964,940 98	2,979,795 59
" " "	1896	259,105 23		3,029,304 08	2,994,201 93
" " "	1897	145,142 00		2,936,789 71	2,906,631 25
" " "	1898	252,367 20	70,000 00	3,275,830 14	3,154,896 49
" " "	1899	1,081,929 94	210,000 00	3,478,559 30	3,775,558 08
Total		49,913,931 63	280,000 00	65,297,571 74	61,092,106 78

* Including $296,872.90 charged to "Consolidated Fund."

Total cost of construction as above $49,913,931 63

LESS amounts transferred from Capital to Consolidated Fund as follows:—

	Nova Scotia Ry.	European and North American Ry.	
1868	$ 16,800 99	$ 11,302 89	
1870	34,403 45	1,749 21	
1871	50,405 69	.....	
1873	106,899 59	75,311 08	
	$ 208,509 72	$ 83,363 18	
		208,509 72	
			296,872 90
			$ 49,617,058 73
Cape Breton Railway			3,860,679 14
Oxford and New Glasgow Railway			1,949,063 21
Eastern Extension Railway			1,324,042 81
Total Capital cost of Intercolonial Railway system			$ 56,750,843 89
Governor General's car "Victoria"			1,290 31
Agreeing with Public Accounts, 1899, page xvi			$ 56,752,134 20

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

EASTERN EXTENSION RAILWAY.

——	Year.	Capital.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
" " "	1875			
" " "	1876			
" " "	1877			
" " "	1878			
" " "	1879			
" " "	1880			
" " "	1881			
" " "	1882			
" " "	1883			
" " "	1884	1,284,311 97	10,033 77	30,767 66
" " "	1885	2,055 92	78,273 65	73,050 01
" " "	1886	183 79	94,756 06	66,893 11
" " "	1887		94,254 04	64,107 10
" " "	1888		90,954 73	70,552 20
" " "	1889	34,235 73	90,719 04	72,436 65
" " "	1890		79,102 77	84,658 95
" " "	1891	3,255 40	*	†
" " "	1892		*	†
" " "	1893		*	†
" " "	1894		*	†
" " "	1895		*	†
" " "	1896		*	†
" " "	1897		*	†
" " "	1898		*	†
" " "	1899		*	†
Total		‡ 1,324,042 81	538,094 06	462,465 68

*Included in Intercolonial Railway working expenses. †Included in Intercolonial Railway revenue.
‡Included in total cost of Intercolonial Railway system, page 33.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

CARLETON BRANCH RAILWAY.

——	Year.	Capital.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation.....				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
" " "	1875			
" " "	1876			
" " "	1877			
" " "	1878			
" " "	1879			
" " "	1880			
" " "	1881			
" " "	1882			
" " "	1883			
" " "	1884			
" " "	1885			
" " "	1886	85,610 69		
" " "	1887	2,299 62		
" " "	1888	500 17		
" " "	1889			
" " "	1890			
" " "	1891			
" " "	1892			
" " "	1893			
" " "	1894			
" " "	1895			
" " "	1896			
" " "	1897			
" " "	1898			
" " "	1899			
Total.		*88,410 48		

*56 Victoria, cap. 6, transferred the Carleton Branch Railway to the city of St. John, N.B., for the sum of $40,000, which sum was paid in March, 1893, to the Receiver General.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

CAPE BRETON RAILWAY.

——	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	1868		
" since "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887	76,501 89	
" " "	1888	689,450 50	
" " "	1889	1,083,276 60	
" " "	1890	1,170,523 62	
" " "	1891	521,441† 62	
" " "	1892	99,936 96	
" " "	1893	59,982 74	
" " "	1894	158,770 61	
" " "	1895	*	
" " "	1896	*	
" " "	1897	405 00	
" " "	1898	389 60	
" " "	1899		
Total		§3,860,679 14	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses
§ Included in total cost of Intercolonial Railway system, see page 33.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

OXFORD AND NEW GLASGOW RAILWAY.

—	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	1868		
" since. "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887		
" " "	1888	280,932 35	
" " "	1889	840,553 57	
" " "	1890	434,074 60	
" " "	1891	220,886 39	
" " "	1892	48,745 23	
" " "	1893	7,922 80	
" " "	1894	112,382 75	
" " "	1895	*	
" " "	1896	*	
" " "	1897	3,565 52	
" " "	1898		
" " "	1899		
Total ...		‡ 1,949,963 21	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.
‡ Included in total cost of Intercolonial Railway system, page 33.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

——	Year.	Construction.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation.	1868			
" since " "	1869			
" " " "	1870			
" " " "	1871			
" " " "	1872			
" " " "	1873			
" " " "	1874			
" " " "	1875			
" " " "	1876			
" " " "	1877			
" " " "	1878			
" " " "	1879			
" " " "	1880			
" " " "	1881			
" " " "	1882			
" " " "	1883			
" " " "	1884			
" " " "	1885	49,587 45		
" " " "	1886	135,214 38		
" " " "	1887	24,157 32		
" " " "	1888	397 35		
" " " "	1889			
" " " "	1890			
" " " "	1891	124,568 23		
" " " "	1892			
" " " "	1893			
" " " "	1894	17 99		
" " " "	1895			
" " " "	1896			
" " " "	1897			
" " " "	1898			
" " " "	1899			
Total		*333,942 72		

* Agreeing with Public Accounts, 1899, page xvi.

LEONARD SHANNON
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

PRINCE EDWARD ISLAND RAILWAY.

——	Year.	Construction.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		3,114,735 11		
" since " "	1874		750 00	
" " " "	1875	46,086 63	49,344 62	24,493 99
" " " "	1876	42,546 10	219,930 43	118,060 96
" " " "	1877	200,000 00	228,595 25	130,664 92
" " " "	1878	6,551 86	221,599 49	135,899 60
" " " "	1879	40,129 05	223,313 12	125,855 91
" " " "	1880	16,539 82	164,640 55	113,851 11
" " " "	1881		203,122 88	131,131 43
" " " "	1882	402 03	228,259 97	137,267 54
" " " "	1883	57,186 02	252,808 41	146,170 42
" " " "	1884	130,663 38	236,428 13	144,504 12
" " " "	1885	76,956 56	211,207 01	158,588 06
" " " "	1886	4,668 33	216,744 34	155,584 36
" " " "	1887	5,800 00	204,237 45	155,303 37
" " " "	1888		229,639 95	158,363 62
" " " "	1889		247,559 44	171,369 56
" " " "	1890		266,485 85	160,971 78
" " " "	1891		257,990 08	174,258 05
" " " "	1892	8,300 49	289,706 38	157,442 69
" " " "	1893		226,422 17	162,690 42
" " " "	1894		226,891 06	158,533 83
" " " "	1895		232,905 19	149,654 78
" " " "	1896		225,138 56	146,476 54
" " " "	1897		240,489 90	153,443 13
" " " "	1898	17,541 88	231,418 74	158,950 61
" " " "	1899	22,000 00	218,053 01	165,012 03
Total		3,790,107 26	5,553,681 98	3,594,542 83

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

CANADIAN PACIFIC RAILWAY.

	Year.	Construction, including Subsidy of $25,000,000.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871	30,148 32		
" " "	1872	489,428 16		
" " "	1873	561,818 44		
" " "	1874	310,224 88		
" " "	1875	1,546,241 67		
" " "	1876	3,346,567 06		
" " "	1877	1,691,149 97		
" " "	1878	2,228,373 13		
" " "	1879	2,240,285 47		
" " "	1880	4,044,522 72	78,892 01	104,975 69
" " "	1881	4,968,503 93	236,944 98	291,498 06
" " "	1882	(1) 4,589,075 79	1,786 20	
" " "	1883	(2) 10,033,800 04	266 09	
" " "	1884	(3) 11,192,722 02	327 02	
" " "	1885	(4) 9,900,281 53		
" " "	1886	(5) 3,672,584 81		
" " "	1887	(6) 915,057 49		
" " "	1888	52,098 65		
" " "	1889	86,716 07		
" " "	1890	40,980 54		
" " "	1891	37,367 00		
" " "	1892	66,211 39		
" " "	1893	413,836 49		
" " "	1894	146,539 87		
" " "	1895	49,209 77		
" " "	1896	65,669 49		
" " "	1897	14,054 50		
" " "	1898	692 17		
" " "	1899	8,418 53		
Total	....	*62,742,579 90	318,216 30	396,473 75

* Agrees with Public Accounts balance sheet, 1898-99, page xvi.

(1)	Including	$ 2,210,000 00 on account subsidy.
(2)	"	5,323,076 60 "
(3)	"	7,254,208 27 "
(4)	"	6,862,201 00 "
(5)	"	2,890,427 00 "
(6)	"	460,087 13 "
		*$25,000,000 00

* See also Statement No. 3, page 45. for this expenditure.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

ANNAPOLIS AND DIGBY RAILWAY.

——	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887		
" " "	1888		
" " "	1889	9,847 27	
" " "	1890	381,942 75	
" " "	1891	196,869 36	
" " "	1892	26,129 39	
" " "	1893	2,190 62	
" " "	1894	1,675 36	
" " "	1895	570 55	
" " "	1896		
" " "	1897	41,457 29	
" " "	1898		
" " "	1899		
Total		*660,683 09	

* Of this amount Parliament voted under 52 Vic., cap. 8, the sum of $500,000 as a subsidy to the Western Counties Railway which is also shown in the statement of subsidies, page 45.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

STATEMENT showing amount expended on Capital Account on Railways.

Railways.	—	—
	$ cts.	$ cts.
Intercolonial	49,617,058 73	
Cape Breton	3,860,679 14	
Oxford and New Glasgow	1,949,063 21	
Eastern Extension	1,324,042 81	
		56,750,843 89
Carleton Branch		48,410 48
Montreal and European Short Line		333,942 72
Prince Edward Island		3,790,107 26
Canadian Pacific		62,742,579 90
Annapolis and Digby		660,683 09
Governor General's car "Victoria"		1,290 31
Total		124,327,857 65
Memo. re *Recapitulation—Railways.*		
Total cost as per statement above		124,327,857 65
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, see statement page 33		296,872 90
Agreeing with total cost of construction, as per statement page 43		124,624,730 55

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

SESSIONAL PAPER No. 10

RECAPITULATION—RAILWAYS.

——	Year.	Construction.	Working Expenses.	Revenue Received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	13,881,460 65	.....	.....
since "	1868	483,353 65	359,961 08	420,752 58
" " "	1869	282,615 18	387,548 47	455,022 76
" " "	1870	1,729,381 49	445,208 75	471,245 09
" " "	1871	2,946,930 45	442,993 31	565,713 52
" " "	1872	5,620,569 67	595,076 22	622,900 56
" " "	1873	5,763,268 81	1,011,892 60	703,458 26
" " "	1874	3,925,123 69	1,847,925 24	893,430 17
" " "	1875	5,018,427 85	1,581,934 24	886,087 42
" " "	1876	4,497,434 75	1,497,128 22	966,922 42
" " "	1877	3,209,502 16	1,890,268 80	1,285,110 27
" " "	1878	2,643,741 73	2,032,873 05	1,514,846 38
" " "	1879	2,507,053 71	2,233,496 34	1,419,955 60
" " "	1880	6,109,077 14	1,851,489 26	1,739,137 25
" " "	1881	5,577,236 73	2,220,421 39	2,200,486 25
" " "	1882	5,175,046 61	2,310,638 54	2,237,583 39
" " "	1883	11,707,619 02	2,636,551 70	2,541,205 41
" " "	1884	14,013,074 89	2,613,508 87	2,551,937 97
" " "	1885	11,224,244 54	2,749,710 53	2,624,243 07
" " "	1886	4,443,220 17	2,819,973 50	2,628,336 35
" " "	1887	1,846,887 18	3,152,650 40	2,840,747 88
" " "	1888	1,765,582 11	3,621,076 62	3,166,253 22
" " "	1889	2,709,857 37	3,513,063 67	3,167,542 67
" " "	1890	2,392,767 99	3,846,044 42	3,203,874 11
" " "	1891	1,184,317 34	3,949,263 73	3,181,888 56
" " "	1892	417,425 73	3,748,597 77	3,136,393 51
" " "	1893	712,917 44	3,288,629 62	3,262,505 62
" " "	1894	585,749 01	3,226,208 13	3,179,019 57
" " "	1895	376,814 83	3,197,846 17	3,129,450 37
" " "	1896	324,774 72	3,254,442 64	3,140,678 47
" " "	1897	204,624 31	3,195,959 58	3,060,074 38
" " "	1898	270,990 85	3,507,248 88	3,313,847 10
" " "	1899	1,112,348 47	3,696,612 31	3,940,570 11
Total	.....	*124,663,440 24	76,726,244 05	68,451,220 29

*Total amount paid on construction.....	$124,663,440 24
Less amount received from the City of St. John, N.B., as purchase of the Carleton Branch Railway.....	40,000 00
Total cost of construction.....	$124,623,440 24
Add expenditure Governor General's car "Victoria".....	1,290 31
	$124,624,730 55

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

RECAPITULATION—RAILWAYS AND CANALS.

EXPENDITURE.

Railways—Capital Account, *see* statement page 42		$ 124,327,857 65
Canals— " " 27		76,404,279 16
Total cost of Government Railways and Canals, Capital Account.		$ 200,732,136 81
Railway Subsidies, chargeable to Consolidated Fund as per Statement No. 3, page 45	$ 46,133,842 16	
Less subsidies already included in Railways Capital Account (statement page 42) to Canadian Pacific Railway	$ 25,000,000 00	
Western Counties Railway	500,000 00	
	25,500,000 00	
		20,633,842 16
* Total expenditure on Railways and Canals, Capital Account, and Railway Subsidies		$ 221,365,978 97

REVENUE.

Canals, revenue received from July 1, 1867, to June 30, 1899. (For details *see* page 28)	$ 12,079,274 46
Railways, revenue received from July 1, 1867, to June 30, 1899. (For details *see* page 43)	63,451,220 39
Total revenue received to July 1, 1898	$ 80,530,494 75
Memo of cost of operating and maintaining Railways and Canals to June 30, 1899:—	
Canals chargeable to Income	$ 2,618,104 42
Less prior to Confederation	98,378 46
	$ 2,519,725 96
From Confederation (July 1, 1867) to June 30, 1899:—	
Staff	7,326,174 32
Repairs	5,687,964 10
Total Canals, *see* statement page 28	$ 15,533,864 38
Railways, Working expenses, *see* page 43	76,726,244 05
Total	$ 92,260,108 43

* This amount does not include the annual subsidy of $186,600 payable half-yearly for twenty years, dating from July 1, 1889, to the Atlantic and North-west Railway Company; nor the annual payment of $119.700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of $2,394,000 granted by 47 Vic., ch. 8 (1884), for the line between Ottawa and Quebec, which sum has now been transferred to the public debt as a liability. (*See* Public Accounts, 1898-99, p. x.). These items are dealt with by the Finance Department.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November, 1, 1899.

No. 3.

STATEMENT showing Subsidies voted for Railways as to which contracts have been entered into and payments made up to June 30, 1899.

Subsidies voted.			Railways.	Payments.														Total June 30, 1899.
Authority.		Amount.		1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	
		$ cts.		$	$	$	$	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
46 Vic., chap.	25	156,800 00	International Railway, Quebec	144,000				8,960 00		3,840 00										156,800 00
53 do	2																			
45 do	14	384,000 00	Quebec and Lake St. John Railway, Quebec	32,000	37,027	186,745	202,219	232,013 00	19,911 00	38,440 00	70,350 00	26,222 73	76,471 77	81,600 00		3,744 00				1,006,743 50
46 do	25	80,000 00																		
48-49 do	59	96,000 00																		
49 do	10	186,295 00																		
50-1 do	24	28,800 00																		
51 do	3	96,000 00																		
52 do	3	64,000 00																		
53 do	2	30,000 00																		
54-5 do	8	5,250 00																		
57-8 do	4	44,800 00																		
46 do	25	89,600 00	Kingston, Napanee and Western Railway, formerly Napanee, Tamworth and Quebec Railway, Ontario	32,000	57,600					95,744 00	7,600 00		1,856 00	13,932 80						208,73 8
49 do	10	70,000 00																		
50-1 do	24	12,800 00																		
52 do	3	32,000 00																		
55-6 do	5	64,000 00																		
47 do	8	272,000 00	Pontiac Pacific Junction Railway, Quebec		49,090	41,000	60,580	24,158 00							18,750 00					193,578 00
51 do	3	41,000 00																		
53 do	2	24,000 00																		
46 do	25	115,200 00	Caraquet Railway, N.B		32,000	76,800	61,200	40,050 00	13,950 00											224,000 00
47 do	8	76,800 00																		
50-1 do	24	32,000 00																		
47 do	8	32,000 00	Great Northern Railway, Quebec		25,088					20,000 00	9,500 00	24,100 00			32,000 00	32,000 00			32,000 00	174,688 00
49 do	10	57,600 00																		
52 do	3	22,400 00																		
53 do	2	48,000 00																		
56 do	2	48,000 00																		
57-8 do	4	96,000 00																		
47 do	8	48,000 00	Kingston and Pembroke Railway, Ontario		48,000															48,000 00
45 do	14	660,000 00	Northern and Pacific Junction Railway, Ontario		154,440	1,051,590	78,370			35,000 00	600 00									1,320,000 00
46 do	26	660,000 00																		
53 do	2																			
47 do	8	128,000 00	Canada Eastern Railway, formerly Northern and Western Railway, N.B., including also Chatham Branch Railway			128,000	18,200	159,400 00	6,300 00	100 00		24,439 84			30,400 00					366,839 84
48-9 do	59	19,200 00																		
49 do	10	32,000 00																		
48-9 do	59	24,439 84																		
51 do	3	140,800 00																		
57-8 do	4	35,200 00																		
47 do	8	60,342 00	Quebec Central Railway, Quebec			60,342										288,000 00				348,342 00
51 do	3																			
53 do	2	288,000 00																		
48-9 do	59	72,000 00	Montreal and Sorel Railway, Quebec			64,972	4,950			6,719 50	17,116 07									93,757 57
53 do	2	40,000 00																		
48-9 do	59	30,000 00	Montreal and Champlain Junction Railway, Quebec			30,000		16,400 00	36,700 00	5,400 00			15,100 00							103,600 00
50-1 do	24	64,000 00																		
51 do	3	9,600 00																		
46 do	25	38,400 00	Elgin, Petitcodiac and Havelock Railway, N.B.			38,400						44,252 82								82,652 82
51 do	3	44,252 82																		
47 do	8	22,400 00	St. Louis and Richibucto Railway, N.B			22,400														22,400 00
48-9 do	59	96,000 00	Canada Atlantic Railway, Ontario			48,480	44,384		9,491 20	149,812 00	30,188 00									282,355 20
49 do	10	38,400 00																		
50-1 do	24	180,000 00																		
47 do	6	750,000 00	Esquimalt and Nanaimo Railway, B.C			422,520	327,480													750,000 00
47 do	8	96,000 00	Erie and Huron Railway, Ontario				96,000													96,000 00
46 do	25	320,000 00	Baie des Chaleurs Railway, Quebec				250,000	50,300 00	75,200 00	148,675 00				95,825 00						620,000 00
47 do	8	300,000 00																		
52 do	3																			
48-9 do	59	118,400 00	New Brunswick and Prince Edward Railway, N.B				97,440	16,000 00												113,440 00
50-1 do	24	217,600 00	St. Lawrence, Lower Laurentian and Saguenay Railway, Quebec, now Laurentian Railway				64,430	28,383 00			32,003 00	92,784 00								217,600 00
49 do	10	11,200 00	L'Assomption Railway, Quebec				11,200													11,200 00
49 do	10	32,000 00	Great Eastern Railway, Quebec				19,200				16,300 00	4,845 00								40,345 00
50-1 do	24	96,000 00																		
56 do	2	64,000 00																		
53 do	2	37,500 00																		
47 do	8	160,000 00	Irondale, Bancroft and Ottawa Railway, Ontario				15,000						17,000 00	32,000 00	32,000 00		48,000 00			144,000 00
52 do	3																			
49 do	10	96,000 00	Buctouche and Moncton Railway, N.B				40,480	20,573 57		4,366 00	1,600 43			34,580 00						101,600 90
50-1 do	24	6,400 00																		
47 do	8	51,200 00	Albert Southern Railway, N.B				1,000	18,428 57	1,387 06		10,684 37	18,960 00								50,460 00
52 do	3																			
50-1 do	24	65,200 00	Lake Temiscamingue Colonization Railway, Quebec				14,400	3,000 00	9,000 00	26,360 00					233,198 95	17,900 75	6,476 25			310,335 95
57-8 do	4	274,940 00																		
49 do	10	38,400 00	Joggins Railway, N.S					26,138 78		9,761 22	1,600 00									37,500 00
50-1 do	24	4,000 00																		
45 do	14	240,000 00	Témiscouata Railway, N.B., and Quebec					249,684 00	163,216 00	74,300 00	82,770 00	54,830 00	21,150 00							645,950 00
48-9 do	58	258,000 00																		
51 do	3	100,000 00																		
53 do	2	51,200 00																		
48-9 do	59	44,800 00	Leamington and St. Clair Railway, Ontario					32,000 00	19,200 00											51,200 00
50-1 do	24	6,400 00																		
49 do	10	16,000 00	Toronto, Grey and Bruce Railway, Ontario					14,656 00												14,656 00
50-1 do	24	22,400 00	Dominion Lime Co., Quebec					11,840 00	3,520 00											15,360 00
49 do	10	256,000 00	West Ontario Pacific Railway and Ontario and Quebec Railway					60,000 00	800 00	189,200 00	6,000 00									256,000 00
53 do	2																			
50-1 do	24	96,000 00	Drummond County Railway, Quebec					15,057 00	13,815 00	12,428 00	136,000 00	5,105 00	13,435 00		92,096 00				136,000 00	423,936 00
52 do	3	14,400 00																		
53 do	2	76,800 00																		
57-8 do	4	96,000 00																		
48-9 do	59	128,000 00	Brockville, Westport and Sault Ste. Marie Railway, Ontario						45,000 00		47,400 00	12,800 00								105,200 00
53 do	2																			
54-5 do	8	64,000 00																		
57-8 do	4																			
49 do	10	32,000 00	Montreal and Lake Maskinongé Railway, Quebec						19,700 00	20,080 00	1,500 00									41,280 00
53 do	2	10,200 00																		
50-1 do	24	54,400 00	South Norfolk Railway, Ontario						54,400 00											54,400 00
50-1 do	24	51,200 00	Guelph Junction Railway, Ontario						46,000 00											46,000 00
48-9 do	59	22,400 00	Belleville and North Hastings Railway, Ontario						21,888 00											21,888 00
49 do	10																			
49 do	10	108,800 00	Hereford Railway, Quebec						63,900 00	91,300 00										155,200 00
52 do	3	48,000 00																		
50-1 do	24	118,400 00	Lake Erie and Detroit River Railway, Ontario						106,500 00	11,900 00				220,331 00						338,731 00
55-6 do	5	224,000 00																		
50-1 do	24	62,400 00	Beauharnois Junction Railway, Quebec						54,650 00	4,250 00						3,500 00				62,400 00
56 do	2																			
50-1 do	24	138,400 00	St. Catharines and Niagara Central Railway, Ontario						26,640 00		11,760 00									38,400 00
55-6 do	5	108,000 00																		
57-8 do	4	108,800 00																		
52 do	3	30,000 00	Fredericton and St. Mary's Railway Bridge Co., N.B						30,000 00											30,000 00
50-1 do	24	9,600 00	Harvey Branch Railway Co., N.B						5,553 57											5,553 57
55-6 do	5	240,000 00	Nova Scotia Central Railway Co., N.S							219,100 00	3,300 00	8,300 00							4,500 00	235,200 00
61 do	1																			
50-1 do	24	44,800 00	Cumberland Railway and Coal Co., N.S							29,400 00	10,450 00									39,850 00
52 do	3	19,200 00	Pontiac and Renfrew Railway Co., Ontario							9,800 00	3,800 00									13,600 00
52 do	3	54,400 00	Thousand Islands Railway Co., Ontario							10,400 00				14,000 00						24,400 00
52 do	3																			
56 do	3	96,000 00	Quebec, Montmorency and Charlevoix Railway Co., Quebec							65,600 00					30,400 00					96,000 00
52 do	3	375,000 00	St. Clair Frontier Tunnel Co., Ontario							173,000 00	143,400 00	58,600 00								375,000 00
50-1 do	24	57,600 00	Brantford, Waterloo and Lake Erie Railway, Ontario							36,620 00	16,190 00					4,790 00				57,600 00
57-8 do	4																			
51 do	3	287,200 00	Port Arthur, Duluth and Western Railway, Ontario								87,000 00	70,075 00	114,125 00							271,200 00
53 do	2																			
50-1 do	24																			
53 do	2	192,000 00	Montreal and Ottawa Railway, Ontario								49,960 00			23,640 00			32,000 00	40,000 00	46,400 00	192,000 00
54-5 do	8																			
57-8 do	4																			
50-1 do	24	44,800 00	Cornwallis Valley Railway, N.S								42,670 00	2,130 00								44,800 00
52 do	3																			
52 do	3	320,000 00	Ottawa and Gatineau Railway, Quebec								87,582 00	38,790 00	104,380 00	53,376 00						284,128 00
57 8 do	6	64,000 00																		
47 do	8																			
51 do	3																			
52 do	3	83,612 54	Central Railway, N.B								75,639 00	88,612 54							66,761 00	226,012 54
53 do	2	142,400 00																		
57 8 do	4	48,000 00																		
61 do	1																			
62-3 do	1																			
53 do	2	361,270 00	Montreal and Western Railway, Quebec								76,143 00	82,253 00	133,388 00	119,486 00						361,270 00
52 do	3	128,000 00	Parry Sound Colonization Railway									30,400 00	28,820 00		68,780 00	24,800 00				152,800 00
57-8 do	4	64,000 00	Shuswap and Okanagan Railway, B.C									162,260 00		640 00	300 00					163,200 00
52 do	3	163,200 00																		
54-5 do	8	89,600 00																		
53 do	2	35,200 00	Tobique Valley Railway, N.B									73,000 00	41,674 46	19,341 54						134,016 00
55 6 do	5	9,600 00																		
53 do	2	112,000 00	Columbia and Kootenay Railway, B.C									88,800 00								88,800 00
53 do	2	35,200 00	Waterloo Junction Railway, Ontario									32,800 00								32,800 00
53 do	2	99,200 00	Orford Mountain Railway, Quebec									32,000 00		52,800 00						84,800 00
53 do	2	57,600 00	St. Lawrence and Adirondack Railway, Quebec									40,256 00	24,448 00	297 60				84,480 00		149,481 60
55-6 do	5	25,024 00																		
55 6 do	5	*40,000 00	New Glasgow Iron, Coal and Railway Company, N.S										32,945 84	5,454 16		1,440 00				39,840 00
56 do	2	102,400 00	United Counties Railway, Quebec											88,973 00	42,728 15	52,926 85	2,700 00	1,488 00		188,816 00
57 8 do	4	102,400 00																		
55-6 do	5	21,600 00	Philipsburg Junction Railway Quarry Company, Quebec											18,688 00	2,912 00					21,600 00
55-6 do	5	*430,400 00	Ottawa, Arnprior and Parry Sound Railway, Ontario											101,120 00	249,280 00	80,000 00		327,232 00	22,080 00	779,712 00
56 do	2	67,200 00	Montfort Colonization Railway, Quebec											32,000 00	35,200 00			35,840 00	64,400 00	167,440 00
57-8 do	4	38,400 00																		
55-6 do	5	48,000 00	Lotbinière and Mégantic Railway, Quebec											35,200 00	38,400 00		22,400 00			96,000 00
57-8 do	4	48,000 00																		
56 do	2	48,000 00	Grand Trunk, Georgian Bay and Lake Erie Railway, Ontario												39,744 00					39,744 00
55-6 do	5	80,000 00	Canadian Pacific Railway, Revelstoke to Arrow Lake, B.C												28,000 00		52,000 00			80,000 00
57-8 do	4	121,600 00	Nakusp and Slocan Railway, B.C												117,760 00					117,760 00
55-7 do	5	89,600 00	Dominion Coal Company, N.S												32,000 00	55,808 00				87,808 00
56 do	2	22,400 00	Oshawa Railway and Navigation Company, Ontario													22,400 00				22,400 00
57-8 do	4	51,200 00	Tilsonburg, Lake Erie and Pacific Railway, Ontario													51,200 00			10,912 00	62,112 00
56 do	2	*11,200 00	St. Stephen's and Milltown Railway, N.B													9,635 89		5,212 11		14,848 00
57-8 do	4	*38,400 00	Gulf Shore Railway Company, N.B														28,635 05	25,064 15		53,699 20
57-8 do	4	9,000 00	Cap de la Madeleine Railway, Quebec														7,424 00			7,424 00
56 do	2	32,000 00	Ontario, Belmont and Northern Railway Company, Ontario														30,720 00			30,720 00
		*	Coast Line of Nova Scotia															90,400 00		90,400 00
		*	Ottawa and New York Railway Company, Ontario															33,600 00	138,784 00	172,384 00
60-61 do	5	3,630,000 00	Crow's Nest Pass Railway Co., B.C															453,750 00	2,322,500 00	2,776,500 00
60 61 do	4	300,000 00	Grand Trunk Railway Co., "Victoria Jubilee Bridge," Quebec															131,268 52	68,331 05	119,599 57
		*	Restigouche and Western Railway Co., N.B																32,000 00	32,000 00
		*	East Richelieu Railway Co., Quebec																69,952 00	69,952 00
				208,000	403,245	2,171,249	1,406,533	1,027,041 92	846,721 83	1,491,595 72	1,079,105 87	1,061,615 93	624,794 07	1,043,285 10	1,123,949 10	648,145 49	230,355 30	1,228,334 78	3,014,620 05	17,608,592 16
37 do	14	1,525,250 00	Canada Central Railway																	1,525,250 00
46 do	2																			
44 do	1	25,000,000 00	Canadian Pacific, main line																	25,000,000 00
47 do	8	1,500,000 00	Canadian Pacific, extension																	1,500,000 00
48-9 do	58																			
52 do	8	500,000 00	Western Counties Railway																	500,000 00
																				46,133,842 16

This return does not include the Atlantic and North-western Railway.

* 60-61 Victoria, Cap. 4, *authorizes $3,200 per mile subsidy* if the cost does not average more than $15,000 per mile, if over that amount a further sum of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 1, 1899.

PART III

RAILWAY SUBSIDIES

No. 1.

RAILWAY SUBSIDIES.

TABLE of per mile Cash Subsidies paid in aid of Railway Construction, showing amount of subsidy granted for same Railways.

Number.	Name of Railway.	On Following Named Railways. No. of miles built up to June 30, 1899.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1899.	Subsidy paid to June 30, 1899.	Subsidy paid to Nov. 1, 1899.
				$ cts.	$ cts.	$ cts.
1	Albert Southern	16	16	50,460 00	50,460 00	50,460 00
2	Baie des Chaleurs	70	70	620,000 00	620,000 00	620,000 00
3	Beauharnois Junction	19·50	19·50	62,400 00	62,400 00	62,400 00
4	Belleville and North Hastings	6·84	6·84	21,888 00	21,888 00	21,888 00
5	Brantford, Waterloo and Lake Erie	18	18	57,600 00	57,600 00	57,600 00
6	Brockville, Westport and Sault Ste. Marie	44·50	44·50	105,200 00	105,200 00	105,200 00
7	Buctouche and Moncton	31·75	31·75	101,600 00	101,600 00	101,600 00
8	Canada Atlantic	54·05	54·05	282,355 20	282,355 20	282,355 20
9	Canada Central	120	120	1,525,250 00	1,525,250 00	1,525,250 00
10	Canada Eastern	107	107	342,400 00	342,400 00	342,400 00
11	Canadian Pacific	1,905	1,905	25,000,000 00	25,000,000 00	25,000,000 00
12	" (extension)*	476·55	476·55	5,210,000 00	4,356,250 00	4,356,250 00
13	Caraquet	67	67	224,000 00	224,000 00	224,000 00
14	Central (of New Brunswick)	44·50	59·50	185,100 00	142,400 00	142,400 00
15	Cornwallis Valley	14	14	44,800 00	44,800 00	44,800 00
16	Columbia and Kootenay	27·75	27·75	88,800 00	88,800 00	88,800 00
17	Cumberland	14	14	39,850 00	39,850 00	39,850 00
18	Dominion Lime Co	4·80	4·80	15,360 00	15,360 00	15,360 00
19	Dominion Coal Co	27·44	27·44	87,808 00	87,808 00	87,808 00
20	†Drummond Counties	133·03	135 60	433,920 00	423,936 00	423,936 00
21	Elgin, Petitcodiac and Havelock	12	12	38,400 00	38,400 00	38,400 00
22	Erie and Huron	30	30	96,000 00	96,000 00	96,000 00
23	Esquimalt and Nanaimo	71	71	750,000 00	750,000 00	750,000 00
24	Fredericton and St. Mary's Bridge Co.	1·33	1·33	30,000 00	30,000 00	30,000 00
25	Grand Trunk, Georgian Bay and Lake Erie	12·42	12·42	39,744 00	39,744 00	39,744 00
26	Great Eastern	12·50	12·50	40,345 00	40,345 00	40,345 00
27	†Great Northern	64·59	143·59	517,588 00	174,688 00	174,688 00
28	Guelph Junction	15·25	15·25	46,000 00	46,000 00	46,000 00
29	Harvey Branch	3	3	5,553 57	5,553 57	5,553 57
30	Hereford	48·50	48·50	155,200 00	155,200 00	155,200 00
31	Irondale, Bancroft and Ottawa	45	50	160,000 00	144,000 00	144,000 00
32	International	49	49	156,800 00	156,800 00	156,800 00
33	Joggins	12	12	37,500 00	37,500 00	37,500 00
34	Kingston and Pembroke	15	15	48,000 00	48,000 00	48,000 00
35	Kingston, Napanee and Western	61·35	61·35	208,732 80	208,732 80	208,732 80
36	L'Assomption	3·50	3·50	11,200 00	11,200 00	11,200 00
37	Lake Erie and Detroit River	84·05	84·05	338,731 00	338,731 00	338,731 00
38	Lake Temiscamingue Colonization	45·84	45·84	310,335 95	310,335 95	310,335 95
39	Leamington and Lake St. Clair	16	16	51,200 00	51,200 00	51,200 00
40	Lotbinière and Mégantic	30	30	96,000 00	96,000 00	96,000 00
41	Montreal and Sorel (now South Shore Ry)	44·67	44·67	109,922 00	93,757 57	109,922 00
42	Montreal and Lake Champlain	83	83	103,600 00	103,600 00	103,600 00
43	Montreal and Western	70	70	361,270 00	361,270 00	361,270 00
44	Montreal and Lake Maskinongé	12·90	12·90	41,280 00	41,280 00	41,280 00
45	Montreal and Ottawa	60	60	192,000 00	192,000 00	192,000 00
46	Montfort Colonization	32·20	33	171,600 00	167,400 00	167,400 00
47	Nakusp and Slocan	36·90	38	121,600 00	117,760 00	117,760 00
48	New Brunswick and P.E.I	35·45	35·45	113,440 00	113,440 00	113,440 00
	Carried forward	4,209·16	4,351·08	38,850,833 52	37,561,335 09	37,577,499 52

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.—*Concluded.*

Number.	Name of Railway.	On Following Named Railways. No. of miles built up to June 30, 1899.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1899.	Subsidy paid to June 30, 1899.	Subsidy paid to Nov. 1, 1899.
				$ cts.	$ cts.	$ cts.
	Brought forward.....	4,209·16	4,351·08	38,850,833 52	37,561,335 09	37,577,499 52
49	New Glasgow Iron and Coal Co.....	12·45	12·45	39,840 00	39,840 00	39,840 00
50	Northern Pacific Junction.....	110	110	1,320,000 00	1,320,000 00	1,320,000 00
51	Nova Scotia Central	73·50	73·50	235,200 00	235,200 00	235,200 00
52	Ontario, Belmont and Northern.....	9·60	10	32,000 00	30,720 00	30,720 00
53	Ontario and Quebec.....	61·25	61·25	196,000 00	196,000 00	196,000 00
54	Oxford Mountain.....	26·50	26·50	84,800 00	84,800 00	84,800 00
55	Oshawa Railway and Navn. Co.....	7	7	22,400 00	22,400 00	22,400 00
56	Ottawa and Gatineau Valley	54	86	396,800 00	284,128 00	284,128 00
57	†Ottawa, Arnprior and Parry Sound.	159·58	163	609,000 00	779,712 00	779,712 00
58	Parry Sound Colonization.....	47·75	47·75	152,800 00	152,800 00	152,800 00
59	Pontiac Pacific Junction.....	70	70	307,850 00	193,578 00	193,578 00
60	†Phillipsburg Junction	6·75	7·41	23,712 00	21,600 00	21,600 00
61	Pontiac and Renfrew.....	4·25	4·25	13,600 00	13,600 00	13,600 00
62	Port Arthur, Duluth and Renfrew...	84·75	84·75	271,200 00	271,200 00	271,200 00
63	Quebec Central.....	74·86	74·86	348,342 00	348,342 00	348,342 00
64	Quebec and Lake St. John.....	245·85	245·85	1,006,743 50	1,006,743 50	1,006,743 50
65	Quebec, Montmorency and Charlevoix	30	30	96,000 00	96,000 00	96,000 00
66	Shuswap and Okanagan.....	51	51	163,200 00	163,200 00	163,200 00
67	South Norfolk.....	17	17	54,400 00	54,400 00	54,400 00
68	St. Catharines and Niagara Central..	12	12	38,400 00	38,400 00	38,400 00
69	St. Clair Frontier Tunnel.....	2·23	2·23	375,000 00	375,000 00	375,000 00
70	St. Lawrence and Lower Laurentian.	38·85	38·85	217,600 00	217,600 00	217,600 00
71	St. Louis, Richibucto and Buctouche.	7	7	22,400 00	22,400 00	22,400 00
72	†St. Lawrence and Adirondack ...	33·51	33·51	108,201 60	149,481 60	149,481 60
73	Témiscouata.....	112·95	112·95	645,950 00	645,950 00	645,950 00
74	Thousand Island.....	4·33	4·33	24,400 00	24,400 00	24,400 00
75	†Tilsonburg, Lake Erie and Pacific..	19·41	19·50	62,400 00	62,112 00	62,112 00
76	Tobique Valley.....	27·88	27·88	134,016 00	134,016 00	134,016 00
77	Toronto Gray and Bruce.....	4·58	4·58	14,656 00	14,656 00	14,656 00
78	†United Counties	59	65	208,000 00	188,816 00	188,816 00
79	Waterloo Junction.....	10·25	10·25	32,800 00	32,800 00	32,800 00
80	Western Counties.....	20	20	500,000 00	500,000 00	500,000 00
81	West Ontario Pacific.....	18·75	18·75	60,000 00	60,000 00	60,000 00
82	Cap de la Magdeleine.....	2·32	2·32	7,424 00	7,424 00	7,424 00
83	†Gulf Shore.....	16·78	17·50	56,000 00	53,699 20	53,699 20
84	†St. Stephen and Milltown.....	4·64	4·64	14,848 00	14,848 00	14,848 00
85	†Coast (of Nova Scotia).....	28·25	61	195,200 00	90,400 00	90,400 00
86	Grand Trunk.....	Bridge	Bridge	300,000 00	199,599 57	271,628 25
87	†Ottawa and New York	53·87	53·87	172,384 00	172,384 00	172,384 00
88	†Restigouche and Western.....	10	40	128,000 00	32,000 00	32,000 00
89	†East Richelieu Valley.....	21·86	24	76,800 00	69,952 00	69,952 00
	Total.....	5,863·71	6,113·81	47,619,800 62	45,981,536 96	46,069,730 07

‡ Add subsidy of used rails as per statement, part iii, page 6, $152,305.20, which will then agree with statement of subsidies in part ii, page 44, viz., $46,133,842.16.

* Includes the mileage of the North Shore Railway, 160 miles.

† By 60-61 Vic., cap. 4, a subsidy was authorized on certain mileage of this railway, specified in the Act of Parliament, of $3,200 per mile and a further subsidy beyond the sum of $3,200 per mile, of 50 per cent on so much of the *average cost* of the said specified mileage subsidized as in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile.

The amount of certain of the subsidies authorized by Parliament, given in this statement, includes the determined portion of the subsidies under 60-61 Vic., cap. 4, viz.: The amount produced by the $3,200 per mile, but the other portion is now an undetermined amount, and therefore cannot be shown here.

SESSIONAL PAPER No. 10

The following is the mileage of certain of the Railways shown in this statement and subsidized under 60-61 Vic., cap. 4, and 62-63 Vic., cap. 7 :—

	Miles.
Ottawa, Arnprior and Parry Sound	56
Phillipsburg Junction	0·66
St. Lawrence and Adirondack	13·50
Tilsonburg, Lake Erie and Pacific	3·50
United Counties	1
Great Northern	44
Gulf Shore	5·50
St. Stephen's and Milltown	1·14
Drummond County	42·50
Coast (of Nova Scotia)	61
Ottawa and New York	53·87
Restigouche and Western	40
East Richelieu Valley	24
Ottawa and Gatineau	86

STATEMENT showing Railways receiving Cash Subsidies of fixed amounts, payable Annually or Semi-annually for fixed period of years.

No.	Name of Railway.	Miles Subsidized.	Amount of Instalment.	Amount paid up to June 30, 1899.
				$
1	International (Atlantic and North-west) Railway Co.	252	$93,300 per ½ year for 20 years	1,866,000
2	Kingston, Smith's Falls and Ottawa Railway Co.	56	$3,136 " 21 "	Nil
	Total	308		1,866,000

STATEMENT showing Railways aided by the Grant of Loans.

No.	Name of Railway.	Amount of Loans authorized.	Amount loaned.
		$	$ cts.
1	Albert Railway Co	15,000	14,725 56
2	Fredericton and St. Mary's Bridge Co.	300,000	300,000 00
3	St. John Bridge and Railway Extension Co.	500,000	433,900 00
	Total	815,000	748,625 56

STATEMENT showing Railways subsidized by the Grant of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Subsidy on value of Rails.	Subsidy in used Rail paid.
			$ cts.	$ cts.
1	Central Railway Co. of New Brunswick	4,052	83,612 54	83,612 54
2	Elgin, Petitcodiac and Havelock Ry. Co	2,201	44,252 82	44,252 82
3	Chatham Branch Railway Co	958	24,439 84	24,439 84
	Total	7,211	152,305 20	152,305 20

STATEMENT showing Railways aided by the Loan of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Value of used Rails loaned.	Remarks.
			$ cts.	
1	Kent Northern Railway Co	2,549	58,334 27	By 51 Victoria, chapter 3, these used rails will be granted as a subsidy (the section of road to be first laid with new steel rails weighing not less than 50 lbs. per lin. yard and after an O.C. had been passed authorizing transfer).
2	Halifax Cotton Co	233	4,235 00	
3	Steel Company of Canada	597	11,964 66	
4	Albert Railway Company	726	14,665 45	
	Total	4,105	89,299 38	

SESSIONAL PAPER No. 10

STATEMENT showing Railways sub-idized by Grants of Lands.

No.	Act authorizing Subsidy.	Name of Railway Company.	Mileage Subsidized.	Acres granted per Mile.	Total Area granted.
1	48-49 Vic., c. 60 50-51 Vic., c. 22 52 Vic., c. 2	Alberta Railway and Coal Co.—Main line, Dunmore to Lethbridge	109·50	6,400	700,800
2	52 Vic., c. 4 52 Vic., c. 3	Alberta Railway and Coal Co.--From Lethbridge to the International Boundary	64·62	6,400	413,568
3	53 Vic., c. 4	Calgary and Edmonton Railway	340·00	6,400	2,176,000
4	44 Vic., c. 1	Canadian Pacific Railway—Main line			18,206,986
5	53 Vic., c. 4	C. P. R.—Deloraine and Napinka Branch	18·01	6,400	115,264
6	53 Vic., c. 4	C. P. R.—Glenboro' and Souris Branch	45·24	6,400	289,536
7	53 Vic., c. 4 54 Vic., c. 10	C. P. R.—Kenmay and Estevan Branch	156·86	6,400	1,003,904
8	57-58 Vic., c. 6	C. P. R.—Pipestone Branch	31·30	6,400	200,320
9	49 Vic., c. 11	Great North-west Central Railway	50·00	6,400	320,000
10	48-49 Vic., c. 60	Manitoba and North-western Railway—Main line	430·00	6,400	2,918,400
11	49 Vic., c. 11	Manitoba and North-western Railway—Branch from Biscarth	26·60	6,000	
12	53 Vic., c. 4	Manitoba and South-eastern Railway Co.	98·00	6,400	627,200
13	54-55 Vic., c. 10 48-49 Vic., c. 10	Manitoba South-western Colonization Co.	218·25	6,400	1,396,800
14	48-49 Vic., c. 60 50-51 Vic., c. 23	Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Co	253·96	6,400	1,625,344
15	52 Vic., c. 4 54 Vic., c. 9	Red Deer Valley Railway and Coal Co	55·00	6,400	352,000
16	57-58 Vic., c. 6	Saskatchewan and Western Railway Co	15·47	6,400	99,008
17	62-63 Vic., c. 57	Canadian Northern Railway	1,025·00	Div. A., 6,400 do B., 12,800 do C., 6,400	9,280,000
			2,937·21		39,725,130

NOTE.—By 62-63 Victoria (Session of 1899), chapter 57, the Lake Manitoba Railway and Colonization Company and the Winnipeg Great Northern Railway were amalgamated under the title of the Canadian Northern Railway, all the rights of the two companies being vested in the new company.

No. 2

LIST OF RAILWAY SUBSIDY ACTS PASSED IN EACH YEAR.

NOTE.—The marginal number opposite each subsidy has reference to the alphabetical list in the Deputy Minister's report showing the action taken in case where a contract for work has been made with any company.

By the Acts of Parliament below specified, authority has been placed in the hands of the Governor in Council to grant, upon certain conditions, aid towards the construction of various lines of railway throughout the Dominion, as follows, namely:—

By the Acts of 45 Vic., cap. 14, 1882 *(Assented to 17th May, 1882)*:—

1. For a railway from Gravenhurst to Callander, both in the province of Ontario, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole $660,000

2. For a railway from St. Raymond to Lake St. John, both in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 384,000

3. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, or between them, to Edmundston, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 240,000

4. For a railway from Oxford to New Glasgow, both in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 224,000

"The said subsidies to be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to complete the said railways respectively, within a reasonable time, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in an agreement to be made by the company with the Government, and which the Government is empowered to make, and to be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, such proportion to be established by the report of the said Minister; provided always, that the granting of such bonuses or subsidies shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting therewith, as the Governor in Council may determine."

By the special Act 45 Vic., cap. 55, 1882 *(Assented to 17th May, 1882)*:—

5. A subsidy authorized in favour of "The Chignecto Marine Transport Railway Company," provided that they construct and thereafter maintain and operate a ship railway, to be approved by the Government, across the Isthmus of Chignecto, from the Gulf of St. Lawrence to the Bay of Fundy, per year, for twenty-five years $150,000

By the Act 46 Vic., cap. 25, 1883 *(Assented to 25th May, 1883)*:—

6. To the Baie des Chaleurs Railway Company, for 100 miles of their railway, from Métapediac, on the Intercolonial Railway, to Paspebiac, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 320,000

7. To the Caraquet Railway Company, for 36 miles of their railway, from a point near Bathurst to Caraquet, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $115,200

8. To the Gatineau Valley Railway Company, for the first 50-mile section of their railway, from Hull station, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 160,000

9. To the Great American and European Short Line Railway Company, for 80 miles of their railway, from Canso to Louisburg or Sydney, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 256,000

10. To the International Railway Company, for 49 miles of their railway, from Sherbrooke, in the province of Quebec, to the international boundary line, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 156,800

11. To the Northern and Western Railway Company, for 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy village, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 102,400

12. To the Montreal and Western Railway Company, for the first 50-mile section of their railway, out of St. Jérôme, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 160,000

13. To the Napanee, Tamworth and Quebec Railway Company, for 28 miles of their railway, from Napanee to Tamworth, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 89,600

14. To the Quebec and Lake St. John Railway Company, for 25 miles of their railway, from St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 80,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

15. For a railway from the International Railway at Petitcodiac to Havelock Corner, in the province of New Brunswick, 12 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

16. For a railway from Gravenhurst to Callander, 110 miles, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole 660,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

"The nine subsidies first mentioned to be granted to the companies hereinbefore named respectively; and the two subsidies last mentioned to be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to complete the said railways, respectively; and all the eleven lines above mentioned, and also the lines of railway in respect of which it is provided by the Act of forty-fifth Victoria, chapter fourteen, that subsidies may be granted, shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years from and after the passing of this Act, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made by each company with the Government, and which the Government is empowered to make; and all the said subsidies authorized by this Act, respectively, to be paid out of the Consolidated Revenue Fund of Canada by instalments, on the completion of each section of not less than ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, to be established by the report of the said Minister; Provided always, that the granting of such subsidies shall be subject to such conditions for securing such running powers

or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine."

By the special Act 46 Vic., cap. 26, 1883 *(Assented to 25th May, 1883)*:—

17. An advance authorized in favour of the "St. John Bridge and Railway Extension Company," to enable them to build a railway bridge across the River St. John, N.B., with railway connection with the Intercolonial, such advance to be secured by a mortgage on their entire property, not to exceed 80 per cent of the expenditure on the work, nor a total sum of.....$ 500,000

By the Act 47 Vic., cap. 8, 1884 *(Assented to 19th April, 1884)*:—

18. To the Government of the province of Quebec, in consideration of their having constructed the railway from Quebec to Ottawa, forming a connecting line between the Atlantic and Pacific coasts via the Intercolonial and Canadian Pacific Railways, and being as such a work of national and not merely provincial utility, a subsidy not exceeding $6,000 per mile for the portion between Quebec and Montreal, 159 miles, nor exceeding in the whole..... 954,000

19. And for the portion between Montreal and Ottawa, 120 miles, $12,000 per mile, nor exceeding in the whole.....1,440,000

20. For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding $170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work.

21. For the construction of a line of railway from Oxford station, on the Intercolonial Railway, to Sydney or Louisburg, a subsidy not exceeding $30,000 per annum for fifteen years or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work, in addition to the subsidies previously granted, and also a lease or transfer to such company of the Eastern Extension Railway, from New Glasgow to Canso, with its present equipment.

22. To the Quebec Central Railway Company, for a line of railway from Beauce Junction to the international boundary line, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 211,200

23. For the extension of the Canadian Pacific Railway, from its terminus at St. Martin's Junction, near Montreal, or some other point on the Canadian Pacific Railway, to the harbour of Quebec, in such manner as may be approved by the Governor in Council, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole..... 960,000

24. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway to the village of Bancroft, in the township of Dungannon, county of Hastings, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000

25. To the Pontiac Pacific Junction Railway, for a line of railway from Hull or Aylmer to Pembroke, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 272,000

26. To the Gatineau Railway Company, for a line of railway from Kazubazua to Le Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000

27. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth to Bogart and Bridgewater, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

28. To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last session of Parliament, towards Le Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $160,000

29. To the Northern and Western Railway Company, for a line of railway from Fredericton to the Miramichi River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883) 128,000

30. To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

31. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 262,400

32. To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000

33. To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000

34. For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole 200,000

35. For a line of railway from Richibucto to St. Louis, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400

36. For a line of railway from Hopewell to Alma, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200

37. For a line of railway from St. Andrew's to Lachute, in the county of Argenteuil, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400

38. For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 217,600

39. For a line of railway from Annapolis to Digby, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000

40. For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway between Sussex and St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 128,000

41. To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbour, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 76,800

42. For a branch of the Intercolonial Railway, from Metapediac eastward towards Paspebiac, twenty miles, in the province of Quebec, a sum not exceeding in the whole 300,000

43. For a branch of the Intercolonial Railway, from Derby Station to Indiantown, fourteen miles, a sum not exceeding in the whole 140,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are

granted shall be commenced within two years from the first day of July next and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, except the line mentioned in the fourth section of this Act,* which shall be commenced within one year, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister. The subsidies to the province of Quebec shall be capitalized, and the interest shall be payable at such time and in such manner as the Government of Canada shall agree upon with the Government of the said province. The two subsidies last mentioned in the list are for works to be constructed by the Government of Canada.

"Provided, always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By the special Act 47 Vic., cap. 6, 1884 *(Assented to 19th April, 1884):*

44. Relating to an agreement with the province of British Columbia, authority was given, *inter alia*, for the grant of a subsidy to the "Esquimalt and Nanaimo Railway Company" in aid of the construction of a line of railway and telegraph between the points named; such subsidy to be in lands *en bloc* on Vancouver Island, the boundaries being fixed by the Act, and in money **$750,000**

By the Act 48-49 Vic., cap. 59, 1885 *(Assented to 20th July, 1885):*

45. To the Ottawa, Waddington and New York Railway and Bridge Company, for a line of railway from Ottawa to Waddington, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... **166,400**

46. To the New Brunswick and Prince Edward Island Railway Company, for a line of railway from Sackville to the Straits of Northumberland, at or near Cape Tormentine, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... **118,400**

47. To the Montreal and Sorel Railway Company, for a line of railway from St. Lambert to Sorel, a subsidy not exceeding $1,600 per mile, nor exceeding in the whole..... **72,000**

48. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a line of railway from Brockville to Westport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... **128,000**

49. To the Quebec and Lake St. John Railway Company, for a line of railway from its junction on the North Shore Railway to St. Raymond, upon condition of the company extending their road to a point 50 miles north of St. Raymond, a subsidy not exceeding $3,200 per mile nor exceeding in the whole..... **96,000**

50. To the Northern and Western Railway Company, for a line of railway from the northern end of the 40 miles subsidized between Fredericton and the Miramichi River by 47 Victoria, chapter 8, to Boiestown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole **19,200**

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* The extension of the Canadian Pacific Railway from its terminus at St. Martin's Junction, or some other point on the said railway to the harbour of Quebec.

51. To the Montreal and Champlain Junction Railway Company, for a line of railway from Brosseau's to Dundee, a subsidy not exceeding $500 per mile, nor exceeding in the whole $30,000

52. To the Thunder Bay Colonization Railway Company, for a line of railway from the Murillo station of the Canadian Pacific Railway to the east end of Whitefish Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 92,000

53. To the Central Ontario Railway Company, for a line of railway from Coe Hill or Rathbun, to Bancroft, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

54. To the Belleville and North Hastings Railway Company, for a line of railway from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, a subsidy not exceeding $1,500 per mile, nor exceeding in the whole 10,500

55. For a line of railway from Long Sault to the foot of Lake Temiscamingue, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 25,600

56. For a line of railway from a point on the Canada Southern Railway near Comber, to Lake Erie, at or near the village of Leamington, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.... 44,800

57. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth towards Bogart and Bridgewater, 16 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy of..... 70,000

58. To the Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of 62 miles, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, a subsidy of.... 320,000

59. For a line of railway from the Grand Piles, on the River St. Maurice, to its junction with Lake St. John Railway, a distance of about 50 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, for a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy of..... 217,600

60. To the Canada Atlantic Railway Company, for a line of railway from Valleyfield to a point one and a half miles west of Johnston's, a subsidy not exceeding $1,600 per mile, and from one and a half miles west of Johnston's to Lacolle; also from the present terminus at Ottawa, to the Chaudiere Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

61. For a line of railway from Indiantown via the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 140,800

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions, specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister.

"Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connected with those so subsidized, as the Governor in Council may determine."

By the Act 48-49 Vic., cap. 58, 1885 *(Assented to 20th July, 1885)*:—

62. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, to Edmundston, in the province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act forty-fifth Victoria, chapter fourteen, and constituting with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

63. For a line of railway from the south bank of the St. Lawrence river, opposite or near Montreal, to the harbours of St. Andrew's, St. John and Halifax, via Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such a line of railway for a period of twenty years, or a guarantee bond of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway.

64. The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montreal, or from some other point on their railway to be selected by the said company, to the harbour of Quebec, in such a manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act, to aid in procuring the extension of

the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada.

The said Act further provided as follows in relation to this matter:—

"If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligation as the Government shall have assumed in acquiring it."

By the Act 49 Vic., cap. 10, 1886 (*Assented to 2nd June, 1886*):—

65. For a railway from a point at or near Moncton, to Buctouche, in the province of New Brunswick, thirty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 96,000

66. For a railway from Ingersoll via London to Chatham, in the province of Ontario, eighty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 256,000

67. To the Northern and Western Railway Company, for ten miles of their railway, intervening between the termini of the portions of their railway for which subsidies are already granted, the one from Fredericton and the other from Indiantown, and an extension of two miles down to deep water at Chatham, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 32,000

68. To the Caraquet Railway Company, for ten miles of their railway, from the end of the present subsidized portion at Lower Caraquet to Shippegan, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

69. To the Lake Erie, Essex and Detroit River Railway Company, for thirty-seven miles of their railway, from Windsor to Leamington, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 118,400

70. To the Thunder Bay Colonization Railway Company, for fifty-six miles of their railway, from the end of the present subsidized section to a point near Crooked Lake, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 179,200

71. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, on the line of the Northern Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000

72. For a railway from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, eighteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

73. For a railway from Hereford to the International Railway, in the township of Eaton, in the province of Quebec, thirty-four miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 108,800

74. For a railway from St. Félix to Lake Maskinongé, parish of St. Gabriel in the province of Quebec, ten miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

75. For a railway from Glenannan to Wingham, in the province of Ontario, five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

76. For a railway from a point at or near the McCann Station, on the Intercolonial Railway, to the Joggins, on Cumberland Basin, in the province of Nova Scotia, twelve miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 38,400

77. For a railway from L'Assomption to L'Epiphanie, in the province of Quebec, three miles and a half, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 11,200

78. To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly towards Désert, in the province of Quebec, a subsidy of $5,161 per mile, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, not exceeding in the whole..... 361,270

79. For a railway from St. Andrew's to the Canadian Pacific Railway at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400

80. To the Canada Atlantic Railway Company, for twelve miles of their railway from Clark's Island to Valleyfield, and from Lacolle, in the province of Quebec, to the international boundary, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

81. For a railway from Truro to Newport, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 156,800

82. To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding $1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of $3,200 per mile)..... 186,295

83. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

84. For the construction of wharfs and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of..... 6,000

85. To the Gananoque, Perth and James Bay Railway Company, seventeen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400

86. For a railway from St. Eustache to St. Placide, county of Two Mountains, eighteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

87. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley, on the line which will afford facilities of communication with the Iron Mines, Spring Side, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

88. For a railway from Yamaska to the River St. Francis, in the province of Quebec, ten miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

89. For a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, in the province of New Brunswick, twenty-eight miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 89,600

90. For a railway from Fredericton to the village of Prince William, in the province of New Brunswick, twenty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

91. For a railway from a point on the Intercolonial Railway near Newcastle or via Douglastown to a point on the River Miramichi, opposite the town of Chatham, in the province of New Brunswick, six miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $19,200

92. For a railway from a point on the Canadian Pacific Railway to Eganville, in the province of Ontario, twenty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

93. To the Belleville and North Hastings Railway Company, for seven miles of their railway, from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, in the province of Ontario, a subsidy (in addition to the subsidy of $1,500 per mile granted by 48-49 Victoria, chapter 59), not exceeding $1,700 per mile, nor exceeding in the whole..... 11,900

94. To the Napanee, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of..... 70,000

95. To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of..... 15,000

"The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose shall be granted to such companies respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies have been granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall be so constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company to the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements, and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By section 2 of this Act authority was given for the grant of a charter by the Governor in Council for the purpose of constructing a railway from Long Sault to the foot of Lake Temiscamingue.

By the Act 50-51 Vic., cap. 24, 1887 *(Assented to 23rd June, 1887).*

96. To the St. Catharines and Niagara Railway Company, for twelve miles of their railway from the city of St. Catharines to the bridge over the Niagara River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 38,400

97. To the Vaudreuil and Prescott Railway Company, for thirty miles of their railway from Vaudreuil towards Hawkesbury, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

98. To the Richmond Hill Junction Railway Company, for five miles of their railway from Richmond Hill Junction, on the Northern Railway of Canada, to Richmond Hill village, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

99. To the Drummond County Railway Company, for thirty miles of their railway from Drummondville towards Nicolet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

100. To the Joggins Railway Company, for one and a quarter miles of their railway extending from the southern end of the portion subsidized by the Act 49 Victoria, chapter 10, to the wharfs, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 4,000

101. To the Moncton and Buctouche Railway Company, for two miles of their railway from the west end of the portion subsidized by the Act 49 Victoria, chapter 10, to Moncton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 6,400

102. To the Beauharnois Junction Railway Company, for thirty miles of their railway from St. Martin's towards St. Anicet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

103. To the Harvey Branch Railway Company, for three miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600

104. To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

105. To the Guelph Junction Railway Company, for sixteen miles of their railway from its junction with the Canadian Pacific Railway to the town of Guelph, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200

106. To the Massawippi Railway Company, for ten miles of their railway from a point on the Atlantic and North-western Railway near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

107. To the Napanee, Tamworth and Quebec Railway Company, for four miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to Tweed, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 12,800

108. To the Dominion Lime Company, for seven miles of their railway from a point on the Quebec Central Railway, in the township of Dudswell, to the Dudswell Lime Company's quarries, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400

109. To the South Norfolk Railway Company, for seventeen miles of their railway from Port Rowan to the town of Simcoe, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400

110. To the Jacques Cartier Union Railway Company, extending and completing their railway, a subsidy of..... 20,000

111. For a line of railway from Mount Forest to Walkerton, twenty-four miles in length, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 76,800

112. To the Oshawa Railway and Navigation Company, for seven miles of their railway from Port Oshawa towards Raglan, a subsidy not exceeding $3,200 per mile. nor exceeding in the whole..... 22,400

113. To the Saguenay and Lake St. John Railway Company, for thirty miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

114. To the Great Eastern Railway Company, for thirty miles of their railway from the River St. Francis to the Arthabaska Railway, at St. Grégoire station, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $96,000

115. To the Ontario and Pacific Railway Company, for six miles of their railway from the northern end of the portion subsidized by the Act 47 Victoria, chapter 8, to the town of Perth, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

116. To the Caraquet Railway Company, for seven miles of their railway from Lower Caraquet to Shippegan, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding in the whole.. 32,000

117. To the St. Lawrence and Lower Laurentian and Saguenay Railway Company, for the section of this railway from Grand Piles, on the St. Maurice River, to its junction with the Quebec and Lake St. John Railway, in lieu of the subsidy granted by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, for a line of railway from Grand Piles, on the St. Maurice River, to its junction with the Lake St. John Railway, a distance of about fifty miles, a subsidy of..... 217,600

118. To the St. John Valley and River du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

119. To the Lake Temiscamingue Railway Company, for four short sections of railway, in all about two miles in length, to overcome the rapids of the Ottawa River, known as "La Mi-Charge," "La Cave," "Les "Erables," and "La Montagne," and for the construction of wharfs and landing stages at these rapids, to connect the Canadian Pacific Railway at Mattawa with Lake Temiscamingue by steamboats, railways and other works (in lieu of a portion two miles in length, out of the eight miles of railway subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, under which about six miles of railway have already been built from the foot of Long Sault proper to the foot of Lake Temiscamingue, and in lieu also of the subsidy granted by the Act 49 Victoria, chapter 10), a subsidy of..... 12,400

120. To the Carillon and Grenville Railway Company, for twelve miles of their railway from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

121. To the Minudie Branch Railway Company, for five and a half miles of their railway from its junction with the Joggins Railway, near the River Hébert railway bridge, to the village of Minudie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 17,600

122. To the Lake Temiscamingue Colonization and Railway Company, for ten and a half miles of their railway from the Long Sault to Lake Kippewa, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 33,600

123. To the Leamington and St. Clair Railway Company, for two miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to the village of Comber, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 6,400

124. To the Cumberland Railway and Coal Company for fourteen miles of their railway from a point on the Spring Hill and Parrsboro' Railway, near Spring Hill, to a point on the railway between Oxford and New Glasgow, near Oxford village, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 44,800

125. To the Montreal and Champlain Junction Railway Company, a subsidy of..... $ 64,000

126. To the Quebec and Lake St. John Railway Company, for nine miles of their railway, the distance which the previous subsidies granted are short of covering from the city of Quebec to Lake St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 28,800

127. To the Temiscouata Railway Company, for thirty miles of a branch of their railway from Edmundston towards the St. Francis River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 96,000

128. To the Cornwallis Valley Railway Company, for thirteen miles of their railway from Kentville to Kingsport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 41,600

129. To the Nova Scotia Central Railway Company, for thirty-four miles of their railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

130. To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, a subsidy of..... 89,600

131. For a railway from Woodstock towards Centreville, twenty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 64,000

132. For a railway bridge over the St. Lawrence River, at Coteau Landing on the line of the Canada Atlantic Railway, a subsidy of fifteen per cent on the value of the structure, not to exceed..... 180,000

133. To the Lake Erie, Essex and Detroit River Railway Company, for twenty-seven miles of their railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding..... 118,400

"For the purpose of granting corporate powers to persons or companies undertaking the construction of railways or parts of railways, mentioned in the next preceding section, for the construction of which no corporate powers exist at the time of the passing of this Act, the Governor in Council may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, as the Governor in Council shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; the other subsidies, including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct their railway, shall be granted to such companies as shall be approved by the Governor in Council, as having established, to his satisfaction, their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized, except as regards the subsidy for the bridge over the

St Lawrence River, upon which shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"Notwithstanding anything contained in the Act forty-fifth Victoria, chapter fourteen, or in the Act forty-sixth Victoria, chapter twenty-five, the balances of the sums granted for a railway from St. Raymond to Lake St. John and to the Quebec and Lake St. John Railway Company by the said Acts respectively, which have not yet been paid by the Government, may be paid at any time within one year from the passing of this Act, subject to the conditions in the said Act contained."

By the Act 51 Vic., cap. 3, 1888 (*Assented to 22nd May, 1888*):—

134. To the Ottawa and Parry Sound Railway Company, for 22 miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by 49 Victoria, chapter 10, for a railway from a point on the Canadian Pacific Railway to Eganville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 70,400 00

135. To the Nova Scotia Central Railway Company, for 46 miles of their railway, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 147,200 00

136. To the Montreal and Champlain Junction Railway Company, for 3 miles of their railway from the end of the present subsidized section, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600 00

137. To the Massawippi Junction Railway Company, for their railway from a point on the Atlantic and North-west Railway, near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of..... 32,000 00

138. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of $31,500, to be paid out monthly as the work progresses, upon the certificate of the Chief Engineer of Government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken, and for three miles of their railway extending from a point three miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $9,600, provided that the entire work subsidized upon this railway shall be completed within four years from the passing of this Act, the subsidy granted by this Act not to exceed in the whole..... 41,100 00

139. To the Port Arthur, Duluth and Western Railway Company, for 84¾ miles of their railway from Port Arthur towards Gun Flint Lake, in lieu of the subsidies granted by 48-49 Victoria, chapter 59, and 49 Victoria, chapter 10, for the construction of a railway from Murillo Station to Crooked Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 271,200 00

140. To the Quebec and Lake St. John Railway Company, for 30 miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, being a transfer made at the request of the Saguenay and Lake St. John Railway Company of the subsidy granted to them by 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000 00

141. To the Temiscouata Railway Company, for 20 miles of their branch railway from Edmundston towards the St. Francis River, in the province of Quebec, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of..... $100,000 00

142. To the Quebec Central Railway Company, for the construction and completion of a line of railway from St. Francis Station to a point on the Atlantic and North-west Railway near Moose River, 90 miles, in lieu of the balance of the subsidy, unearned, granted by 47 Victoria, chapter 8, a subsidy not exceeding $21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of 288,000 00

143. To the Central Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 4,052 tons of used iron rails and fastenings, loaned to the St. Martin's and Upham Railway Company, now forming part of the Central Railway, which rails and fastenings stand in the Public Accounts as an asset for..... 83,612 54

144. To the Elgin, Petitcodiac and Havelock Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,201 tons of used iron rails and fastenings loaned to the Elgin Branch Railway, now forming part of the Elgin, Petitcodiac and Havelock Railway, which rails and fastenings stand in the Public Accounts as an asset for 44,252 82

145. To the Kent Northern Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,549 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 58,334 27

146. To the Halifax Cotton Company of Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 233 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 4,335 00

147. To the Steel Company of Canada, in Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company of 597 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 11,964 66

148. To the Albert Railway Company of New Brunswick, a grant as a subsidy (the section of road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 726 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 14,665 45

149. To the Chatham Branch Railway of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 958 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... $24,439 84

" All the lines, for the construction of which subsidies are granted, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and also the said subsidies respectively, payable in cash, shall be payable out of the Consolidated Revenue Fund of Canada by instalments, on the completion to the satisfaction of the Minister of Railways and Canals of each section of the railway of not less than 10 miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized."

By the Act 52 Vic., chap. 3, 1889. *(Assented to 2nd May, 1889):—*

150. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Ottawa, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $172,400 00

151. To the Ottawa and Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of sixty-two miles, a subsidy not exceeding in the whole..... 320,000 00

152. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway, from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

153. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the line of the Northern and Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000 00

154. For a railway from St. Andrew's to the Canadian Pacific Railway, at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

155. For a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 156,800 00

156. For a line of the Central Railway from the head of Grand Lake to the Intercolonial Railway, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000 00

157. To the Albert Southern Railway Company, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole 31,771 43

158. To the Baie des Chaleurs Railway Company, the balance remaining unpaid of the subsidy mentioned in the Act 49th Victoria, chapter 17, not exceeding in the whole 244,500 00

159. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria Branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole..... $145,000 00

160. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Act 45th Victoria, chapter 14, and 46th Victoria, chapter 25, not exceeding in the whole.. 35,000 00

161. For a railway from some point on the Joggins Railway, near the Hébert River, to Young's Mills, in the province of Nova Scotia, a distance of five miles, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 16,000 00

162. To the St. Clair Frontier Tunnel Company, for the construction of a tunnel under the St. Clair River, from a point at or near Sarnia, to a point at or near Port Huron, a subsidy not exceeding in the whole..... 375,000 00

163. To the Pontiac and Renfrew Railway Company, for six miles of their railway from the north bank of the Ottawa River, opposite Braeside, or from Bristol Iron Mines, to the Pontiac Pacific Junction Railway, near the Quyon River, in the province of Quebec, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 19,200 00

164. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the St. Charles River, to or near to Cap Tourmente, in the province of Quebec, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 96,000 00

165. To the Fredericton and St. Mary's Bridge Company, for a bridge over the St. John River, at Fredericton, in the province of New Brunswick, a subsidy not exceeding in the whole..... 30,000 00

166. To the Napanee, Tamworth and Quebec Railway Company, for seven miles of their railway, from a point at or near Yarker to a point at or near Harrowsmith, and to a company for three miles of railway from a point at or near Harrowsmith to a point at or near Sydenham, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 32,000 00

167. For a railway from a point near Sicamous, on the Canadian Pacific Railway, to a point on Lake Okanagan for fifty-one miles of such railway, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 163,200 00

168. To the Cornwallis Valley Railway Company, for one mile of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Kingsport, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 3,200 00

169. To the Lake Témiscamingue Colonization and Railway Company, for fifteen miles of their railway, from Mattawa station on the Canadian Pacific Railway, towards the Long Sault, or from the Long Sault towards the said Mattawa station, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

170. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of Saint-Michel des Saints, on the River Mattawin, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

171. To the Kingston, Smith's Falls and Ottawa Railway Company, for twenty miles of their railway, from the city of Kingston towards Smith's Falls, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 64,000 00

172. To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway, from Woodstock to Hamilton, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 158,400 00

173. For a railway from St. Césaire to St. Paul d'Abbotsford, in the province of Quebec, five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000 00

174. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

175. To the Drummond County Railway Company, for four and one-half miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Ball's Wharf, on the St. Lawrence River, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 14,400 00

176. To the St. Catharines and Niagara Central Railway Company, for twenty miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Catharines, towards the city of Hamilton, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

177. To the Quebec and Lake St. John Railway Company, for twenty miles of their railway, from the end of the section of thirty miles from Lake St. John towards Chicoutimi, subsidized by the Act 51 Victoria, chapter 3, towards Chicoutimi, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

178. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

179. To the Hereford Railway Company, for fifteen miles of their railway, from Cookshire to a junction with the Quebec Central Railway at Dudswell, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

180. To the Massawippi Junction Railway Company, for fifteen miles of their railway, from Ayer's Flat to Coaticook, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

181. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro', towards Palmer's Rapids, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 64,000 00

182. To the Thousand Islands Railway Company, for four miles of their railway, from a point near the St. Lawrence River, in Gananoque village, to Gananoque Junction of the Grand Trunk Railway, and for thirteen miles of their railway, from Gananoque Junction of the Grand Trunk Railway to a junction with the Brockville, Westport and Sault Ste. Marie Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400 00

183. For a railway from Cape Tourmente towards Murray Bay, twenty miles, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $64.000 00

184. To the Amherstburg, Lake Shore and Blenheim Railway Company, for twenty miles of their railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

"So much of the subsidy of three thousand two hundred dollars per mile, which under the provisions of the Act forty-ninth Victoria, chapter seventeen, and of this Act, may be paid to the Baie des Chaleurs Railway Company in respect of the thirty miles of their railway, from the seventieth to the hundredth mile, eastward from Metapediac, shall be applicable to the section of the said railway, comprised between the fortieth and the seventieth mile thereof, eastward from Metapediac, instead of to the said first mentioned section of thirty miles, making six thousand four hundred dollars per mile applicable to the secondly mentioned section of thirty miles; but the foregoing provision shall be subject to the condition that the said company undertake to complete the thirty miles of their railway from the seventieth to the hundredth mile eastward from Metapediac within a reasonable time, not to exceed four years, to be fixed by Order in Council, and without any further subsidy from the Government of Canada, and that they deposit with the Minister of Railways and Canals, as security to the Crown that they will well and truly carry out their undertaking, their bonds to the amount of two hundred thousand dollars.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized, except as respects the tunnel under the St. Clair River, in which case there shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"And for the removal of doubts it is hereby declared and enacted that the provision in the Act passed in the fifty-first year of Her Majesty's reign, and chaptered three, relating to the Pontiac Pacific Junction Railway Company, extended and extends the several subsidies in aid of the said company for four years from the passing of the said Act, that is to say, from the twenty-second day of May, one thousand eight hundred and eighty-eight."

By the Special Act, 52 Vic., cap. 5, 1889 *(Assented to 2nd May, 1889)*:—

185. In order to enable the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company to complete their railway from Regina to some point on the South Saskatchewan River at or near Saskatoon, and thence northward to Prince Albert, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails,

for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum in manner following, that is to say:—the sum of fifty thousand dollars to be paid annually on the construction of the railway to a point at or near Saskatoon, such payment to be computed from the date of the completion of the railway to such point; and the remaining thirty thousand dollars annually on the extension of the railway to Prince Albert, such payment to be computed from the date of such last mentioned completion: Provided that if the second portion of the said railway is not built and operated to Prince Albert within two years after the completion of the railway to the South Saskatchewan as aforesaid, the payment of fifty thousand dollars shall cease until the whole railway is finished to Prince Albert.

By the Act 53 Vic., cap. 2, 1890 *(Assented to 16th May, 1890)*:—

186. To the Montreal and Ottawa Railway Company, for thirty miles of their railway, from the western end of the thirty-six miles subsidized by the Act 50-51 Victoria, chapter 24, towards Ottawa, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... $ 96,000

187. To the Waterloo Junction Railway Company, for eleven miles of their railway, from Waterloo to Elmira, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 35,200

188. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Acts 45 Victoria, chapter 14, and 46 Victoria, chapter 25, not exceeding in the whole... 600

189. For a railway from Woodstock via London to Chatham, in the province of Ontario, thirty miles in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Ingersoll via London to Chatham, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 256,000

190. To the St. Catharines and Niagara Railway Company, for fourteen miles of their railway, from the end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Hamilton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 44,800

191. To a railway from Ottawa to Morrisburg, fifty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 166,400

192. To the Erie and Huron Railway Company, for twenty-two miles of their railway from Petrolea via Oil Springs to Dresden, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 70,400

193. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a railway from Brockville to Westport, the balance remaining unpaid of the subsidy granted by the Act 48-49 Victoria, chapter 59, not exceeding in the whole..... 83,000

194. To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

195. To the Port Arthur, Duluth and Western Railway Company, for five miles of their railway, being a branch of the main line of railway to the Kakabeka Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

196. To the Lake Erie and Detroit River Railway Company, for fifty miles of their railway, on a line to be fixed by the Governor in Council, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000

197. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway, from Bobcaygeon to the Midland Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 51,200

198. To the Kingston, Smith's Falls and Ottawa Railway Company, for thirty-six miles of their Railway, from the north-east end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Smith's Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 115,200

199. To the Ottawa and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

200. To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway, from Belleville to Tweed and thence to Bridgewater, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

201. To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

202. To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 11,200

203. To the Woodstock and Centreville Railway Company, for six miles of their railway, from the western end of the twenty miles subsidized by the Act 50-51 Vic., chap. 24, to the International boundary between the province of New Brunswick and the state of Maine, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

204. For a railway from a point at or near Fredericton, via Oromocto and Gagetown, to a point on the New Brunswick Railway west of Westfield station, for thirty miles thereof, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

205. To the Central Railway Company of New Brunswick, for four and a half miles of their railway, the distance which the previous subsidy granted is short of covering, from the head of Grand Lake to the Intercolonial Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 14,400

206. To the Montreal and Western Railway Company, for seventy miles of their railway, from St. Jérôme, north-westerly towards Désert, in the province of Quebec, in lieu of the subsidy granted by the Act 49 Vic., chap. 10, a subsidy not exceeding $5,161 per mile, nor exceeding in the whole..... 361,270

"Provided, that the subsidy hereby granted to the Montreal and Western Company may be paid by instalments on the completion of each section of the railway as follows, that is to say:—

SECTIONS.	Approximate length in miles.
St. Jérôme to Shawbridge	8
Shawbridge to St. Sauveur	4
St. Sauveur to Ste. Adèle	6
Ste. Adèle to Lac à la Fourche	6
Lac à la Fourche to Ste. Agathe	6½
Ste. Agathe to St. Faustin	14
St. Faustin to St. Jovite	7½
St. Jovite to Summit Lake	8
Summit Lake to La Chute aux Iroquois	7
La Chute aux Iroquois towards Désert	3

"Such instalments to be proportionate to the value of the portions so completed in comparison with that of the whole work undertaken, to be established as aforesaid."

207. For seventy-five miles of the railway from Shelburne, in the county of Shelburne, and from Liverpool, in the county of Queen's towards Annapolis, in the province of Nova Scotia, to be so contracted for as to secure the construction to both Shelburne and Liverpool, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 240,000

208. To the Inverness and Richmond Railway Company, for fifty miles of their railway from Port Hawkesbury to Broadcove, a subsidy not exceeding $1,000 per mile, nor exceeding in the whole..... 50,000

209. To the International Railway Company, for a railway from Sherbrooke to the international boundary, the balance remaining unpaid of the subsidy granted by the Act 46 Vic., chapter 25, not exceeding in the whole..... 3,840

210. For completing the Montreal and Sorel Railway from St. Lambert to Sorel..... 40,000

211. To the Pontiac Pacific Junction Railway Company, for seven and a half miles of their railway, from Hull to Aylmer, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 24,000

212. To the Montreal and Lake Maskinongé Railway Company, for three and a half miles of their railway, the distance which the subsidy granted by the Act 49 Vic., chapter 10, is short of covering from St. Félix to Lake Maskinongé, in the parish of St. Gabriel, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 10,200

213. To the Great Eastern Railway Company, for a bridge over the Nicolet River, and also a bridge on the St. Francis River, a subsidy of 15 per cent on the value of the structure, not to exceed..... 37,500

214. To the Drummond County Railway Company, for twenty-four miles of their railway, from Drummondville to Ste. Rosalie, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 76,800

215. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

216. To the Lake Temiscamingue Colonization Railway Company, for twenty miles of their railway, from the northern end of the fifteen miles subsidized by the Act 52 Vic., chapter 3, to the Long Sault, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

217. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from the northern end of the 15 miles subsidized by the Act 52 Victoria, chapter 3, towards the parish of St. Michel des Saints, on the River Mattawa, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

218. To the St. Lawrence and Adirondack Railway Company, for eighteen miles of their railway, from Valleyfield to Huntingdon, on the Montreal and Champlain Junction Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

219. To the Quebec Central Railway Company, for ninety miles of their railway, from St. Francis Station, on the Quebec Central Railway, to a point on the Atlantic and North-western Railway,

near Moose River, or from a point on the Quebec Central Railway between the Chaudière River and Tring Station, to a point on the International Railway at or near Lake Megantic, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding $21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period, as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of..... $288,000

220. To the Quebec and Lake St. John Railway Company, for a railway bridge over the St. Charles River, to give access to the city of Quebec, a subsidy not to exceed in the whole $30,000; also for twelve miles of their railway from Lorette via Charlesbourg to Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $38,400..... 68,400

221. For a railway from Summerside to Richmond Bay, in the province of Prince Edward Island, three miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600

222. To the Columbia and Kootenay Railway Company, for thirty-five miles of their railway, from the outlet of Kootenay Lake to a point on the Columbia River as near as practicable to the junction of the Kootenay and Columbia Rivers, a subsidy not exceeding $3,200 per mile, nor to exceed in the whole..... 112,000

223. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley on a line which will afford facilities of communication with the Iron Mines, Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

224. For a railway from Fredericton to the village of Prince William in the province of New Brunswick, twenty-two miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

225. To the St. John Valley and Rivière du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

226. To the Témiscouata Railway Company, for sixteen miles of their railway, from the west end of the twenty miles of their branch railway from Edmundston, subsidized by the Act 51 Victoria, chapter 3, towards the St. Francis River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200

227. For a railway from the north end of the fourteen miles for which a subsidy was granted by the Act 50 and 51 Victoria, chapter 24, to the Tobique Valley Railway Company, from Perth Centre towards Plaister Rock Island, eleven miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 35,200

228. To the Orford Mountain Railway Company, for thirty-one miles of their railway, between Eastman and Kingsbury, a subsidy not exceeding $3,200 per mile, nor exceedingin the whole..... 99,200

229. For a railway from Lachine Bank, on a line of the Grand Trunk Railway, to a point at or near Rivière des Prairies, a distance of fifteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; the other subsidies,

including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct its railway, shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council,—except the Erie and Huron Railway, which shall be completed within two years from the first day of July next. And they shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specifying an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make. The location, also, of every such line of railway shall be subject to the approval of the Governor in Council. And all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as regards the Erie and Huron Railway Company, upon which payment shall be made only upon the completion of the work—except, also as regards the subsidies to the Inverness and Richmond Railway, which shall be paid on the completion of each ten mile section, in accordance, as nearly as practicable, with the agreement between the company and the municipality of Inverness, and with section four of the Act of the Legislature of Nova Scotia, 1890, intituled: An Act to enable the county of Inverness to borrow money—except, also, as regards the subsidies to the Great Eastern Railway Company for bridges over the Nicolet and St. Francis Rivers, and to the Quebec and Lake St. John Railway for the bridge over the St. Charles River, upon which shall be paid fifteen per cent of the value of work done, on monthly progress estimates certified by the Chief Engineer and upon the approval of the Minister of Railways and Canals—and except also the subsidy granted to the Quebec Central Railway Company, the first annual payment upon which shall be made at the end of twelve months from the date of the Chief Engineer's certificate of the completion of the work, and each subsequent payment at the end of each twelve months thereafter, for the term of twenty years.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing running powers or traffic arrangements or other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those subsidized, as the Governor in Council determines."

By the special Act 53 Vic., ch. 5, 1890 *(Assented to 16th May, 1890)*:—

230. In order to enable the Calgary and Edmonton Railway Company to construct so much of their railway as reaches from a point on the line of the Canadian Pacific Railway Company within the town of Calgary to a point on the North Saskatchewan River near Edmonton, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum, in manner following, that is to say: the sum of eighty thousand dollars to be paid annually on the construction of the railway from Calgary to a point on the North Saskatchewan River near Edmonton,—such payment to be computed from the date of the completion of the railway between such points: Provided that the Governor General in Council may order such sums to be paid in semi-annual instalments, and may permit the company to assign the same by way of security for any bonds or securities which may be issued by the company in respect of the company's undertaking.

By 54-55 Victoria, ch. 8, 1891 *(Assented to 30th Sept., 1891)*:—

231. To the Great Northern Railway Company, for a railway from a point at or near New Glasgow or St. Lin to or near to Montcalm, in the province of Quebec, eighteen miles, the balance

remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Act forty-ninth Victoria, chapter ten, nor exceeding in the whole..... $ 28,100 00

232. To the Quebec and Lake St. John Railway Company, for the railway bridge over the St. Charles River to give access to the city of Quebec, the difference between the amount already paid to the company and the sum of $30,000 mentioned as not to be exceeded by the Act fifty-third Victoria, chapter two, a subsidy not exceeding..... 5,250 00

233. To the Oshawa Railway Company, for seven miles of their railway from Port Oshawa towards Raglan, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

234. To the St. Lawrence, Lower Laurentian and Saguenay Railway Company, for the section of their railway from Grand Piles, on the St. Maurice River to its junction with the Quebec and Lake St. John Railway, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole..... 92,784 00

235. To the Great Eastern Railway Company, for thirty-miles of their railway, from the River St. Francis to the Arthabaska Railway at St. Grégoire station, the balance remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole..... 79,700 00

236. To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway from Woodstock to Hamilton, in the province of Ontario, in lieu of the subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 158,400 00

237. To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole..... 46,040 00

238. To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding $6,400 per mile, nor exceeding in the whole.... 89,600 00

239. To the Kingston, Smith's Falls and Ottawa Railway Company for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed $179,200, granted by the Acts fifty-second Victoria, chapter three, and fifty-third Victoria, chapter two, a subsidy not exceeding $12,534 per annum, to be paid in semi-annual instalments of $6,267 each, for twenty years, which represents a grant in cash of..... 179,200 00

"Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles; Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding $1,170,000, in consideration whereof there shall be paid to the company, for twenty years, a semi-annual annuity calculated on a basis of three and one-half per cent on the amount so deposited; Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

240. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro' towards Palmer's Rapids, in the province of Ontario, in lieu of a subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $64,000 00

"Provided that the subsidy hereby granted to the Brockville, Westport and Sault Ste. Marie Railway Company may be paid by instalments, on the completion of each section of the railway as follows, that is to say:—

Sections.	Length in miles.
From, at or near Newboro' to Westport.....	4
From Westport towards Palmers Rapids.....	16

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also of every such line of railway, shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, the first semi-annual payment upon which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of twenty-eight miles of the railway, and each subsequent payment at the end of each six months thereafter, for the term of twenty years,—except also as to the Quebec and Lake St. John Railway Company, the subsidy to which shall be paid upon the completion of the work,—except also as to the Brockville, Westport and Sault Ste. Marie Railway Company, the subsidy to which shall be paid as follows: on the completion of that portion of the said road from, at or near Newboro' to Westport, a distance of four miles, the sum of twelve thousand eight hundred dollars, and on the completion of the remaining sixteen miles from Westport towards Palmer's Rapids, the sum of fifty-one thousand two hundred dollars.

"Within one month after the commencement of each session of Parliament, whilst any of the said moneys are being paid out, there shall be laid before Parliament a statement showing all payments of such moneys during the then next preceding year, the names of the respective persons to whom such payments have been made, and the amounts paid them respectively, together with the engineer's report upon which pay-

ments have been recommended, and copies of all contracts between the Government and the company under which the said subsidies are authorized to be paid.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running power or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

By the Act 55-56 Victoria, chap. 5, 1892 *(Assented to 9th July, 1892)*:—

241.	To the Lake Erie and Detroit River Railway Company, for fifty-eight miles of their railway from a point at or near Cedar Creek to the town of Ridgetown, in lieu of the subsidies granted to the Lake Erie and Detroit River Railway Company by the Act 53 Victoria, chapter 2, and to the Amherstburg, Lake Shore and Blenheim Railway Company by the Act 52 Victoria, ch. 3.	$224,000 00
242.	To the Ottawa, Arnprior and Parry Sound Railway Company, for fifty-five miles of their railway from Barry's Bay towards the Northern Pacific Junction Railway, a subsidy not exceeding $6,400 per mile on the first twenty-seven and a half miles out from Barry's Bay, and not exceeding $3,200 per mile on the second twenty-seven and a half miles, nor exceeding in the whole.....	264,000 00
243.	To the Canadian Pacific Railway Company or to the Columbia and Kootenay Railway and Navigation Company, for a railway from a point on the Canadian Pacific Railway at or near Revelstoke to the head of Arrow Lake, for twenty-five miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	80,000 00
244.	To the Tobique Valley Railway Company, for a railway from the north end of the eleven miles for which a subsidy was granted by the Act 53 Victoria, chapter 2, to Plaister Rock Island, for 3 miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	9,600 00
245.	To the Monfort Colonization Railway Company, for twenty-one miles of their railway from Lachute, St. Jérôme or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Monfort and westward, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	67,200 00
246.	To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway from the Belmont iron mines to the Canadian Pacific Railway and the Central Ontario Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	32,000 00
247.	To the Montreal and Champlain Junction Railway Company, the balance remaining unpaid of the subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, a subsidy of.....	15,100 00
248.	To the Buctouche and Moncton Railway Company, for thirty-two miles of their railway from Moncton to Buctouche, the balance remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Acts 49 Victoria, chapter 10, and 50-51 Victoria, chapter 24, not exceeding in the whole.....	35,480 00
249.	To the Cobourg, Northumberland and Pacific Railway Company, for nineteen miles of their railway from Cobourg to the Ontario and Quebec Railway (in addition to the subsidy granted by the Act 53 Victoria, chapter 2), a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	60,800 00

250. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien in the said county, for twelve miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 38,400 00

251. To the Inverness and Richmond Railway Company (or any other company undertaking the work), for twenty-five miles of their railway from a point on the Cape Breton Railway, at or near Orangedale, to Broadcove, a subsidy not exceeding $3,200 per mile, in lieu of the subsidy of $50,000 granted to the said railway company by 53 Victoria, chapter 2, and on the same conditions, not exceeding in the whole 80,000 00

252. To the Nicola Valley Railway Company, for twenty-five miles of their railway from a point on the Canadian Pacific Railway at or near Spence's Bridge towards Nicola Lake 80,000 00

253. To the Lotbinière and Megantic Railway Company, for fifteen miles of their railway from a point at or near St. Jean Deschaillons towards Glen Lloyd, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

254. To the Stewiacke and Lansdowne Railway Company, for a railway from a point on the Intercolonial Railway, through the Stewiacke Valley, on a line which will afford facilities of communication with the iron mines at Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 80,000 00

255. To the Philipsburg Junction Railway and Quarry Company, for six and seven-hundredths miles of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 21,600 00

256. To the Kingston, Napanee and Western Railway Company, for three miles of their railway from a point at or near Harrowsmith to a point at or near Sydenham, in lieu of the subsidy granted for this section of road by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 9,600 00

257. For a railway from Cape Tourmente towards Murray Bay, in the province of Quebec, twenty miles, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000 00

258. To the Stewiacke and Lansdowne Railway Company, for a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, for forty-nine miles of such railway, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 156,800 00

259. To the Restigouche and Victoria Railway Company, for fifteen miles of their railway from Campbelton towards Grand Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

260. For a railway from St. Johns to Ste. Rosalie, thirty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 102,400 00

261. For a railway from St. Placide to St. Andrew's, eight miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 25,600 00

262. For a railway to complete the connection between Sydney and Louisburg, in the county of Cape Breton, for twenty-eight miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 89,600 00

263. To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway from Belleville to Tweed and thence to Bridgewater, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 96,000 00

264. To the Kingston, Smith's Falls and Ottawa Railway Company, for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed $179,200, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of such subsidies so granted, to be paid in semi-annual instalments for such period not exceeding twenty-one years, as the company may elect, which represents a grant in cash of..... 179,200 00

"Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles: Provided also, that the company may deposit with the Minister of Finance and Receiver General, a sum not exceeding $1,170,000, in consideration whereof there shall be paid to the company for such period not exceeding twenty years as the company may elect, a semi-annual annuity calculated on a basis of three and a half per cent on the amount so deposited. Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

265. To the St. Catharines and Niagara Central Railway Company, for thirty-four miles of their railway from the city of St. Catharines to the city of Hamilton, in lieu of the subsidies, not to exceed $108,000, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of the said subsidies, to be paid in semi-annual instalments for such period, not exceeding twenty years, as the company may elect, representing a grant in cash of $108,000: Provided that, upon the completion of ten miles of said railway, a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole thirty-four miles. Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding $400,000, in consideration whereof there shall be paid by the Government to the company, for such period not exceeding twenty years, as the company may elect, a semi-annual annuity, calculated on a basis of three and a half per cent on the amount so deposited, or a guarantee of a like sum, as interest on the bonds of the company: Provided further, that the company, with the approval of the Governor in Council, may assign the said subsidy and annuity to trustees by way of security for principal, or interest of any bonds or securities which may be issued by the company in respect of their undertaking, and the subsidy last above mentioned to the St. Catharines and Niagara Central Railway Company shall be paid in instalments, the first semi-annual payment upon which shall be made at the end of the six months from the date of the Chief Engineer's certificate of the completion of the first ten miles of railway, and each subsequent payment at the end of six months thereafter, for the term of twenty years or less. It is a condition of this subsidy that the sum not exceeding $400,000 above mentioned shall be deposited with the Finance Minister before January 1st, 1893.

266. To the Woodstock and Centreville Railway Company, for a railway from Woodstock towards Centreville, twenty miles, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $64,000 00

267. To the Brockville, Westport and Sault Ste. Marie Railway Company, for the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding $3,200 per mile, and also for the balance remaining unpaid of the subsidy granted by the Act 53 Victoria, chapter 2, nor exceeding in the whole..... 96,800 00

268. To the New Glasgow Iron, Coal and Railway Company, for a railway from Eureka Junction on the Intercolonial Railway to a point at or near Sunnybrae, including a branch line to the charcoal iron furnace at Bridgeville, for twelve and a half miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 40,000 00

269. To the Thousand Island Railway Company, for an extension of their railway to connect with the Brockville, Westport and Sault Ste. Marie Railway, the Kingston, Napanee and Western Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, and an extension across the mouth of the Gananoque River, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 44,000 00

Payable, $14,000 on the completion of the last named or southern extension, and the balance of said subsidy, being $30,000, on the completion of the first named or northern extension of their railway.

270. To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $96,000 00

271. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway from the end of the line subsidized by the Act 53 Victoria, chapter 2, at the junction with the Midland Railway, to Pontypool, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200 00

272. For seventy-five miles of the railway from Sand Point, Shelburne Harbour, in Nova Scotia, to Annapolis Royal, in the county of Annapolis and to a junction at or near New Germany on the Nova Scotia Central Railway, with a view to future construction to Liverpool, in lieu of the subsidy of a like amount granted by the Act 53 Victoria, chapter 2, for the same length of railway from Shelburne and from Liverpool, towards Annapolis, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 240,000 00

273. To the Kingston, Napanee and Western Railway Company, for twenty miles of their railway, being extensions or branches in the counties of Peterborough, Hastings, Addington, Frontenac or Leeds, towards iron deposits, a subsidy not exceeding $3,200 per mile, payable in instalments regulated by the length of each of the said extensions, additions or branches, the subsidy not exceeding in the whole..... 64,000 00

274. To the St. John Valley and Rivière du Loup Railway Company, for ten miles of their railway from the north end of the line subsidized by the Act 53 Victoria, chapter 2, towards the town of Woodstock, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

275. To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 96,000 00

276. To the Ottawa, Arnprior and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

277. To the Ottawa, Arnprior and Parry Sound Railway Company, for twenty-two miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400 00

278. To the Lake Témiscamingue Colonization Railway Company, for thirty-five miles of their railway from Mattawa to the Long Sault, in lieu of the subsidies granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 112,000 00

279. To the Témiscouata Railway Company, for twelve miles of their railway from the north end of the section of the St. François Branch subsidized by the Act 51 Victoria, chapter 3, being the first twelve miles on the section subsidized by the Act 53 Victoria, chapter 2, a subsidy not exceeding $1,800 per mile, in addition to the subsidy already granted, and not exceeding in the whole..... 21,600 00

280. To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway from Port Burwell to Tilsonburg, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200 00

281. To the Woodstock and Centreville Railway Company, for six miles of their railway from the west end of their twenty miles subsidized by the Act 50-51 Victoria, chapter 24, to the international boundary between the province of New Brunswick and the state of Maine, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200 00

282. To the Lake Témiscamingue Colonization Railway Company, for 15 miles of their railway from the Long Sault to the crossing of the Kippewa River, a subsidy not exceeding $3,200 per mile—and a subsidy of fifteen per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not exceeding $15,000,—nor exceeding in the whole..... 63,000 00

283. To the Goderich and Wingham Railway Company, for thirty-one miles of their railway from Goderich to Wingham, via Port Albert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 99,200 00

284. To the Joliette and St. Jean de Matha Railway Company, for eight miles of their railway from St. Félix de Valois to St. Jean de Matha, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 25,600 00

285. To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 48,000 00

286. To the Nipissing and James Bay Railway Company, for twenty-five miles of their railway from, at or near North Bay station on

	the Canadian Pacific Railway towards James Bay, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	$ 80,000 00
287.	For a railway from a point on the Intercolonial Railway between Ste. Flavie and Little Métis station to Matane, for fifty miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	160,000 00
288.	To the Ontario and Pacific Railway Company, for fifty-three and eighty-seven hundredths miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	172,400 00
289.	For a railway from a point on the line of the Canadian Pacific Railway on the Isle Jésus, in the county of Laval, towards St. Eustache, for twelve miles of such railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, to the Carillon and Grenville Railway Company, for twelve miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	38,400 00
290.	For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for eighteen miles of such railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	57,600 00
291.	To the Port Arthur, Duluth and Western Railway Company, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding, with the amount already paid, $3,200 per mile, nor exceeding in the whole.....	114,125 00
292.	To the Drummond County Railway Company for four and six-tenths miles of their railway from Bull's Wharf, on the St. Lawrence River, near Nicolet, to Ste. Rosalie Junction, an excess of distance by the constructed line over the subsidies heretofore voted for a railway between the said points, $3,200 per mile, not exceeding in the whole.....	14,720 00
293.	To the St. Lawrence and Adirondack Railway Company, for five and forty-two hundredths miles of their railway, from Huntingdon towards the international boundary, which, with the distance between Valleyfield and Huntingdon, twelve and fifty-eight hundredths miles, makes up the distance of eighteen miles named in the 53 Vic., chap. 2, granting a subsidy to this company, and for five and forty-hundredths miles from the east end of the eighteen miles referred to to the international boundary, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.....	25,024 00

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated

Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, and the subsidy granted to the St. Catharines and Niagara Central Railway Company, the first semi-annual payments upon both of which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of their railways respectively, and each subsequent payment at the end of each six months thereafter, for the term of twenty years or less.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines."

294. Notwithstanding the expiration of the time limited by the Act 47 Victoria, chapter 8, and by the contract entered into with the Pontiac Pacific Junction Railway Company, the Governor in council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act.

295. Notwithstanding the expiration of the time limited by the Act 52 Victoria, chapter 3, and by the contract entered into with the Quebec and Lake St. John Railway Company, the Governor in Council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act; and notwithstanding anything contained in the Act 50-51 Victoria, chapter 24, the Governor in Council may also pay to the said company the balance remaining unpaid of the subsidy granted to the company by the said Act, amounting to $12,800, on the four miles of their road from the north end of the main line subsidized towards Roberval.

By the Act 56 Vic., chap. 2, 1893 (*Assented to 1st April, 1893*):—

296. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 64,000 00

297. To the United Counties Railway Company, for thirty-two miles of their railway, from a point at or near the town of Iberville to St. Hyacinthe, and thence towards Sorel, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, for a railway from St. Johns to Ste. Rosalie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 102,400 00

298. To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway, divided into two sections: first, from the Belmont Iron Mines to Marmora village; second, from Marmora village to the junction with the Ontario Central Railway, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000 00

299. To the Central Ontario Railway Company, for twenty miles of their railway, from Coe Hill or Gilmore, or some point between

Coe Hill and Gilmore, to Bancroft, via L'Amable, or as near thereto as practicable, in lieu of the subsidy granted by the Act 48-49 Victoria, chapter 59, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 64,000 00

300. To the Quebec and Lake St. John Railway Company, for thirty miles of their railway, from Lake St. John towards Chicoutimi, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding in the whole..... 81,040 00

301. To the Irondale, Bancroft and Ottawa Railway Company, for fifty miles of their railway, from the Victoria branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47 Victoria, chapter 8, and again granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 145,000 00

302. To the Beauharnois Junction Railway Company, for thirty miles of their railway, from Ste. Martine towards St. Anicet, the balance remaining unpaid of the subsidy granted by the Act 50-51 Victoria, chapter 24, not exceeding in the whole..... 3,500 00

303. To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 11,200 00

304. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the River St. Charles, to or near to Cape Tourmente, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.. 30,400 00

305. To the Ottawa and Gatineau Valley Railway Company, for sixty-two miles of their railway, from Hull station towards Le Désert, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 89,248 00

306. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara, or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

307. To the Nova Scotia Central Railway Company (or to such person or persons or company as in the opinion of the Minister or acting Minister of Justice are entitled to the same) for eighty miles of their railway, from Lunenburg, on the east coast of Nova Scotia, westward to a point in the district of New Germany, together with a spur about three-fourths mile long to Bridgewater railway wharf, and from a point thirty-three and a half miles from Lunenburg and running to Middleton on the Windsor and Annapolis Railway, of unpaid subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, an amount not exceeding in the whole..... 4,500 00

308. To the Great Northern Railway Company, for eighteen miles of their railway, from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 54-55 Victoria, chapter 8, not exceeding in the whole..... 25,600 00

309. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific

Railway between Joliette and St. Félix de Valois, in lieu of the subsidy granted by the Act 53 Victoria, chap. 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000 00

310. To the Montfort Colonization Railway Company, for twenty-one miles of their three-feet gauge railway from Lachute, St. Jérôme, or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Montfort and westward, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 67,200 00

311. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of St. Michel des Saints, on the river Mattawa, in the province of Quebec, and for fifteen miles of their railway from the north end of the fifteen miles above referred to, towards the parish of St. Michel des Saints on the river Mattawa, in the province of Quebec, in lieu of the subsidies granted by the Acts 52 Victoria, chap. 3, and 53 Victoria, chap. 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

312. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the Northern Pacific Junction Railway, in the province of Ontario, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 97,600 00

313. To the Jacques Cartier Union Railway Company, for extending and completing their railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy of..... 20,000 00

314 To the Oshawa Railway Company, for seven miles of their railway and branches as follows: from Port Oshawa to a point at or near Edmondson's Falls mill site, near Mill Street, in the town of Oshawa (this portion being known as the "Lake" section of the said railway); thence to a point at or near the town hall in the town of Oshawa, and thence to the Oshawa station of the Grand Trunk Railway Company of Canada (this portion being known as the "Town" or "Northern" section of the said railway)—in lieu of the subsidy granted by the Act 54-55 Victoria, chapter 8, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

"All the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"All the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed

in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as follows :—

"(*a.*) The subsidy to the Ontario, Belmont and Ottawa Railway Company, which shall be paid as follows : on the completion of the first section, an instalment proportionate to the value of the said section in comparison with that of the ten miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy on the completion of the second section ;

"(*b.*) The subsidy to the Oshawa Railway Company, which shall be paid as follows : on the completion of the "Town" or "Northern" section, an instalment proportionate to the value of the said section in comparison with that of the seven miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy, on the completion of the "Lake" section of the said railway."

By the Act 57-58 Vic., cap. 4, 1894. *(Assented to, 23rd July, 1894)* :—

315. To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000

316. To the Brockville, Westport and Sault Ste. Marie Railway, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding $3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was re-granted by chapter 5 of 1892 ; the whole not exceeding 86,800

317. To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway, from Port Burwell to Tilsonburg, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200

318. To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway, from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding $3,200 per mile, nor exceeding in the whole 4,790

319. To the St. Catharines and Niagara Central Railway Company, for 34 miles of their railway from the city of St. Catharines to the city of Hamilton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

320. To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887 ; and for 30 miles of their railway from the western end of the 30 miles first mentioned towards Ottawa, the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, not exceeding $3,200 per mile ; the whole not exceeding..... 118,400

321. Notwithstanding the expiration of the time limited by chapter 2 of 1890, and by the contract entered into with the Quebec Central Railway Company, and notwithstanding anything otherwise in the said chapter 2 contained, the Governor in Council may pay the subsidy granted by the said chapter to the said company at the present worth of the twenty annual payments mentioned in the said chapter (interest computed at four per cent), for and upon the completion of its railway extending from a point between the Chaudière River and Tring Station to a point on the International Railway at or near Lake Megantic, and upon the inspection and acceptance of the same by the Chief Engineer of Railways and Canals, the sum in all of..... 288,000

322. To the Philipsburg Junction Railway and Quarry Company, for $\frac{47}{100}$ mile of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi and a branch to Missisquoi Bay, the balance remaining unpaid of the subsidy granted by chapter 5 of 1892, not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 2,912

323. To the Joliette and St. Jean de Matha Railway Company, for 8 miles of their railway from St. Félix de Valois to St. Jean de Matha, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 23,600

324. To the Lake Temiscamingue Colonization Railway Company, for their railway from Mattawa to the foot of the Kippewa Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $160,000,—also 15 per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not to exceed $15,000 in all, in lieu of the subsidies granted by chapter 5 of 1892,—also the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, for their railway from Long Sault to Lake Kippewa, a subsidy not exceeding $3,200 per mile of railway and 15 per cent on the value of the bridges,—also, a sum of $1,750 additional per mile on their said railway from Mattawa to the foot of the Kippewa Lake; the whole not exceeding 274,940

325. For a railway from St. Placide to St. Andrews, 8 miles, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 25,600

326. For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for 18 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 57,600

327. For a railway from a point on the line of the Canadian Pacific Railway on Isle Jésus, in the county of Laval, towards St. Eustache, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, to the Carillon and Grenville Railway Company, for 12 miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

328. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien, in the said county, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

329. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of $31,500, to be paid out monthly as the work progresses, upon the certificate of the chief engineer of government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken; and for 3 miles of their railway extending from a point 3 miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $9,600, in lieu of the subsidy granted by chapter 3 of 1888; provided that the entire work subsidized upon this railway shall be completed within 4 years from the passing of this Act; the subsidy granted by this Act not to exceed in the whole 41,100

330. To the Pontiac Pacific Junction Railway Company, for the construction or acquisition of 7½ miles of railway, from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $ 24,000

331. To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, less the subsidy granted for the line from Hull to Aylmer, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceding $3,200 per mile, nor exceeding in the whole 73,172

332. To the Harvey Branch Railway Company, for 3 miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding $3,200 per mile, nor exceeding in the whole..... 4,046

333. For a railway from a point on the Intercolonial Railway near Newcastle via Douglastown, to a point on the River Miramichi opposite the town of Chatham, in the province of New Brunswick, 6 miles, in lieu of the subsidy granted by chapter 10 of 1886, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

334. For a railway from some point on the Joggins Railway, near the Hebert River, to Young's Mills, in the province of Nova Scotia, a distance of 5 miles, in lieu of the subsidy granted by chapter 3 of 1889, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

335. To the Woodstock and Centreville Railway Company, for a railway from Woodstock to the international boundary between the province of New Brunswick and the state of Maine, 26 miles, in lieu of the subsidies granted by chapter 24 of 1887 and chapter 2 of 1890 a subsidy not exceeding $3,200 per mile nor exceeding in the whole..... 83,200

336. For 90 miles of the railway from Newport or Windsor to Truro, or to a point between Truro and Stewiacke, and from a point on the said railway to a point at or near Eastville, and from Eastville through the valley of the Musquodoboit River towards a point on the proposed Dartmouth branch of the Intercolonial, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; and also for a railway bridge over the Shubenacadie River on the line of the said railway, a subsidy of 15 per cent on the value of the structure; the whole not exceeding..... 300,000

337. To the Nipissing and James Bay Railway Company, for 25 miles of their railway from, at or near North Bay Station on the Canadian Pacific Railway towards James Bay, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; also for 43 miles of their railway from North Bay towards Lake Tamagaming, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 217,000

338. To the Lotbinière and Mégantic Railway Company, for 15 miles of their railway, in addition to the 15 miles already subsidized and built, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

339. To the Drummond County Railway Company, for 30 miles of their railway from St. Leonard northerly towards a junction with the Intercolonial Railway at Chaudière Junction, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

340. For a railway from Lime Ridge, in the county of Wolfe, in the province of Quebec, northerly through the county of Wolfe and into the county of Megantic, a distance not exceeding 50 miles from Lime Ridge, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $160,000

341. To the Strathroy and Western Counties Railway Company, for 25 miles of their railway from St. Thomas through the counties of Elgin and Middlesex, towards Forest Station or Park Hill, on the Grand Trunk Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

342. To the Parry Sound Colonization Railway Company, for 20 miles of their railway east from Parry Sound, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

343. To the Manitoulin and North Shore Railway Company, for 10 miles of their railway from Little Current to Nelson, on the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

344. To the United Counties Railway Company for 32 miles of their railway from Iberville to Sorel, in addition to the 32 miles already subsidized, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 102,400

345. To the Joliette and St. Jean de Matha Railway Company, for 12 miles of their railway from St. Jean de Matha to Ste. Emelie de L'Energie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

346. To the Great Northern Railway Company, for 22 miles of their railway, from the eastern end of the 15 miles subsidized by chapter 2 of 1893 to a point between Joliette and St. Félix de Valois, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

347. To the Quebec and Lake St. John Railway Company, for 2 miles of the Chicoutimi branch of their railway, from the east end of the 50 miles already subsidized and built eastward to deep water at Chicoutimi, a subsidy not exceeding $3,200 per mile; also for 12 miles from the 52nd mile on the Chicoutimi branch to Ha Ha Bay, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 44,800

348. To the Pontiac and Ottawa Railway Company, for 23 miles of their railway from the point of divergence from the Pontiac Railway to Ferguson's Point, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 73,600

349. To the Ottawa and Gatineau Valley Railway Company, for 20 miles of their railway from the eastern end of the 62 miles already subsidized towards Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

350. To the Canada Eastern Railway Company for 6 miles of their railway from the town of Chatham to Black Brook, a subsidy not exceeding $3,200 per mile; also for 4 miles of their railway for a branch to the village of Nelson, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 32,000

351. For a railway from Cross Creek Station, on the Canada Eastern Railway to Stanley village, in the county of York, in the province of New Brunswick, 6 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

352. To the Restigouche and Victoria Railway Company, for 20 miles of their railway from the western end of the 15 miles subsidized by chapter 5 of 1892, towards Grand Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

353. To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman station to the Newcastle coal fields, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000

354. To the Tobique Valley Railway Company, for 15 miles of their railway from the present terminus at Plaister Rock easterly, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

355. Towards the restoration or renewal of the railway bridge on the South-eastern Railway over the Yamaska River at Yamaska, a subsidy equal to one-third of the actual cost of the renewal of the bridge, but the grant not to exceed in the whole..... 50,000

356. To the Boston and Nova Scotia Coal and Railway Company, for 10½ miles of their railway from the north end of the section already subsidized to Broad Cove, a subsidy not exceeding $3,200 per mile; also for 25 miles of their railway from a point on the Cape Breton Railway at or near Orangedale towards Broad Cove, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; the whole not exceeding 113,600

357. For a railway from Port Hawkesbury towards Cheticamp, 25 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

358. To the Manitoba North-western Railway Company, for 100 miles of the extension of their main line from its present western terminus towards Prince Albert,—the company relinquishing 3,200 acres of the land grant per mile, and the whole road to be operated as a continuous line of railway under one management, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 320,000

359. For a line of railway from the junction of the Elk and Kootenay Rivers to Coal Creek, a distance of 34 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

360. For a railway from Abbotsford Station on the Mission Branch of the Canadian Pacific Railway to the town of Chilliwack, 21 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 67,200

361. To the Nicola Valley Railway Company, for 28 miles of their railway from the western end of the section of their road subsidized by chapter 5, of 1892, towards Nicola Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 89,600

362. To the Nakusp and Slocan Railway Company, for 38 miles of their railway from the town of Nakusp to a point at or near the Forks of Carpenter Creek, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 121,600

363. To the Pontiac and Kingston Railway Company, for 22 miles of a railway from Portage du Fort to Upper Thorne Centre, via Shawville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

364. To the New Glasgow Iron, Coal and Railway Company, for 5 miles of their railway, from Sunnybrae to Kerrogare, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.... 16,000 00

365. To the South Shore Railway Company, for 35 miles of their railway from Yarmouth towards Shelburne and Lockport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 112,000 00

366. To the Cape Breton Railway Extension Company, for 30 miles of railway from Port Hawkesbury to St. Peter's, on their line of railway from Port Hawkesbury to Louisbourg, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

367. For a railway from a point on the Intercolonial Railway between Norton and Sussex Stations towards Havelock, 20 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $ 64,000 00

368. For a railway from St. John to Barneville, for a distance of 10 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000 00

369. For a line of railway from Cap de la Magdeleine to connect with the Piles Branch of the Canadian Pacific Railway, 3 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600 00

370. To the Canada Eastern Railway Company, for an extension of one mile from the western end of their railway, to connect with the Canadian Pacific Railway, a subsidy not exceeding..... 3,200 00

371. To the Great Northern Railway Company, for 30 miles of their railway from its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the River St. Maurice, westward, in lieu of the subsidy granted to the Maskinongé and Nipissing Railway Company by chapter 2 of 1893, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

372. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for 16 miles of their railway from Bobcaygeon to the Midland Railway, and for another 16 miles from the end of the first mentioned 16 miles to Pontypool, in lieu of the subsidies granted by chapter 2 of 1890, and chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 102,400 00

373. To the Montfort Colonization Railway Company, for 12 miles of their railway from the end of the 21 miles already subsidized westward to a point on the Rouge River, in the county of Argenteuil, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

374. For a railway from a point on the Caraquet Railway, at or near Pokemouche siding, towards Tracadie village, 12 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railway and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the

subsidy granted to the Great Northern Railway Company by chapter two of 1893, for fifteen miles from Montcalm to the Canadian Pacific Railway, which shall be paid as follows: on the completion of the eighteen miles from New Glasgow to Montcalm and of two miles out of the fifteen miles from Montcalm to the Canadian Pacific Railway, an instalment proportionate to the value of the ten miles out of the total mileage subsidized by chapter two of 1893, to be established as aforesaid, and the balance of the said subsidy on the completion of the remaining thirteen miles of the said railway.

No subsidies were authorized by 58-59 Vict. (1895), nor by 59 Vict. (1896).

By the Act 60-61, chapter 4, 1897 *(Assented to 29th June, 1897).*

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and includes the amount expended upon any bridge up to and not exceeding twenty-five thousand dollars, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

375. To the Ottawa and New York Railway Company, for $53\frac{87}{100}$ miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by chapter 5 of the statutes of 1892,

376. To the Kingston, Smith's Falls and Ottawa Railway Company, for 101 miles of their railway from Kingston, or a junction with the Grand Trunk Railway at Rideau or some other point near Kingston, to Ottawa, in lieu of the subsidy granted by chapter 5 of 1892;

377. For a railway from a point on the Canadian Pacific Railway, at or near either Welsford or Westfield, or between the said two points, to Gagetown, in the county of Queen's, New Brunswick, not exceeding 30 miles, in lieu of the subsidy granted by chapter 2 of 1890;

378. To the Cobourg, Northumberland and Pacific Railway Company, for 50 miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidies granted by chapter 5 of 1892;

379. To the Ottawa and Gatineau Railway Company, for 20 miles of their railway from the end of the 62nd mile subsidized towards Désert, in lieu of the subsidies granted by chapter 4 of 1894;

380. To the Great Northern Railway Company, for 9 miles of their railway, being shortage in distance between Montcalm and St. Tite;

381. To the St. Gabriel de Brandon and Ste. Emélie de l'Energie Railway Company, for 15 miles of their railway from St. Gabriel to Ste. Emélie de l'Énergie, and 5 miles from a point on the main line to St. Jean de Matha, making in all 20 miles, in lieu of the subsidy granted by chapter 4 of 1894;

382. To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman Station to Newcastle Coal Fields, county of Queen's, in lieu of the subsidy granted by chapter 4 of 1894;

383. To the Gulf Shore Railway Company, for 5½ miles of their railway from the end of the section subsidized to Tracadie and thence to Big Tracadie, New Brunswick;

384. For a railway from Campbellton, on the Intercolonial Railway, towards Grand Falls, New Brunswick, a distance of 20 miles, commencing at Campbellton, in lieu of the subsidy granted by chapter 4 of 1894;

385. To the Pontiac Pacific Junction Railway Company, for 7½ miles of their railway from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890;

386. To the Schomberg and Aurora Railway Company, for 15 miles of their railway from a point on the Grand Trunk Railway between King and Newmarket to Schomberg, in the province of Ontario;

387. To the Tilsonburg, Lake Erie and Pacific Railway Company, for $3\frac{50}{100}$ miles of their railway from the present terminus, through Tilsonburg to the Michigan Central Railway, in the province of Ontario.

388. To the Ottawa, Arnprior and Parry Sound Railway Company, for 52 miles of their railway, from the crossing of the Northern Pacific Junction Railway to 55 miles west of Barry's Bay, and also for 4 miles of their railway across Parry Island;

389. To the Pembroke Southern Railway Company, for 20 miles of their railway from Pembroke to Golden Lake, in the province of Ontario;

390. To the Ontario and Rainy River Railway Company, for 80 miles of their railway from the Port Arthur, Duluth and Western Railway to Rainy Lake, in the province of Ontario;

391. To the Strathroy and Western Counties Railway Company, for 7 miles of their railway, commencing at a point at or near Caradoc Station on the Canadian Pacific Railway and extending to the town of Strathroy;

392. To the Phillipsburg Railway and Quarry Company, for $\frac{66}{100}$ mile of their railway from the end of the subsidized section to the government wharf at Phillipsburg;

393. To the United Counties Railway Company, for 1 mile of their railway from Johnson to St. Grégoire Station, in the province of Quebec;

394. To the St. Lawrence and Adirondack Railway Company, for 13½ miles of their railway from Beauharnois to Caughnawaga, in the province of Quebec;

395. To the East Richelieu Valley Railway Company, for 24 miles of their railway from Iberville to St. Thomas, boundary of Missisquoi County, in the province of Quebec;

396. To the Portage du Fort and Bristol Branch Railway Company, for 15 miles of their railway to a point at or near Shawville, in the county of Pontiac;

397. For a railway from a point at or near Windsor Junction, on the Intercolonial Railway, to Upper Musquodoboit, for a distance of 40 miles;

398. To the St. Stephens and Milltown Railway Company, for $1\frac{14}{100}$ mile of their railway from Milltown to St. Stephen, in the province of New Brunswick;

399. For a railway from Sunny Brae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysboro', in the province of Nova Scotia, a distance of 65 miles;

400. For a railway from Port Hawkesbury, Nova Scotia, to Port Hood and Broad Cove, 53 miles, in lieu of the subsidy granted by chapter 4 of 1894;

401. For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles;

402. For a railway from Indian Garden on the line of the Central Railway, to Shelburne, in the province of Nova Scotia, a distance of 35 miles;

403. To the Coast Railway Company of Nova Scotia, for 61 miles of their railway from Yarmouth to Port Clyde, in the province of Nova Scotia;

404. For a railway from Brookfield Station on the Intercolonial Railway to Eastville, 30 miles;

405. To the Great Northern Railway Company, for 35 miles of their railway from St. Jérôme, in the province of Quebec, to Hawkesbury, in the province of Ontario;

406. To the Drummond County Railway Company, for 42½ miles of their railway from Moose Park to Chaudière River, provided that the amount of the said subsidy shall be refunded to the Government of Canada in the event of the company's railway from Ste. Rosalie to Chaudière River being purchased or leased for a term of years by the government.

3. The Governor in Council may grant the subsidies hereinafter mentioned to the railway companies and towards the construction of the railways also hereinafter mentioned, that is to say:—

407.	To the Great Northern Railway Company, for 67 miles of their railway between Montcalm and its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the St. Maurice River, the balance remaining unpaid of the subsidies granted by chapter 2 of 1893, and by chapter 4 of 1894, between these points, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	$ 182,400 00
408.	To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, also for bridging the Ottawa River, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, and by chapter 4 of 1894, not exceeding	114,272 00
409.	To the Ottawa and Gatineau Railway Company, for 62 miles of their railway from Hull towards Désert, in the province of Quebec, the balance remaining unpaid of the subsidy granted by chapter 2 of 1893, not exceeding in the whole	35,872 00
410.	To the Grand Trunk Railway Company of Canada, for a subsidy towards the rebuilding and enlargement of the Victoria Bridge at Montreal over the St. Lawrence River, 15 per cent upon the amount expended thereon, not exceeding	300,000 00
411.	To the Montfort Colonization Railway Company, for 33 miles of their railway from Montfort Junction to Arundel, in the province of Quebec, a subsidy not exceeding $2,000 per mile, nor exceeding in the whole	66,000 00
412.	To the Irondale, Bancroft and Ottawa Railway Company, the balance remaining unpaid of the subsidy for the last five miles of the company's railway; the eastern terminus to be either at the village of Bancroft or at some point near the Hastings Road, in the township of Herschell, in lieu of the subsidy granted by chapter 2 of 1893, not exceeding in the whole	16,000 00
413.	To the Great Northern Railway Company, towards the construction of a railway bridge over the Ottawa River at Hawkesbury, 15 per cent upon the amount expended thereon, not exceeding	52,500 00
414.	For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa and the city of Hull, 15 per cent upon the amount expended thereon, not exceeding	112,500 00

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and

upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

5. The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

6. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect of which it is hereinbefore otherwise provided.

7. Any company receiving a subsidy as aforesaid, in excess of $3,200 per mile, shall be bound to carry Her Majesty's mails for a term of ten years free of charge over the portion of railway subsidized.

By the Special Act 60-61 Victoria, Chapter 5, 1897. *(Assented to 29th June, 1897.)*

1. Subject to the conditions hereinafter mentioned, the Governor in Council may grant to the Canadian Pacific Railway Company a subsidy towards the construction of a railway from Lethbridge, in the district of Alberta, through the Crow's Nest Pass to Nelson, in the province of British Columbia (which railway is hereinafter called "the Crow's Nest Line,") to the extent of eleven thousand dollars per mile thereof, and not exceeding in the whole the sum of three million six hundred and thirty thousand dollars, payable by instalments on the completion of each of the several sections of the said railway of the length respectively of not less than ten miles, and the remainder on the completion of the whole of the said railway; provided that an agreement between the Government and the company is first entered into in such form as the Governor in Council thinks fit, containing covenants to the following effect, that is to say:—

On the part of the company:

(*a.*) That the company will construct or cause to be constructed, the said railway upon such route and according to such descriptions and specifications and within such time or times as are provided for in the said agreement, and, when completed, will operate the said railway for ever;

(*b.*) That the said line of railway shall be constructed through the town of Macleod, and a station shall be established therein, unless the Governor in Council is satisfied by the company that there is good cause for constructing the railway outside the limits of the said town, in which case the said line of railway shall be located and a station established at a distance not greater than five hundred yards from the limits of the said town;

(*c.*) That so soon as the said railway is opened for traffic to Kootenay Lake, the local rates and tolls on the railway and on any other railway used in connection therewith and now or hereafter owned or leased by or operated on account of the company south of the company's main line in British Columbia, as well as the rates and tolls between any point on any such line or lines of railway and any point on the main line of the company throughout Canada, or any other railway owned or leased by or operated on account of the company, including its lines of steamers in British Columbia, shall be first approved by the Governor in Council or by a railway commission, if and when such commission is established by law, and shall at all times thereafter and from time to time be subject to revision and control in the manner aforesaid;

(*d.*) That a reduction shall be made in the general rates and tolls of the company as now charged, or as contained in its present freight tariff, whichever rates are now the lowest, for carloads or otherwise, upon the classes of merchandise hereinafter mentioned, westbound, from and including Fort William and all points east of Fort

William on the company's railway to all points west of Fort William on the company's main line, or on any line of railway throughout Canada owned or leased by or operated on account of the company, whether the shipment is by all rail line or by lake and rail, such reduction to be to the extent of the following percentages respectively, namely :—

Upon all green and fresh fruits, 33⅓ per cent;

Coal oil, 20 per cent;

Cordage and binder twine, 10 per cent;

Agricultural implements of all kinds, set up or in parts, 10 per cent;

Iron, including bar, band, Canada plates, galvanized, sheet, pipe, pipe-fittings, nails, spikes and horse shoes, 10 per cent;

All kinds of wire, 10 per cent;

Window glass, 10 per cent;

Paper for building and roofing purposes, 10 per cent;

Roofing felt, box and packing, 10 per cent;

Paints of all kinds and oils, 10 per cent;

Live stock, 10 per cent;

Wooden ware, 10 per cent;

Household furniture, 10 per cent;

And that no higher rates than such reduced rates or tolls shall be hereafter charged by the company upon any such merchandise carried by the company between the points aforesaid; such reductions to take effect on or before the first of January, one thousand eight hundred and ninety-eight;

(*e.*) That there shall be a reduction in the company's present rates and tolls on grain and flour from all points on its main line, branches or connections, west of Fort William to Fort William and Port Arthur and all points east, of three cents per one hundred pounds, to take effect in the following manner:—One and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-eight, and an additional one and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-nine; and that no higher rates than such reduced rates or tolls shall be charged after the dates mentioned on such merchandise from the points aforesaid;

(*f.*) That the Railway Committee of the Privy Council may grant running powers over the said line of railway and all its branches and connections, or any portions thereof, and all lines of railway now or hereafter owned or leased by or operated on account of the company in British Columbia south of the company's main line of railway, and the necessary use of its tracks, stations and station grounds, to any other railway company applying for such grant upon such terms as such committee may fix and determine, and according to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament; but nothing herein shall be held to imply that such running powers might not be so granted without the special provision herein contained;

(*g.*) That the said railway, when constructed, together with that portion of the company's railway from Dunmore to Lethbridge, and all lines of railway, branches, connections and extensions in British Columbia south of the main line of the company in British Columbia shall be subject to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament;

(*h.*) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it, as stipulated for in the said agreement, become entitled to and shall get any land as a subsidy from the Government of British Columbia, then such lands, excepting therefrom those which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, shall be disposed of by the company or by such other company to the public according to regulations and at prices not exceeding these prescribed from time to time by the Governor in Council, having regard to the then existing provincial regulations applicable thereto; the expression "lands" including all mineral and timber thereon which shall be disposed of as aforesaid, either with or without the land, as the Governor in Council may direct:

(*i.*) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it as stipulated for in the said agreement, become entitled to and shall get any lands as a subsidy from the Government of British Columbia which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, then the company will cause to be conveyed to the Crown, in the interest of Canada, a portion thereof to the extent of fifty thousand acres, the same to be of equal value per acre as coal lands with the residue of such lands. The said fifty thousand acres to be selected by the Government in such fair and equitable manner as may be determined by the Governor in Council, and to be thereafter held or disposed of or otherwise dealt with by the Government as it may think fit on such conditions, if any, as may be prescribed by the Governor in Council, for the purpose of securing a sufficient and suitable supply of coal to the public at reasonable prices, not exceeding two dollars per ton of two thousand pounds free on board cars at the mines.

And on the part of the Government, to pay the said subsidy by instalments as aforesaid.

2. The company shall be bound to carry out in all respects the said agreement, and may do whatever is necessary for that purpose.

3. In order to facilitate such financial arrangements as will enable the company to complete the railway as aforesaid without delay and to acquire and consolidate with it the railway from Dunmore to Lethbridge, hereinafter called "the Alberta Branch," which, under the authority of chapter thirty-eight of the statutes of 1893, it now operates as lessee, and is under covenant to purchase, the company may issue bonds which will be a first lien and charge and be secured exclusively upon the said Alberta Branch and Crow's Nest Line together in the same way and with the same effect as if both the said pieces of railway to be so consolidated were being built by the company as one branch of its railway within the meaning of section one of chapter fifty-one of the statutes of 1888, and that section shall apply accordingly, such first lien to be subject to the payment of the purchase money of the Alberta Branch, as provided for in the said covenant to purchase.

By the Act 62–63 Vic., chapter 7 (*Assented to 11th August, 1899*).

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

415. To the Central Ontario Railway Company, for an extension of their railway from, or from near, either Coe Hill or Rathbun Station on the company's railway to, or near to Bancroft, not exceeding 21 miles, in lieu of the subsidy granted by chapter 5 of 1892;

416. To the Great Northern Railway Company, for a railway between Montcalm and St. Tite Junction, on the Lower Laurentian Railway, Quebec, not exceeding 53½ miles; and for a branch from their main line to Shawenegan Falls, Quebec, not exceeding 6½ miles.

417. To the Phillipsburg Railway and Quarry Company, shortage in the extension of their railway from a point on the company's line at or near the end of the subsidized section, to the government wharf at Phillipsburg, Quebec, not exceeding $\frac{66}{100}$ of a mile;

418. To the Strathroy and Western Counties Railway Company, for a line from Strathroy, Ontario, via Adelaide and Arkona, to either Forest, Tedford, or Park Hill, not exceeding 24 miles, in lieu of the subsidy granted by chapter 4 of 1894;

419. To the St. John Valley and Rivière du Loup Railway Company, for a line of railway from Fredericton, in the county of York, New Brunswick, to Woodstock, in the county of Carleton, not exceeding 59 miles;

420. For a railway from Port Hawkesbury, on the Strait of Canso, Nova Scotia, to St. Peter's, not exceeding thirty miles;

421. For a railway from Windsor, Nova Scotia, to Truro, via the township of Clifton, not exceeding 58 miles, in lieu of the subsidy granted by chapter 4 of 1894;

422. For a railway from a point at or near Brookfield Station, Nova Scotia, on the Intercolonial Railway, to Eastville, not exceeding 25 miles, in lieu of the subsidy granted by chapter 4 of 1897;

423. For a railway from Cross Creek Station, on the Canada Eastern Railway, to Stanley Village, New Brunswick, not exceeding 6 miles;

424. For a railway from the village of St. Rémi to Stottville or some point on the Delaware and Hudson Railway (Grand Trunk) in the parish of St. Paul de l'Ile aux Noix, not exceeding 19 miles;

425. For a railway between Pontypool and Bobcaygeon, via Lindsay, Ontario, not exceeding 40 miles.

426. To the Pontiac Pacific Junction Railway Company, for a railway from Aylmer to Hull, Quebec, not exceeding 9 miles, in lieu of the subsidy granted by chapter 4 of 1897;

427. To the Portage du Fort and Bristol Branch Railway Company, for a branch line from a point on the Pontiac Pacific Junction Railway at or near the village of Quyon, towards the village of Portage du Fort, Quebec, not exceeding 15 miles, in lieu of the subsidy granted by chapter 4 of 1897;

428. To the Orford Mountain Railway Company, for a branch from their railway from a point between Lawrenceville and Eastman to Waterloo, not exceeding 13 miles;

429. To the Atlantic and Lake Superior Railway Company, for an extension of their railway from Caplin to Paspebiac, Quebec, not exceeding 30 miles;

430. To the United Counties Railway Company, for a railway from St. Robert Junction to Sorel, 6½ miles, (this sudsidy to be payable only in the event of adequate running rights over the South-eastern Railway between the two points above mentioned not being granted to the first mentioned Company on terms to be approved by the Railway Committee of the Privy Council,) and from Mount Johnson to St. Grégoire Station, 1 mile, not exceeding 7½ miles.

431. For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia, via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles;

432. For a railway from Indian Gardens, Queen's County, Nova Scotia, to Shelburne, in the said province, a distance of 35 miles;

433. The subsidy which the Ontario and Rainy River Railway Company is entitled to receive under chapter 4 of 1897, shall be $6,400 per mile for the 80 miles mentioned in the said Act; not exceeding in all $512,000.

434. To the Bay of Quinté Railway Company, for such extensions, branches or additions to their system as will enable the said Company to connect their lines of railway or connecting lines with iron or other mines or mineral or wood lands in the counties of Peterborough, Northumberland, Hastings, Lennox and Addington, Frontenac or Leeds, payable in instalments regulated by the length of each of the said extensions or branches or additions, as the case may be, in lieu of part of the balance remaining unpaid of the subsidy granted to the Kingston, Napanee and Western Railway Company, by chapter 5 of 1892, but not exceeding $3,200 per mile for 10 miles, nor exceeding in the whole $32,000;

435. To the Quebec and Lake St. John Railway Company, for 12 miles of their railway from the end of their line at deep water on the Chicoutimi branch of their railway, to Ha Ha Bay, in the lieu of the subsidy for the 12 miles granted by chapter 4 of 1894;

436. For a line of railway from Hawkesbury, Ontario, to South Indian, not exceeding 35 miles;

437. For a railway from Sault Ste. Marie, Ontario, towards Michipicoten River and harbour and towards the main line of the Canadian Pacific Railway, not exceeding 40 miles;

438. For a branch line of railway from the main line of the Ottawa, Arnprior and Parry Sound Railway to the town of Parry Sound, Ontario, not exceeding 5 miles;

439. For a railway from the village of Haliburton, via the village of Whitney, towards the town of Mattawa, Ontario, not exceeding 20 miles;

440. For an extension of the Tilsonburg, Lake Erie and Pacific Railway, from Tilsonburg to Ingersoll or Woodstock, Ontario, not exceeding 28 miles;

441. To the South Shore Railway Company, from Sorel Junction along the South Shore to Lotbinière, Quebec, a distance not exceeding 82 miles;

442. To the Massawippi Valley Railway Company for an extension of their railway to the village of Stanstead Plain, Quebec, not exceeding 2½ miles;

443. For a railway from Port Hawkesbury on the Strait of Canso, to Caribou Cove, Nova Scotia, a distance of 10 miles;

444. For a railway from Fort Frances, Ontario, westerly to a point at or near the mouth of Rainy River, a distance not exceeding 70 miles;

445. To the Central Railway Company of New Brunswick, for an extension of their line of railway from Newcastle Coal Fields to Gibson, New Brunswick, not exceeding 30 miles;

446. To the Canadian Northern Railway Company, for a railway from a point on the present line of the Winnipeg Great Northern Railway north of Swan River to Prince Albert, North-west Territories, not exceeding 100 miles;

447. For a railway from some point near Antler Station to a point near Moose Mountain, Manitoba, not exceeding 50 miles;

448. For a railway from Sunnybrae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, Nova Scotia, to make up the deficiency in mileage between points mentioned and subsidized by chapter 4 of 1897, additional mileage not exceeding 15 miles;

449. For a railway from Port Clyde towards Lockeport, in the province of Nova Scotia, not exceeding 20 miles;

450. For a railway from a point on the Intercolonial Railway at or near Halifax towards the Central Railway in the county of Lunenburg, not exceeding 20 miles;

451. For a railway from Labelle, in the province of Quebec, in a north-westerly direction, to Nominingue, via Notre Dame de l'Annonciation, a distance not exceeding 22 miles;

452. For a railway from Owen Sound, in the province of Ontario, to Meaford, not exceeding 21 miles;

453. To the Ottawa and Gatineau Railway Company, for their line of railway in and through the city of Hull, Quebec, not exceeding 4 miles;

454. To the Western Alberta Railway Company, from a point on the United States boundary, west of Range 27, north-westerly towards Anthracite, in the district of Alberta, not exceeding 50 miles ;

455. To the Edmonton, Yukon and Pacific Railway Company, for a railway from the town of South Edmonton, North-west Territories, to North Edmonton, and thence westerly towards the Yellow Head Pass, a distance not exceeding 50 miles ;

456. To the Restigouche and Western Railway Company, in addition to the 20 miles subsidized by chapter 4 of 1897, and in continuation from the westerly end of the said 20 miles towards the St. John River, a further distance not exceeding 15 miles, and for the company's railway from a point on the St. John River, New Brunswick, at or near Grand Falls, or St. Leonard, or between Grand Falls and St. Leonard, and extending easterly towards Campbellton, such point to be approved by the Governor in Council, a distance of 12 miles ; in all not exceeding 27 miles ;

457. For a railway in extension of the St. Francis branch of the Temiscouata Railway to the mouth of the St. Francis River, a distance not exceeding 3 miles ;

458. To the Canada Eastern Railway Company, for a line of railway from Nelson, New Brunswick, to connect with the company's main line running into Chatham, to complete the connection from Nelson to such main line, not exceeding in the whole 2¼ miles ;

459 To the Bay of Quinté Railway Company, for an extension of their line in a westerly direction from a point at or near Richmond boundary road near Deseronto for a distance not exceeding 2 miles ; also for an extension of their line from its present terminus at Tweed in a northerly direction for a distance of 2 miles, and for an extension of their line from the end of the last 2 miles mentioned in a northerly direction for a distance not exceeding 3 miles—in all 7 miles ; subsidies payable on each of the sections mentioned as each of such sections is completed ;

460. To the Ontario, Belmont and Northern Railway Company, for an extension of their railway from its present terminus at Iron Mines in a north-westerly direction, a distance not exceeding 5 miles ; and also for an extension of the company's railway southerly, from the present southern terminus thereof to the Central Ontario Junction of the Canadian Pacific Railway, a distance not exceeding 2 miles ; but the last mentioned aid for the said 2 miles of railway shall not be granted in case the Railway Committee of the Privy Council finds that adequate running powers on fair terms can be secured to the company over that portion of the line of the Central Ontario Railway between the present southerly end of the Ontario, Belmont and Northern Railway and the Canadian Pacific Railway Company's line at Central Ontario Junction ; subsidies payable on each of the sections mentioned as each of such sections is completed ;

461. For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, Ontario, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, not exceeding 20 miles ;

462. For a line of railway from Paspebiac, Quebec, to Gaspé in the said province, a distance not exceeding 82 miles ;

463. To the Lake Erie and Detroit River Railway Company, for a line of railway from Ridgetown, Ontario, to St. Thomas, in the said province, a distance not exceeding 44 miles ; this subsidy to be payable only in the event of adequate running rights over the Canada Southern Railway between the two points above mentioned not being granted to the first mentioned company on terms to be approved by the Railway Committee of the Privy Council ;

464. To the Kingston and Pembroke Railway Company, for the construction of branches from the Company's main line to the iron mine at Bluff Point and to the Martele mine in the county of Renfrew, not exceeding 5 miles ;

465. For a railway from the town of Parry Sound extending northerly towards Sudbury, a distance not exceeding 20 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction of the railways also hereinafter mentioned, that is to say :—

466. The Ontario and Rainy River Railway Company, for a railway from a point 80 miles west of Stanley Station, on the Port Arthur, Duluth and Western Railway, to Fort Frances, for a distance of 140 miles, at $6,400 per mile, not exceeding in the whole	$ 896,000 00
467. To the Quebec Bridge Company, towards the construction of a railway bridge over the St. Lawrence River, at Chaudière Basin, near Quebec, one million dollars, 40 per cent of which amount may be paid on monthly progress estimates, approved by the Government engineers, of materials delivered and work done...	1,000,000 00
468. To the South Shore Railway Company, towards the restoration and renewal of the railway bridge over the Yamaska River at Yamaska, Quebec	50,000 00
469. Towards the construction of a bridge over the Richelieu River at Sorel, 15 per cent upon the amount expended thereon, not exceeding	35,000 00
470. Towards the construction of a bridge across the St. Francis River, 15 per cent of the amount expended thereon, not exceeding...	50,000 00
471. Towards the construction of a bridge across the Nicolet River, 15 per cent upon the amount expended thereon, not exceeding....	15,000 00
472. To the Midland Railway Company, Limited, towards the construction of a bridge across the Shubenacadie River, 15 per cent upon the amount expended thereon, not exceeding	33,750 00
473. To the Great Northern Railway Company, towards the construction of a bridge across the St. Maurice River, 15 per cent upon the amount expended thereon, not exceeding	16,425 00
474. Also towards the construction of a bridge across the Rivière du Loup, 15 per cent upon the amount expended thereon, not exceeding	15,000 00
475. Also towards the construction of a steel bridge and viaduct at the Maskinongé River, 15 per cent upon the amount expended thereon, not exceeding	15,000 00

4. The subsidies granted to the Ontario and Rainy River Railway Company, the Canadian Northern Railway Company and the Edmonton, Yukon and Pacific Railway Company are granted upon the condition, and, if received and paid under the authority of this Act to the above mentioned companies respectively, shall be received upon the condition, that the said companies shall not, nor shall any of them, at any time amalgamate with, or lease its line or lines to, any railway company other than those mentioned in this section, except as may be authorized by Parliament; nor shall any of the said railways be leased to or operated by any other company; nor shall any of the said companies make an agreement for a common fund or for pooling its receipts with any other railway company; and any such lease, amalgamation or agreement shall be absolutely void, excepting in so far as such agreement may extend to traffic or running arrangements which have been approved by the Governor in Council.

5. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of

which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

7. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect to which it is hereinbefore otherwise provided.

8. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and in case of disagreement, then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

LAND SUBSIDIES.

By 47 Vic., chap. 25, clause 7, 1884 (*Assented to 19th April, 1884*):—

1. The Governor in Council is hereby authorized in aid of the construction of a railway from some point on the Canadian Pacific Railway to Hudson's Bay, to make a free grant of not more than six thousand four hundred acres for each mile of railway within Manitoba, and not more than twelve thousand eight hundred acres for each mile in the North-west Territories.

By 48-49 Vic., chap. 60, 1885 (*Assented to 20th July, 1885*):—

2. To the North-western Coal and Navigation Company (Limited), Dominion lands to an extent not exceeding three thousand eight hundred acres for each mile of the company's railway, from Medicine Hat to the coal banks on the Belly River, about one hundred and ten miles.
3. To the Manitoba and South-western Colonization Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from its commencement at Winnipeg to its terminus at Whitewater Lake, about one hundred and fifty miles.
4. To the Manitoba and North-western Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Portage la Prairie to the crossing of the South Branch of the River Saskatchewan, twenty miles from Prince Albert, about four hundred and thirty miles.
5. To the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from its commencement near Regina to the navigable waters of Long Lake.

"The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor."

By 49 Vic., cap. 11, 1886 (*Assented to 2nd June, 1886*):—

6. To the Manitoba and North-western Railway Company, Dominion lands to the extent of six thousand four hundred acres per mile for each mile of the company's branch railway running from a point on the main line of that railway, at or near Todburn, in a north-westerly direction through the county of Russell to the Assiniboine River, near the town of Shellmouth, about twenty-six miles.
*7. To the North-west Central Railway Company, or to such other company as may undertake the construction of the railway, or a railway from a point on the Manitoba and North-western Railway via Rapid City, westward, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Brandon station on the Canadian Pacific Railway, or from such point on the Manitoba and North-western Railway as aforesaid, to Battleford, in the provisional district of Saskatchewan, about four hundred and fifty miles.

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* Lapsed except for the subsidy earned for the 50 miles constructed.

*8. To the Wood Mountain and Qu'Appelle Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway for the whole distance commencing at a point in township number four, in range number thirty, west of the second meridian, in the Dominion lands system of survey, passing through the town of Fort Qu'Appelle, to join the Manitoba and North-western Railway at a point to be fixed for that purpose by the Governor in Council, about two hundred and forty miles.

"The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor."

By section 5 of this Act authority was given for the incorporation by the Governor in Council of a company to construct the line from Brandon, or other point indicated, to Battleford, subsidized by this Act.

By 50-51 Vic., cap. 22, 1887 *(Assented to 23rd June, 1887)*:—

9. The subsidy to the North-western Coal and Navigation Company, granted by 49 Vic., chap. 60, was increased from 3,800 acres per mile to 3,840 acres per mile.

By 50-51 Vic., cap. 23, 1887 *(Assented to 23rd June, 1887)*:—

*10. To the Alberta and Athabasca Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from some point on the Bow River or Canadian Pacific Railway, at or between Calgary and Crowfoot Creek, to a point near the town plot of Edmonton, about three hundred miles.

11. To the Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from a point near the northern terminus of the completed portion of that railway, at or near Long Laketon, on the navigable waters of Long Lake, to a point at or near where the fifty-second parallel of latitude crosses the South Saskatchewan River, thence to a point at or near the elbow of the North Saskatchewan River, with branches to Prince Albert and Battleford, about three hundred and twenty-five miles.

*12. To the Medicine Hat Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from a point at or near Medicine Hat, on the line of the Canadian Pacific Railway, to the coal field in or near townships twelve and thirteen, range six, west of the fourth principal meridian, a distance of about eight miles, to be selected out of such lands as are at the disposal of the Government in the proximity of the line of the company's railway.

"The said grants, and each of them may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof, each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor."

By 52 Vic., chap. 4, 1889 *(Assented to 2nd May, 1889)*:—

13. To the North-western Coal and Navigation Company (Limited), in addition to the grant provided for by section one of the Act passed in the session held in the

* The subsidies in land grants for the Wood Mountain and Qu'Appelle, the Alberta and Athabasca and the Medicine Hat railways have lapsed.

forty-eighth and forty-ninth years of Her Majesty's reign and chaptered sixty, Dominion lands to an extent not exceeding two thousand six hundred acres for each mile of the company's railway from Dunmore station, on the Canadian Pacific Railway, to Lethbridge, on the Belly River, the present terminus of the said railway, a distance of one hundred and nine and one-half miles,—such additional grant to be made only on condition that the gauge of the said railway be made standard width; and also to the said North-western Coal and Navigation Company (Limited), Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from Lethbridge to the international boundary, a distance of about fifty miles.

14. To the Red Deer Valley Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from Cheadle Station, on the Canadian Pacific Railway, to its terminus at a point in or near township twenty-nine, range twenty-three, west of the fourth meridian, a distance of about fifty-five miles.

*15. To the North-western Railway Company of Canada, Dominion lands to an extent not exceeding ten thousand acres for each mile of the company's railway from Calgary, on the Canadian Pacific Railway, northerly to a point on the North Saskatchewan River, at or near Edmonton, a distance of about two hundred and ten miles; and also to the said North-western Railway Company of Canada, Dominion lands to an extent not exceeding ten thousand acres for each mile of the company's railway from Calgary southerly to Lethbridge, a distance of about one hundred and twenty miles.

16. To the Lake Manitoba Railway and Canal Company, Dominion lands to an extent not exceeding six thousand acres for each mile of the company's railway from Portage la Prairie to the southern boundary of Lake Manitoba, a distance of about seventeen miles.

"The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof, and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor.

"The Governor in Council may make the grant of land provided for by section three of the Act forty-ninth Victoria, chapter eleven, being for the line of the Wood Mountain and Qu'Appelle Railway, of about two hundred and forty miles in length, applicable to the line of railway of the said company, as authorized by the Act respecting the Wood Mountain and Qu'Appelle Railway Company, passed during the present session of Parliament, upon the like terms and subject to the like conditions as those upon which the grant hereinbefore mentioned was authorized to be made to the said company by the Act in this section first cited."

By the Act 53 Vic., cap. 4, 1890 *(Assented to 16th May, 1890)*:—

17. To the Canadian Pacific Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a branch line to be constructed from Glenboro' westerley a distance of about sixty miles to a point on the proposed branch railway of the said company running from Brandon south-westerly.

18. To the Canadian Pacific Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a branch line of railway from a point at or near Brandon, on the main line of the Canadian Pacific Railway, south-westerly to or near township three, range twenty-seven, west of the first principal meridian, and thence westerly, a total distance of one hundred miles; and also a similar grant, at the same rate per mile, for the

* The North-western Railway of Canada land grant subsidy has lapsed.

said company's proposed branch railway from a point on the line just described at or near township three, range twenty-seven, west of the first principal meridian, easterly to Deloraine, a distance of about twenty-five miles, making the total length of railway to which this grant is applicable one hundred and twenty-five miles.

*19. To the Brandon and South-western Railway Company, Dominion lands to an extent not less than six thousand four hundred acres per mile for the line of railway from a point in township one, in either range twenty-three or twenty-four west of the first principal meridian, to Deloraine, a distance of about seventeen miles.

*20. To the Lac Seul Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point at or near Shelly Station, on the main line of the Canadian Pacific Railway, to a point at or near White Mud Lake, on the Winnipeg River, a distance of about eighteen miles.

21. To the Calgary and Edmonton Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from Calgary to a point at or near Edmonton on the North Saskatchewan River, a distance of about one hundred and ninety miles; and also a grant of six thousand four hundred acres for each mile of the company's railway from Calgary to a point on the international boundary between Canada and the United States, a distance of about one hundred and fifty miles.

*22. To the North-western Coal and Navigation Company (Limited) Dominion lands to an extent not exceeding three thousand eight hundred and forty acres for each mile of the company's railway from Lethbridge to the Crow's Nest Pass, a distance of about one hundred miles.

23. To the Lake Manitoba Railway and Canal Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile, for a line of railway from Portage la Prairie to Lake Winnipegosis, at or near Meadow Portage, a distance of about one hundred and twenty-five miles.

24. To the Manitoba and South-eastern Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile, for a line of railway from Winnipeg southerly or south-easterly to a point on the west side of the Lake of the Woods, a distance of about one hundred and ten miles.

The said grants and each of them may be made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof, and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash, on the issue of the patents therefor.

The lands by this Act authorized to be granted to the Canadian Pacific Railway Company shall be taken and held, and may be disposed of, free and clear of any encumbrance on the lands or property of the said company created before the passing of this Act.

By the special Act 53 Vic., cap. 3, 1890 *(Assented to 26th March, 1890)*:—

25. The Act 52 Victoria, chapter 4, authorizing, in error, the grant of land to the North-western Coal and Navigation Company, for fifty miles from Lethbridge to the international boundary, was amended—the said grant being made to the Alberta Railway and Coal Company.

By 54-55 Vic., cap. 9, 1891 *(Assented to 30th September, 1891)*:—

26. In lieu of the subsidy in land authorized by the Act 52 Victoria, chapter 4, to be granted to the Red Deer Valley Railway and Coal Company, and subject to the conditions in the said Act mentioned, the Governor in Council may grant

* The land grant subsidy to the Brandon and South-western, the Lac Seul and North-western Coal and Navigation railways has lapsed.

Dominion lands to the said company to an extent not exceeding six thousand four hundred acres for each mile of the said company's railway, from the town of Calgary, in the district of Alberta, in the North-west Territories, to a point in or near township twenty-nine, range twenty-three, west of the fourth meridian, a distance of about fifty-five miles.

By 54-55 Vic., cap. 10, 1891 *(Assented to 30th September, 1891)*:—

27. To the Manitoba South-western Colonization Railway Company, in addition to the subsidy for one hundred and fifty miles of railway authorized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter sixty, Dominion lands to the extent of six thousand four hundred acres per mile for the balance of the two hundred and twelve miles of railway which have been constructed and are in operation, that is to say, for a distance of sixty-two miles.

28. Also, to the Manitoba South-western Colonization Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's branch line of railway from Carmen to Barnsley, a distance of about six and one-quarter miles.

29. To the Canadian Pacific Railway Company, in addition to the subsidy authorized by the Act 53 Victoria, chapter 4, for the company's branch line running in a south-westerly and westerly direction from a point at or near Brandon for a distance of one hundred miles, Dominion lands to the extent of six thousand four hundred acres for each mile of the extension westward of the said branch line, from the western limit of the said one hundred miles to a point at or near La Roche Percée, situated in township one, range six, west of the second meridian, a distance of about sixty miles.

"The said grants and each of them shall be made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof, and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash, on the issue of the patents therefor."

By the Act 57-58 Vic., cap. 6, 1894 *(Assented to 23rd July, 1894)*:—

**30.* To the Rocky Mountain Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point at or near Olds Station on the line of the Calgary and Edmonton Railway in a westerly direction to the Red Deer River and thence along the said river in a westerly direction to the coal fields, a distance of about sixty miles.

31. To the Canadian Pacific Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point at or near Souris on the Souris Branch of the Canadian Pacific Railway, in a westerly direction to the Pipestone Valley, a distance of about thirty-two miles.

**32.* To the Brandon and South-western Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point in township one, in either range twenty-three or twenty-four west of the first principal meridian, to a point at or near Deloraine, a distance of about seventeen miles.

33. To the Saskatchewan and Western Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from Minnedosa to Rapid City, a distance of about fifteen miles.

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* The land grant subsidy to the Rocky Mountain Railway and Coal Company and the Brandon and South-western Company has lapsed.

The said grants and each of them may be made in aid of the construction of the said railways respectively in the proportion and upon the conditions fixed by the Orders in Council made with respect thereto ; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of the survey of the lands and incidental expenses at the rate of ten cents per acre in cash on the issue of the patents therefor.

The lands authorized by this Act to be granted to the Canadian Pacific Railway Company shall be taken and held, and may be disposed of, free and clear of any encumbrance on the lands or property of the said company created before the passing of this Act

PART IV

MISCELLANEOUS STATEMENTS

No.

SUBSIDY Agreements for the Construction of Railways

Number of Contract.	Date of Signature.	Name of Railway.	Line of Railway to be Constructed.	Acts of Canada granting Subsidies.
	1898.			
13072	Aug. 22..	Pembroke Southern Railway Co.	From Pembroke to Golden Lake	60-61 V., c. 4.
13251	Sept. 5..	Great Northern Railway Co.	From Montcalm and its Junction with Lower Laurentian Railway, near St. Tite, in the vicinity of St. Maurice River.	60-61 V., c. 4.

OTTAWA, Oct. 11, 1899.

1.

entered into during the Fiscal Year ended June 30, 1899.

Amount of Subsidy.		Number of Miles Subsidized.	Maximum Grade Feet per Mile.	Radius of Curvature not less than.	Width of Clearing each side.	Width of Cutting.	Embankment.	Steel Rails, lbs., per Lineal Yard.	Date for Completion.
Per mile.	Not exceeding.								
$	$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400 per mile.	20	80	955	50	20	15	56	March 1, 1899.
3,200	182,400 balance remaining unpaid.	67	66	573	50	20	15	56	Aug. 1, 1901.
3,200	6,400	9	53	1,433	.....	.....	.....	.....	

GERARD S. RUEL,
Law Clerk.

No. 2.

CONTRACTS entered into during the Fiscal Year ended June 30, 1899.

1. INTERCOLONIAL RAILWAY.

No. of Contract.	Date of Signature.	Contractor.	General Description.
13234	July 8, 1898.	L. A. Cloutier	Painting on the Drummond County Line.
13235	" 13, 1898.	O. Carbonneau	Supply water for locomotives, &c., at L'Islet.
13247	" 28, 1898.	Rhodes, Curry & Co., Ltd.	Construct a creosoted pile wharf and freight shed at Halifax, N.S.
13248	" 29, 1898.	Dominion Bridge Co., Ltd.	Construct three plate girder bridges.
13252	Aug. 18, 1898.	J. B. McManus	Excavate site for grain elevator at Halifax.
13253	July 29, 1898.	Hamilton Bridge Works Co., Ltd.	Construct and erect in place seven through steel bridges.
*13283	June 30, 1898.	Acadia Coal Co	Supply coal for season 1898-9.
*13289	" 30, 1898.	Cumberland Railway and Coal Co.	" "
13290	Sept. 23, 1898.	John Starr, Son & Co., Ltd.	Installation of electric light plant for the SS. "Mulgrave", and on the shores at Mulgrave and Point Tupper.
13300	" 29, 1898.	Jonathan Weir & Son	Construct and erect a bridge at Elm Tree rock cutting.
13309	Oct. 22, 1898.	Rhodes, Curry & Co., Ltd.	Construct 100 platform cars.
13310	" 22, 1898.	" "	" 150 box freight cars.
13311	Sept. 21, 1898.	M. E. Keefe	" a grain elevator and conveyor, complete, at Halifax.
13312	Oct. 22, 1898.	Crossen Car Mfg. Co., Ltd.	" 100 box freight cars.
13317	" 22, 1898.	Rhodes, Curry & Co., Ltd.	" 3 postal and baggage cars.
13318	" 22, 1898.	" "	" 4 baggage cars.
13330	" 22, 1898.	The Rathbun Co., of Deseronto.	" 50 box freight cars.
*13334	June 30, 1898.	The General Mining Association.	Supply coal for season 1898-9.
13336	Nov. 7, 1898.	Rhodes, Curry & Co., Ltd.	Erect a station at Richmond, N.S.
13343	" 19, 1898.	Thomas Gilliland	" Jubilee.
13344	" 28, 1898.	The Wagner Palace Car Co.	Construct 8 sleeping cars, 4 dining cars and 3 first passenger cars.
*13345	" 29, 1897.	Jas. W. Reeves	Supply ties, Oxford and New Glasgow Branch.
13349	Aug. 8, 1898.	Rhodes, Curry & Co., Ltd.	Supply 1,800 33-in. chilled cast iron wheels, and 200 "Special" 33-in. wheels.
13350	Sept. 26, 1898.	" "	Supply 30 26-in. cast iron wheels.
13355	Nov. 19, 1898.	J. B. Woodland	Construct a freight house at Ross Road, N.S.
13356	Dec. 2, 1898.	Geo. A. Appleby	Furnish materials and remove iron trestle at St. John, N.B.
13363	" 24, 1898.	N. K. & M. Connolly	Construct a deep water wharf and dredge docks at St. John, N.B.
13372	Jan. 4, 1899.	The Baldwin Locomotive Works.	Supply 19 compound consolidation locomotives and 1 consolidation locomotive fitted with patent improved steam engine.
13374	Dec. 23, 1898.	The Illinois Steel Co	Supply 5,000 tons of steel rails, 1st quality, with privilege of furnishing a quantity not exceeding 5 p.c. of 2nd quality rails.
13375	" 23, 1898.	The Cambria Steel Co	" " "
13381	Jan. 10, 1899.	James Fleming	Work in connection with iron bridging at Long Wharf, St. John, N.B.
13382	" 26, 1899.	Nap. Halle & Narcisse Marceau.	Hauling of freight and baggage at Lévis between ferry boats and passenger station and freight shed.
13405	Feb. 6, 1899.	J. B. McManus	Construct 338 Standard Farm crossing gates.
13424	" 4, 1899.	Raymond Dand	Supply 62 switch gates and 123 switch stands.
13425	Jan. 23, 1899.	F. E. Sayre	Supply southern hard pitch pine.

* Received too late for last year's report.

SESSIONAL PAPER No. 10

No. 2.—CONTRACTS entered into during the Fiscal Year ended June 30, 1899.—*Con.*

1. INTERCOLONIAL RAILWAY—*Continued.*

No. of Contract.	Date of Signature.	Contractor.	General Description.
13426	Jan. 13, 1899.	Jos. A. Likely	Supply hard pitch pine.
13427	Aug. 18, 1898.	Jno. McDougall & Co.	Supply 1,700 33-in. double plate cast-iron wheels and 1,300 special 33-in. wheels.
13441	Feb. 25, 1899.	Jos. McDonald & Sons	Construct an ice house at Pictou, N.S.
13456	Apl. 30, 1899.	Rhodes, Curry & Co., Ltd.	" grain elevator at St. John, N.B.
13465	Jan. 30, 1899.	F. Gosselin and D. Girard	Discharge coal into shed and deliver same to engines at St. Charles.
13466	Mar. 25, 1899.	W. J. Watkins	Discharge coal into shed and deliver same to engines at Drummondville.
13467	Jan. 11, 1899.	Wilson Estabrooks	Discharge coal into shed and deliver same to engines at Moncton.
13475	Dec. 31, 1898.	Jerome Roy	Handling of coal at Newcastle.
13476	Jan. 25, 1899.	W. A. Johnson	" " Truro.
13480	May 1, 1899.	Rhodes, Curry & Co., Ltd.	Erect a freight shed at St. John, N.B.
13485	Feb. 21, 1899.	Chas. Maisey	Handling of coal at Campbellton.
13486	" 21, 1899.	John Lemieux	" " "
13487	Dec. 31, 1898.	H. H. Cameron	" " Springhill Jct.
13488	May 10, 1899.	Raymond Dand	Erect 1,300 rods of fence.
13489	" 10, 1899.	Dominion Bridge Co., Ltd.	Supply a steel single track through Pony Truss Bridge, P.E.I. Railway.
13490	Feb. 4, 1899.	Eugene Michaud	Handling of coal at Rivière du Loup.
13491	" 4, 1899.	Ernest Joubert	" " "
13492	May 10, 1899.	Enoch Steeves	Erect 3,100 rods of fence.
13493	Jan. 18, 1899.	Damas Charette	Handling of coal at Ste. Flavie.
13494	May 10, 1899.	John Kelly	Erect 2,100 rods of fence.
13495	" 10, 1899.	Jno. McDougall & Co.	Supply 500 33-in. chilled cast-iron wheels.
13501	Dec. 31, 1898.	Jno. McGourty	Handling of coal at St. John, N.B.
13505	June 6, 1899.	W. S. Kinnear & Son	Painting of buildings and bridges.
13506	" 1, 1899.	Geo. P. Rodgers	" "
13507	May 30, 1899.	Jamos Corney	" bridges.
13508	June 1, 1899.	Ludlow Campbell	" "
13509	" 7, 1899.	A. H. McDonald & Son	" buildings.
13510	" 2, 1899.	W. M. Metzler	" " and bridges.
13514	" 3, 1899.	L. A. Cloutier	" bridges.
13515	" 2, 1899.	Stephen Venoit	" buildings and bridges.
13516	" 6, 1899.	Alphonse Caron	" " "
13542	" 19, 1899.	Hamilton Bridge Works Co., Ltd.	Construct 2-deck plate girder bridges.
13545	" 29, 1899.	Rhodes, Curry & Co., Ltd.	Construct 20 Wickes patent refrigerator and ventilated cars.
13610	" 6, 1899.	Jno. McDougall & Co.	Supply 500 33-in. double plate chilled cast-iron wheels.

No. 2.—CONTRACTS entered into during the Fiscal Year ended June 30, 1899—*Con.*

2. CHAMBLY CANAL.

No. of Contract.	Date of Signature.	Contractor.	General Description.
13281	Oct. 11, 1898.	Dominion Bridge Co., Ltd...	Construct 1 steel swing bridge across canal above Ste. Thérèse Island.

3. LACHINE CANAL.

13286	Oct. 11, 1898.	John B. de Lorimier.....	Supply 6,000 cubic yds. building stone for slope walls.

4. RIDEAU CANAL.

13430	Mar. 6, 1899.	Cameron & Co.....	Supply 6,200 cubic ft. of white oak dimension timber.

5. SAULT STE. MARIE CANAL.

13266	Sept. 7, 1898.	David Chalmers	Build abutment and addition to C.P.R. bridge.
13269	" 23, 1898.	Dominion Bridge Co., Ltd...	Construct one railway swing bridge and remove present C.P.R. swing bridge, &c..... .....
13459	May 1, 1899.	Hickler Bros..	Remove masonry pier and fender piers of C.P.R. bridge.

6. SOULANGES CANAL.

13213	July 29, 1898.	Dominion Bridge Co., Ltd ..	Construct sluice gates for locks, weirs and other structures between Cascade Point and Coteau Landing.
13338	Sept. 1, 1898.	Stanislas Houle.....	Painting of five bridges.
13366	Jan. 17, 1899.	Canadian General Electric Co., Ltd.	Erect a power house on section 8 and install an electric plant to operate locks, culverts, &c., and to light the canal.
13435	Feb. 28, 1899.	F. Hyde & Co.....	Supply 10,000 barrels of Portland cement.

7. TRENT CANAL.

13203	Nov. 29, 1898.	Dominion Bridge Co., Ltd ..	Construct hydraulic lift Lock No. 1, Peterborough, Peterborough and Lakefield division.

No. 2.—CONTRACTS entered into during the Fiscal Year ended June 30, 1899—*Con.*

8. WELLAND CANAL.

No. of Contract.	Date of Signature.	Contractor.	General Description.
13244	Sept. 8, 1898.	John Riley	Taking down and rebuilding part of present timber superstructure, West Pier, Port Dalhousie.
13274	" 23, 1898.	Albert H. Irvine & Co	Remove by dredging certain slides on summit level between Allanburgh and Port Colborne.
13403	Mar. 23, 1899.	Gallagher & Cunningham	Supply brass and phosphor bronze castings for 1899.
13420	" 3, 1899.	John McLean	Supply timber and lumber for canal and its branches for 1899.
13422	April 11, 1899.	British Columbia Mills, Timber and Trading Co.	Supply timber for canal and its branches for 1899.

GERARD S. RUEL,
Law Clerk.

OTTAWA, October 11, 1899.

No.

GENERAL

SHOWING Water Power and other Public Property leased by the Department

No. of Lease.	Date of Signature.	Term of Lease.	Lessees.	Property Leased.
	1898.			*1. Intercolonial Railway.*
13224	July 12..	5 years.....	J. Cradock Simpson to the Queen.	Office, No. 143 St. James St., Montreal...
13225	" 13..	5 years.....	James P. Bamford....	South-westerly portion of office No. 143, St. James St., Montreal.
13273	Oct. 25..	1 year.....	Canada Ry. News Co....	News room at Moncton, N.B.....
13417	1899. Jan. 3..	2⅔ years.... ..	Atlantic and Lake Superior Ry. Co.	Room No. 16, Board of Trade Building, Montreal.
13453	Mar. 25..	3 years.....	Clapham Estate to the Queen.	Office marked "I.C.R." on Dufort St., Quebec City.
13502	June 1..	5 years...	James W. Montgomery..	Shop and basement, No. 7, King St., St. John, N.B.
	1898.			*2. Beauharnois Canal.*
13173	Aug. 25..	3½ years, renewable 10 years.	Ella Perkins	Surplus water at lock No. 7 ....
13469	1899. May 8..	During pleasure.	Bell Telephone Company of Montreal.	Privilege to lay an iron pipe carrying electric cables under canal at Valleyfield.
	1898.			*3. Carillon and Grenville Canals.*
13132	July 26..	21 years, renewable.	General Manufacturing Company of Canada.	Surplus water flowing over Carillon dam..
	1899.			
13458	April 25..	During pleasure.	John Brophy.....	Land between old canal and Ottawa River.
	1898.			*4. Lachine Canal.*
13121	Oct. 29..	During pleasure.	Montreal Island Belt Line Ry. Co.	Operate their railway over and across canal reserve between Montreal and Lachine.
13150	1899. April 11..	10 years	Corporation of the City of Montreal..... ...	St. Patrick Park, Montreal..... .....
13212	1898. July 18..	During pleasure.	Damase Parizeau.....	Storage lot No. 3, St. Gabriel Basin, Montreal.
13228	Aug. 12..	" ..	Grand Trunk Ry. Co....	Privilege to lay a track from their present siding to Cantin's lumber yard.
13292	Oct. 20..	" ..	Pierre Tellier.....	Two strips of land, one at head of canal basin No. 1, St. Gabriel, other between same basin and Seminary St.
13293	" 29..	" ..	Joseph Touzin..... .	Land on north side of canal, opposite Seminary St.

3.

STATEMENT

of Railways and Canals during the Fiscal Year ended June 30, 1899.

Area.	For what purpose used.	Amount of Water Power.	Date from which Lease is reckoned.	Terms of Payment.			Remarks.
				Annual Rental.	When due each year.	When first instalment was due.	
				$ cts.			
.....	.....	.....	May 1, '98	1,700 00	Paid quarterly on Jan., Apl., July and Oct. 31.	July 31,'98	
.....	.....	....	" 1, '98	800 00	" " ..	" 31,'98	
.....	....	....	Sept. 1,'98	108 00	Paid quarterly on Mar., June, Sept and Dec. 1.	Sept. 1, '98	
.....	....	.....	Jan. 1, '99	$500 until May 1,1900, $600 thereafter.	Monthly...	Jan. 1, '99	
.....	.. ..	.....	May 1, '99	650 00	Paid quarterly on Feb., May, Aug. and Nov. 1.	Aug. 1, '99	
....	.....	.....	June 1, '99	900 00	" " ..	" 1, '99	
.....	Manufacturing, &c.	40 horse powers.	Jan. 1, '97	100 00	Paid semi-annually on Jan. and July 1.	Jan. 1, '97	
.....	..... .	.....	May 1, '99	10 00	May 1.... . .	May 1, '99	
.....	Generating electricity, &c.	2,000 horse powers or more.	" 1, '98	Not less than $2,000, and $1 per additional horse power.	" 1.....	" 1, '99	
24¾ acres....	Pasturing purposes.	....	" 1, '99	20 00	" 1.....	" 1, '99	
. .....	....	....	" 1, '98	250 00	" 1....	" 1, '98	
2 acres.....	Public park....	.....	" 1, '99	1 00	" 1....	" 1, '99	Surrendered for amendment.
9,444 sq. ft..	Storing lumber.	....	June 7, '98	188 88	June 7.....	June 7, '98	
.....	Access to said lumber yard.	.....	Aug. 1, '98	10 00	Aug. 1.	Aug. 1, '98	
8,675 sq. ft.	Storing sand...	. .....	May 1, '98	130 00	May 1.....	May 1, '98	
2,625 " ..	" ...	.....	Sept. 1, '98	40 00	Sept. 1.....	Sept. 1, '98	

No. 3.—GENERAL STATEMENT showing Water Power and other Public Property

No. of Lease.	Date of Signature.	Term of Lease.	Lessees.	Property Leased.
	1898.			*4. Lachine Canal*—Concluded.
13295	Oct. 26..	During pleasure.	H. Dobell & Co.	Canal reserve land. ....
13296	Nov. 15..	" ..	William Patterson	" ..... .
13297	Oct. 27..	" ..	Intercolonial Coal Mining Co.	" at new lock No. 2.....
13298	" 27..	" ..	Wilfrid Marsan.....	" .....
13340	Dec. 6.. 1899.	3 years.....	Northern Paving and Construction Co.	Land in municipality of St. Gabriel, and privileges.
13386	Jan. 27.	During pleasure.	W. Pauzé & Sons.....	Lots Nos. 1 & 2, St. Ann's Ward, Montreal
13439	Mar. 11..	" ..	The Wilson Co.....	Lots Nos. 13 & 15 " " ..
13440	" 17..	" .	Montreal Stock Yards Co.	Land at Point St. Charles, St. Ann's Ward, Montreal.
13449	April 7..	" .	Bell Telephone Co. of Canada.	Privilege to lay a cable across canal and canal lands, at end of Seminary St., Montreal.
13450	" 29..	" ..	Chambly Manufacturing Co.	Privilege to lay a cable along basin No. 2 and erect a small terminal house near canal waste weir, Point St. Charles, Montreal.
13497	June 10..	" ..	Imperial Oil Co	Privilege to lay iron pipes under canal tow path, at Côte St. Paul, Montreal.
				5. Rideau Canal.
13217	July 29.. 1899.	During pleasure.	Sisters of the Precious Blood of Ottawa.	Privilege to erect a fence on part of canal reserve.
13223	April 1.. 1896.	" ..	John J. McDonald	Part lot No. 30, concession D, Township of Wolford.
13227	Mar. 11.. 1899.	99 years, renewable.	John Duan	Part road allowance between lots Nos. 21 and 22, Gore of Gloucester, Co. of Carleton
13396	Mar. 6..	During pleasure.	Corporation of the City of Ottawa.	Privilege to lay main trunk sewer under and across canal at head of deep cut.
13454	April 11..	" ..	Ottawa and New York Railway Co.	Privilege to lay and maintain two tracks along certain canal reserve.
	1898.			*6. Sault Ste. Marie Canal.*
13433	Oct. 31.. 1899.	99 years	Edward V. Douglass to the Queen.	Part Section 2, in Township of Awenge, District of Algoma.
13499	June 8..	During pleasure.	Bell Telephone Co. of Canada, Ltd.	Privilege to lay a cable across canal at railway bridge.
	1898.			*7. Welland Canal.*
13146	July 11.. 1899.	" ..	Corporation of Town of Port Colborne.	Privilege to cross canal with an 8-inch water main, and to erect a pump house and stand pipe.
13299	Jan. 7..	" ..	The Wilson Carbide Works Co.	Land on east side of lock 10, old canal, and part of lot No. 13, concession 8, County of Lincoln.

OTTAWA, October 11, 1899.

SESSIONAL PAPER No. 10

Leased by the Department of Railways and Canals, &c.—*Concluded.*

Area.	For what purpose used.	Amount of Water Power.	Date from which Lease is reckoned.	Terms of Payment.			Remarks.
				Annual Rental.	When due each year.	When first instalment was due.	
				$ cts.			
192 sq. ft.	Weighing scales	.....	Sept. 1, '98	20 00	Sept. 1.....	Sept. 1, '98	
588 " ..	" ..	.....	" 1, '98	20 00	" 1.....	" 1, '98	
520 " ..	" ..	.....	" 1, '98	20 00	" 1.....	" 1, '98	
796 " ..	" ..	.....	" 1, '98	40 00	" 1.....	" 1, '98	Cancelled by O.C. Aug. 12, '99.
19,200 " ..	Mechanical construction.	.....	Oct. 1, '98	200 00	Oct. 1.....	Oct. 1, '98	
19,046 " ..	Storing lumber.	.....	Jan. 2, '99	380 92	Jan. 2	Jan. 2, '99	
31,879 " ..	Storing coal and wood.	.....	Mar. 1, '99	433 47	March 1.....	Mar. 1, '99	
10·72 acres..	Company's stock yards.	.....	" 1, '99	100 00	" 1.....	" 1, '99	
.....	.....	.....	April 1, '99	10 00	April 1.....	April 1, '99	
.....	.....	.....	" 1, '99	100 00	" 1.....	" 1, '99	
.....	Pumping oil and feeding boiler.	.....	June 1, '99	40 00	June 1.....	June 1, '99	
.....	Preservation of trees.	.....	Sept. 1, '98	1 00	Sept. 1.....	Sept. 1, '98	
2·10 acres...	Access to Rideau River.	.....	April 1, '99	3 15	April 1.....	April 1, '99	
0·61 acre ...	.....	.....	Mar. 11, '96	1 00	For the whole term.	.....	Received too late for last year's rep't
.....	.....	.....	Feb. 1, '99	10 00	Feb. 1.....	Feb. 1, '99	Cancelled by O.C. of Aug. 2, 1899.
.....	.....	.....	April 1, '99	100 00	April 1.....	April 1, '99	
1·00 acre...	.....	.....	" 1, '96	1 00	April 1.....	April 1, '97	
.....	.....	.....	June 1, '99	5 00	June 1.....	June 1, '99	
.....	.....	.....	May 1, '98	20 00	May 1.....	May 1, '98	
0·09 acre ...	Erecting a store house.	.....	Sept. 1, '98	10 00	Sept. 1.....	Sept. 1, '98	

GERARD S. RUEL,
Law Clerk.

No.

PROPERTY conveyed and damages released to the Department of

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
	1899.			*1.—Canadian Pacific Ry.*
13554	June 21..	Her Majesty to Canadian Pacific Railway Co.		Village of Keewatin.....
13555	" 19..	" " ..		" " .....
13556	" 22..	" " ..		.....
	1898.			
13383	Dec. 22..	Heber Archibald.....	N.W. ¼ Sec. 7, and S. ½ of S.W. ¼ Sec. 18.	Township 5, Range 4, Pembina Branch.
13483	Jan. 26..	Patrick Carey, *et ux*.....	N.W. ¼ Sec. 31.....	" " ..
13484	" 26..	" "	S. ½ of the S.W. ¼ Sec. 6.....	Township 6, Range 4, Pembina Branch.
				2.—Intercolonial Railway.
13276	July 13 ..	Pictou Harbour Commissioners.	.....	Pictou.....
	1899.			
13461	Mar. 24..	Rhodes Estate	Pts. Nos. 6, 8, 8*a*, and 9 of Cad. plan of St. Laurent Ward.	Lévis.....
13462	Feb. 27..	Young Estate.....	Pt. No. 408, Cad. plan of Lauzon Ward.	" .....
				3.—Beauharnois Canal.
13444	" 1..	Joseph Lauzon.....	Pt. Lot 249, Official Cad.....	St. Timothée.....
13472	April 10..	Auguste Bergevin, *et ux*.	Pts. Lots. Nos. 342, 343, 344, 345, 346, 347, 348, 349, 350 and 351; and pt. Lot No. 339.	Ste. Cécile.....
			Also pts. Lots Nos. 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 and 21; and pt. Lot No. 1.	St. Stanislas de Kostka.....
	1898.			*4.—Chambly Canal.*
13409	Aug. 9..	Joseph B. Many	Pt. Lot No. 224.....	St. Luc.....
13410	" 9..	Timothé Dupuis	Pt. Lot No. 221.....	" .....
13411	" 9..	Joseph Gabouriau.....	Pts. Lots Nos. 222, 223, 244.....	" .....
13412	" 9..	Tharsile Bessette.....	Pt. Lot No. 218.....	" .....
13413	" 9..	Léocadie Dubuc.....	Pts. Lots Nos. 220, 221.....	" .....
13414	Sept. 10..	Léon Chartier, *et al*.....	Pt. Lot No. 233.....	" .....
13415	Oct. 1..	Joseph Poirier, *et al*.....	Pt. Lot No. 225.....	" .....
13416	Nov. 26..	Patrice Dupuis, *et al*	Pt. Lot No. 219.....	" .....
	1899.			
13437	Feb. 6..	Hormisdas Riendeau....	24, subdivision of Lot 130.....	Chambly Basin .....
13448	Mar. 14..	Her Majesty to H. Riendeau.	Pt. Lot No. 24, subdivision of Lot 130.	" .....
				5.—Carillon and Grenville Canals.
13446	" 2..	Reuben Weldon, *et ux*...	Pts. Lots Nos. 432 and 436 of Cad. and Book of Reference.	Township of Chatham.....

4.

Railways and Canals during the fiscal year ended June 30, 1899.

County.	Area.	Amount.	Remarks.
		$ cts.	
Rainy River District	23·74 acres		Special grant.
"	1·5 "		"
"	0·46 "		"
Thunder Bay District			"
	6·00 acres		Torrens certificate. Received too late for last year's report.
	4·00 "		" "
	2·00 "		" "
Pictou, N.S.		2,500 00	Release, land and premises, and land covered with water.
		Costs, 221 00	
Lévis	10,024 sq. ft.	5,256 80	
"	1,559 "		
"	10,497 "	8,397 60	
Beauharnois		150 00	Release, right of taking clay and gravel.
"		1,000 00	
"			
St. Johns	3,525 sq. ft.	4 41	
"	4,713 "	5 89	
"	11,527 "	14 40	
"	13,185 "	16 48	
"	9,451 "	11 81	
"	10,373 "	12 97	
"	3,822 "	4 78	
"	2,863 "	3 58	
Chambly		Letters Patent No. 13448.	Release, damages.
"	1,700 sq. ft.	$150 and Release No. 13437.	Letters patent.
Argenteuil	0·227 acres	600 00	
	0·549 "		
	0·906 "		
	0·369 "		

No. 4.—PROPERTY conveyed and damages released to the Department of

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
	1898.			*6.—Lachine Canal.*
13357	Nov. 16..	Thomas A. Trenholme...	Cad. 141	Montreal.....
13362	Dec. 15..	Alex and Henry Mills...	Cad. 142.....	" .....
	1899.			
13408	Feb. 8..	Alex. Aubertin.....	3607.....	" .....
	1898.			*7.—Rideau Canal.*
13262	Aug. 19..	Patrick Hogan.....	....	Kingston Mills.....
13308	Oct. 5....	Her Majesty to The Deseronto Navigation Co., Ltd.	....	.....
				8.—Soulanges Canal.
13237	July 7....	Francis Delisle, *et al*....	76 and 77.....	St. Michel de Vaudreuil.....
13256	Aug. 1....	Moïse Leroux.....	Pt. Lot No. 451.....	St. Joseph de Soulanges.....
13285	Feb. 4....	Dame Odile Daoust.....	448, 449, 450 and 451.....	" " .....
13314	Oct. 12...	Alex. Leroux.....	Pts. Lots 344 and 355...	" " .....
13333	Nov. 3...	Arcade Bissonnette. ...	" 147 and 308.....	" " .....
13347	" 17...	Honoré Cuillierier	Pt. Lot 323.....	" " ....
13358	" 21. .	Julienne Dupont, *et al*...	75.....	Cascades Village.....
13369	Aug. 18..	Her Majesty to F. X. Lafrance.	Pts. Lots 441 and 445.....	St. Joseph de Soulanges.....
13370	" 18..	Her Majesty to Ovide Periard.	Pt. Lot 445.....	" " .....
13388	Nov. 30...	L. Joseph Lefaivre, *et al*.	70.....	St. Michel de Vaudreuil.....
13398	Dec. 26...	Maurice Tessier.....	Pt. Lot 331.....	St. Joseph de Soulanges.....
13399	" 26...	Laurent Tessier.....	" 332.....	" " .....
13400	" 26...	Adolphe Tessier.....	" 335.....	" " .....
	1899.			
13406	Feb. 2.. .	Alex. Cuillierier.....	" 354.....	" " .....
13418	Jan. 20...	Ovide Periard....	" 445.....	" " .....
13419	" 20...	F. X. Lafrance.....	Pts. Lots 441 and 445.....	" " .....
13443	" 30...	Mathilde Valois, *et al*...	53.....	Cascades Village..... ....
	1898.			
13447	Aug. 18...	Her Majesty to Moïse Leroux.	Pts. Lots 441 and 445	St. Joseph de Soulanges....
	1899.			
13474	April 18..	Moïse Leroux.....	" "	" " .....

SESSIONAL PAPER No. 10

Railways and Canals during the fiscal Year ended June 30, 1899—*Continued.*

County.	Area.	Amount.	Remarks.
		$ cts.	
Hochelaga		42 00	Release, damages.
"		42 00	" "
Côte St. Paul, Montreal		375 00	" "
Frontenac		200 00	Release, of all claims on buildings, &c.
		100 00	" damages to Str. "Nile" whilst passing through Hogsback Locks.
Vaudreuil		167 00	
Soulanges	0·066 acre	Pr., 300 00 Int., 15 00	
"	0·52 acres 5·63 " 6·39 " 6·57 "	Pr., 5,400 00 Int., 2,033 50	Received too late for last year's report.
"	4·27 " 5·49 "	7,024 00	
"	0·439 " 3·94 " 5·72 "	Pr., 2,860 00 Int., 1,310 84	
"	4·18 "	Pr., 2,008 70 Int., 914 75	
Vaudreuil		Pr., 65 00 Int., 16 68	(Heirs Sylvain Dupont.
Soulanges			Letters Patent.
"			Letters Patent.
Vaudreuil		76 11	(Lefaivre Estate).
Soulanges	4·30 acres	Pr., 2,050 35 956 48	
"	4·00 "	Pr., 2,036 23 Int., 949 56	
"	3·90 "	Pr., 2,326 67 Int., 1,084 99	
"	8·70 "	Pr., 2,752 65 Int., 1,270 79	
"		125 00 and Letters Patent No. 13370	Release, damages.
"		Letters Patent No. 13369	Release.
Vaudreuil		165 43	(Joseph Valois Estate).
Soulanges	0·582 acres. 0·01 "		Letters Patent.
"	0·582 " 0·01 "	100 00 and Letters Patent No. 13447	Released, damages.

No. 4.—PROPERTY conveyed and damages released to the Department

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
	1899.			*Soulanges Canal*—Con.
13511	June 2....	Joseph A. Leroux.....	Pt. Lot 14.....	St. Joseph de Soulanges.....
	1898.			*9.—Trent Canal.*
13238	July 9...	P. Fitzgerald..	Pt. W. ½ of E. ½ Lot 1, Con. 8..	Township of Carden.....
13254	" 30...	Edward Johnson, *et al*...	E. ½ Lot 20, Con. 7....	" Fenelon.....
13255	" 30...	Elizabeth McNeil.... ..	Pt. Lot 32, Con. 8.	" " .....
13279	" 30...	Joseph Hore, *et al*.	E. ½ Lot 25, Con. 7.....	" " .....
13284	Sept. 9....	Peter Hamilton.....	Part Lot 8, Con. 10.....	" Douro.....
13316	Oct. 1....	Angus McIntyre, Jr ...	N. pt. Lot 26, Con. 5.....	" Eldon... .....
13315	Sept. 27...	Angus McIntyre, *et ux*.	" 27, Con. 5.....	" " .....
13331	Oct. 31...	John Suggitt, *et al*	E. pt. Lot 25, Con. 1.....	" Somerville.....
13359	Dec. 13...	Peter Clancy, *et al*	Pt. E. ½ Lot 31, Con. 12.....	" Otonabee .....
13360	" 13...	Wm. Collins and Cornelius Clancy.	" "	" " .....
	1899.			
13397	Jan. 13...	John Grundy, *et ux*.....	24, N. side of Smith St..... ..	Lakefield.....
13428	Feb. 13...	Thos. Fitzgerald and M. Smith.	Pt. Lot 1, E. Caroline St.....	" .....
13464	Mar. 30..	Elizabeth Rippon's Estate	" 11, S. Nelson St.....	" .....
	1895.			
13496	Sept. 28..	James Boulton..... ..	" 8, Con. 10..... .. .	Township of Douro.....
	1898.			*10.—Williamsburg Canals.*
13208	May 17...	William Dillon.....	Pt. W. ½ Lot. 9, Con. 1.....	Township of Edwardsburg...
13233	July 14...	John H. Meikle.....	Pts. Lots 18, 19 and 20. Block 96.	Morrisburg.....
	1898.			
13288	Sept. 15..	Catherine Wright, *et al*..	21, E side of Waddell St. & pt. Lot 1, S. Morrisson St.....	Cardinal...,.....
13319	Oct. 3..	T. F. Chamberlin, *et ux* and W. P. Chamberlin.	Pts. Lots 6 & 5, Block F.	Morrisburg.....
	1897.			
13320	July 30..	John Feeney.....	Pt. Lot 20, E. side of Waddell St.	Cardinal.....
	1898.			
13321	July 21..	Joseph Kerr, *et al*.....	Pts. Lots 25 & 26, Con. 1.	Township of Osnabruck.....
	1897.			
13332	Oct. 20..	Dept. Indian Affairs....	Pt. Drummond Island.....	" Edwardsburg. .
13329	" 15..	Dept. Indian Affairs....	Pt. Spencer's Island.....	" " .
13335	" 21..	Patrick Connell, *et ux*...	Pt. E. ½ Lot 28, Con. 1.....	" Mathilda.....
13337	Nov. 8..	George S. Thompson, *et ux*	Pt. W. ½ Lot 25, Con. 1.....	" " .....
13339	July. 9..	Patrick G. Roddy, *et ux*.	Pts. Lots 25 & 26, Con. 1.....	" Osnabruck.....
13352	Nov. 23..	Mary Serviss..... ..	Pt. E. ½ Lot 26, Con. 1	" Mathilda.....
13353	" 14..	Alex. McGruer.....	E. ½ Lot. 26, Con. 1.....	" " .....
13361	Oct. 21..	Thomas Ward, *et ux*.....	Pt. E. ½ of W. ½ Lot 10, Con. 1.	" Edwardsburg. .
13365	Nov. 21..	Hannah Johnston. . ..	Pt. E. ½ Lot 26, Con. 1..... .	" Mathilda.....
13407	Dec. 31..	Samuel Gore, *et ux*.....	Pt. Lot 19, Con. 1.....	" Edwardsburg.
	1899.			
13468	April 15..	William A. Fisher... ...	Pt. W. ½ Lot 27, Con. 1.....	" Mathilda.....
13482	Mch. 30..	Thomas Hunter..	Pt. front pts. Lots 2 & 3, Con. 1.	" Edwardsburg...
13503	June 1..	Anson Hawley.....	Pt. Lots 10 & 11, S. side Elgin St.	Cardinal.....
13504	May 31..	Sarah Galbraith.....	Pt. Lots 4, 8 & 9, S. of New Canal.	" .....

SESSIONAL PAPER No. 10

of Railways and Canals during the Fiscal Year ended June 30, 1899.—*Continued.*

County.	Area.	Amount.	Remarks.
		$ cts.	
Soulanges	5·40 acres	Pr., 1,600 00 Int., 784 00	
Victoria	10·72 "	72 00	
"		100 00	
"		125 00	
"	100 acres	125 00	
Peterborough	11·9 acres	300 00	
Victoria	19·14 "	255 00	
"	16·45 "	235 00	
"		62 00	
Peterborough	5·00 acres	50 00	Release, damages, (Estate E. Clancy).
"			Bond securing other claims. (Executors of E. Clancy.)
"		50 00	
"		125 00	Release, damages.
"	0·06 acre	190 00	
"	0·55 "	20 00	Received too late for last year's report.
Grenville	2·77 acres	625 00	" "
Dundas	0·058 acre	550 00	(Estate Janet McKenzie).
Grenville		1,400 00	
Dundas	60 sq. ft	442 00	
Grenville	0·005 acres	25 00	Received too late for last year's report.
Stormont	0·01, 1·00, 0·36 "	600 00	
Grenville	17·00 "	136 00	Order in Council.
"	4·25 "		" "
Dundas	2·31 "	175 00	
"	4·75 "	2,900 00	
Stormont	0·001, 1·75 "	425 00	
Dundas	3·45 "	1,350 00	
"		125 00	Release, damages.
Grenville	0·66 "	190 40	
Dundas	1·85 "	600 00	(Estate, N. Johnston.)
Grenville	0·50 "	100 00	
Dundas	2·00 "	1,015 00	
Grenville	2·00 "	400 00	
"	0·43 "	775 00	
"	0·1002 "	875 00	

No. 4.—PROPERTY conveyed and damages released to the Department

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
	1899.			*Williamsburg Canals*—Con.
13512	June 10..	Eliza J. Williams.....	Pt. Lot letter 'F.,' N. side of Dundas St.	Cardinal.....
13513	May 30..	John H. Vancamp.....	Pt. Lot letter 'N.' N. side of Dundas St.	" .....
13519	June 12..	Trustees Cardinal Methodist Church.	Pt. Lot letter 'F.,' N. side of Dundas St.	" .....
13543	May 30..	Henrietta M. Wallace...	Pt. Lot 35, S. side of Lambert St., Block 'L.'	" .....
13557	June 22..	Nelson Gillard, *et al*.	Pt. Lot 26, W. side of Waddell St.	" .....
13558	" 19 .	Albert Kelly, *et ux*.....	Pt. Lot 26&11, E. side Walter St.	" .....
13559	" 1..	Elizabeth Barber, *et al*...	Pt. E. ½ Lot 9, Con. 1.....	Township of Edwardsburg...
13560	April 17..	Sarah A. Hanes, *et al*....	Pt. Lot 4, Block 'F.'.....	Morrisburg.....
13561	June 20..	Adam Lavere, *et ux*. ...	Pt. Lot 22, S. side New Canal..	Cardinal.....
13566	" 5..	Joseph Byers, *et ux*.. ..	N. W. corner of an unnumbered Lot S. of Dundas St.	" .....
13567	" 27..	William Clark, *et al*.....	Pt. Lot letter 'F.,' N. side of Dundas St.	" .....
13571	" 20..	William Blakely, *et ux*..	Pt. Lot 23, N. side Lambert St..	" .....
13592	" 22..	Ashley D. Vancamp.....	Pt. Lots 20 & 21, N. side of Lambert St.	" .....

OTTAWA, October 11, 1899.

of Railways and Canals during the Fiscal Year ended June 30, 1899.—*Concluded.*

County.	Area.	Amount.	Remarks.
		$ cts.	
Grenville	0·084 acres	1,675 00	
"	0.051 "	900 00	
"	0·112 "	300 00	
"	0·007 "	60 00	
"	0·155 "	575 00	
"	0·172 "	1,500 00	
"	0·77 "	475 00	
Dundas	90 sq. ft	900 00	
Grenville	0·060 acres	835 00	
"	0·02 "	1,800 00	
"	0·090 "	325 00	(Trustees Presbyterian Cemetery.)
"	0·060 "	800 00	
"	0·111 "	675 00	(Executor, R. Braithwaite Estate.)

GERARD S. RUEL,
Law Clerk.

PART V

CANAL STATISTICS

CANAL STATISTICS

FOR

SEASON OF NAVIGATION 1898

REVENUE.

The total revenue, exclusive of hydraulic rents for two years, is as follows:

For 1897	$ 346,758 87
For 1898	341,679 23

By comparing the statistics of 1897 with 1898, it will be seen that the gross revenue has decreased $5,079.64.

The increases and decreases are as follows:—

	Increase.	Decrease.
On the Welland Canal		$ 19,935 82
" St. Lawrence Canal	$ 17,353 03	.....
" Chambly Canal		3,982 47
" Ottawa Canals	2,888 34	.....
" Rideau Canal		1,402 32
" St. Peters Canal	27 62	.....
" Trent Valley Canals		59 02
" Murray Canal	29 00	.....
" Sault Ste. Marie Canal	.....	.....
Total	$ 20,297 99	$ 25,377 63
Total decrease		5,079 64

STATEMENT of the Revenue, together with the increases and decreases of all the Canals for the seasons of Navigation from 1889 to 1898, inclusive.

Years.	Revenue.	Increase.	Decrease.
1889	$ 381,109 31	$ 59,675 38	.....
1890	338,059 51	.....	$ 33,049 80
1891	350,351 97	2,292 46	.....
1892	358,711 04	8,359 07	.....
1893	348,012 00	.....	10,699 04
1894	307,824 67	.....	40,187 33
1895	283,211 41	.....	24,613 26
1896	350,061 03	66,849 62	.....
1897	346,758 87	.....	3,302 16
1898	341,679 23	.....	5,079 64

In compliance with the renewed request of forwarders and shippers of Montreal and the management of the Canada Atlantic Railway Co., for a reduction of tolls on certain agricultural products, His Excellency the Governor General in Council on June 1, 1898, authorized a reduction of canal tolls, as follows:—

For the season of 1898 the canal tolls for the passage of the following food products, wheat, indian corn, pease, barley, rye, oats, flax-seed and buckwheat for through passage

eastward through the Welland Canal, shall be 10 cents per ton, and for through passage eastward through the St. Lawrence Canals, only 10 cents per ton, payment of the said tolls of 10 cents per ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals, or any portion thereof; further, in the case of any of the above-named products brought down from Parry Sound over the line of the Canada Atlantic Railway Company to their elevator at Coteau Landing, the through rate thereon from that point to Montreal, to be 5 cents per ton.

In consequence of the reduced rate of tolls, as above, being applicable to the said food products, irrespective of their destination, the reduced rate of 10 and 5 cents a ton respectively only was collected, and therefore no refunds were made on these articles for 1898.

It may be observed, however, that the reduction of tolls from 20 to 10 cents per ton on the articles referred to, for passage through the Welland Canal, amounts to $68,887.30.

The quantity of barley, corn, oats, pease, rye and wheat passed down the Welland Canal, from ports west of Port Colborne for a period of seventeen years is as follows:—

	Quantity Passed Down to Montreal.	Quantity on which full Tolls were Paid.	
		To Ports in Ontario.	Quantity from U. S. Ports to U. S. Ports.
	Tons.	Tons.	Tons.
1882	180,694		63,881
1883	186,814	10,650	121,876
1884	142,194	12,153	104,537
1885	96,569	11,909	117,346
1886	203,940	9,881	151,551
1887	185,034	11,838	134,868
1888	160,358	25,599	169,664
1889	267,769	19,075	213,766
1890	288,513	16,899	245,932
1891	295,509	6,805	202,710
1892	261,954	8,942	201,540
1893	501,806	25,555	222,958
1894	273,651 *	16,699	203,979
1895	231,491	32,096	133,823
1896	461,049	73,386	160,372
1897	560,254	53,257	157,756
1898	519,532	31,279	144,612

The tolls on grain for passage through the Welland Canal prior to 1884 were 20 cents a ton; since that date, however, reductions have been made by Orders in Council from year to year as follows:—Upon the urgent request of forwarders and others interested in the grain trade, a reduction was made of one-half the usual rate of tolls on grain passing down the Welland Canal and the St. Lawrence Canals to Montreal; and in 1885 tolls were reduced to 2 cents a ton, and thereafter from year to year including 1891.

In 1892 the tolls were reduced to 2 cents a ton on grain passed down the Welland and St. Lawrence Canals and exported, and in such cases only.

In 1893 by Order in Council of 13th of February, the tolls were reduced to 10 cents a ton on grain passing eastward through the Welland Canal, irrespective of its destination, and the same rate of tolls for 1894 were allowed by O. C., April 16, 1894.

For the year 1895 (O. C., April 1, 1895,) the same rate of tolls was allowed as was granted for the year 1894.

*Of the quantity of grain passed down to Montreal there were transhipped at Ogdensburg in 1891 17,817 tons; in 1892, 4,341 tons; in 1893, 71,445 tons; in 1894, 23,030 tons; in 1895 18,987 tons; in 1896, 77,355 tons; in 1897, 89,659, and in 1898, 40,257.

For the year 1896 (O. C., April 23, 1896,) the same rate of tolls was allowed as was granted for the year 1895.

For the year 1897 (O.C., April 17, 1897,) the same rate of tolls was allowed as was granted for the year 1896.

For the year 1898 (O.C., June 1, 1898,) the same rate of tolls was allowed as was granted for the year 1897.

The rate through the St. Lawrence Canals only, was 10 cents a ton.

It may be remarked that goods having paid full tolls on the Welland Canal are allowed to pass down the St. Lawrence Canals to Montreal free from payment of any further tolls.

During the last decade the quantity of agricultural products, as above passed down the Welland and St. Lawrence Canals to Montreal, has increased from 267,769 tons in 1889 to 519,532 tons in 1898 ; and the quantity passed down the Welland Canal from United States ports to United States, has decreased from 213,766 to 144,612 tons for the same years.

The quantity of barley, buckwheat, corn, oats, pease, rye and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific Railways for a period of 13 years, is reported as follows :—

	Tons.
For 1886	165,613
1887	191,760
1888	113,794
1889	94,943
1890	119,208
1891	184,410
1892	291,680
1893	147,610
1894	60,666
1895	51,114
1896	153,717
1897	228,611
1898	293,391

The quantity of the same articles passed down the whole length of the St. Lawrence Canals to Montreal, for the same period was :—

	Tons.
For 1886	272,133
1887	237,881
1888	166,191
1889	275,414
1890	242,571
1891	320,434
1892	302,899
1893	532,084
1894	288,015
1895	247,550
1896	495,898
1897	604,200
1898	575,097

Comparative shipments of grain by the St. Lawrence route, and rail and water via the state of New York, are as follows:—

QUANTITY OF GRAIN TO SEA-BOARD BY COMPETING ROUTES.

The quantity of grain and pease passed down the whole length of the St. Lawrence Canals to Montreal, is as follows:—

	Tons.
For 1897	604,200
1898	675,097
Showing a decrease of	29,103

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways, is reported as follows:—

	Tons.
For 1897	228,611
1898	293,391
Showing an increase of	64,780

The quantity of grain arrived at tide-water by New York canals, is reported as follows:—

	Tons.
For 1897	569,362
1898	459,404
Showing a decrease of	109,958

The quantity of grain carried to tide-water by the New York railways, is reported as follows:—

	Tons.
For 1897	4,132,740
1898	5,371,500
Showing an increase of	1,238,760

The increases and decreases for 1898 as compared with 1897 on the several routes, competing for the carrying trade to the seaboard, are as follows:—

—	Increase.	Decrease.	Increase per cent.	Decrease.
On the St. Lawrence Canals		29,103		5·06
do Canadian Pacific and Grand Trunk Railways.	64,780		28·34	
do New York Canals		109,958		23·95
do do Railways	1,238,760		29·97	

By reference to Appendix U, it will be seen that the quantity of freight from ports west of Port Colborne to the United States ports, Oswego, Ogdensburg, &c., has

increased from 204,315 tons in 1887 to 258,871 tons in 1898, and the quantity to Ontario ports, between Port Dalhousie and Cornwall, has increased from 67,632 tons in 1887 to 110,893 tons in 1898. The quantity passed down to Montreal shows an increase from 213,834 tons in 1887 to 539,305 tons in 1898.

TRANSHIPMENT OF GRAIN.

The quantity of grain passed down the Welland Canal in Canadian and United States vessels to Kingston and Prescott for fourteen years, is as follows :—

In Canadian vessels there were in—

				Tons.
1885,	75	cargoes, with an aggregate quantity of	.....	45,639
1886,	244	do	do	143,330
1887,	284	do	do	178,233
1888,	182	do	do	143,025
1889,	208	do	do	165,117
1890,	203	do	do	184,275
1891,	209	do	do	190,664
1892,	158	do	do	159,018
1893,	146	do	do	148,962
1894,	125	do	do	159,145
1895,	123	do	do	136,617
1896,	196	do	do	227,912
1897,	180	do	do	229,265
1898,	166	do	do	224,021

In United States vessels there were in—

				Tons.
1885,	79	cargoes, with an aggregate quantity of	.....	55,982
1886,	97	do	do	62,222
1887,	19	do	do	12,477
1888,	60	do	do	43,667
1889,	114	do	do	108,358
1890,	35	do	do	35,560
1891,	77	do	do	90,153
1892,	89	do	do	109,812
1893,	257	do	do	328,269
1894,	84	do	do	106,236
1895,	56	do	do	73,987
1896,	158	do	do	217,978
1897,	197	do	do	285,847
1898,	339	do	do	464,852

Seven vessels took cargoes of 2,436 tons through to Montreal intact in 1898, seven of 2,324 in 1897, three of 1,176 in 1896, four of 1,344 tons in 1895, two cargoes of 810 tons in 1894, none in 1893, two in 1892 of 924 tons, and three in 1891 of 1,441 tons. Twenty-five vessels lightened a portion of their cargoes in 1898, against 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 473 vessels discharged the whole of their cargoes at Kingston in 1898, against 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

The quantity of grain transhipped at Port Colborne in 1898 and the four previous years is given below.

The total number of grain laden vessels lightened at this port in 1898 was 58, against 147 the previous year.

The quantity of grain lightened was as follows :—

Articles.	1894.	1895.	1896.	1897.	1898.
	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat	104,827	322,662	660,190	642,927	239,518
Corn	260,657	870,705	908,833	697,508	313,689
Rye	Nil	Nil	8,197	Nil	37,380
Oats	63,412	71,648	79,585	12,527	Nil
Barley	..	21,003	6,377	5,119	5,669

Welland Canal.

The total quantity of freight passed on the Welland Canal during the season of 1898 was 1,140,077 tons; of this quantity 19,347 tons were way or local freight.

There were 916,671 tons of freight passed eastwards, and 223,406 tons passed westwards.

East and west bound through freight.

The total quantity of through freight passed through the whole length of the Welland Canal during the season of 1898 was 1,120,730 tons.

Of this quantity 902,519 tons were east bound and 218,211 west bound freight.

Of the east bound through freight Canadian vessels carried 302,625 tons and United States vessels carried 599,894 tons; and of the west bound through freight Canadian vessels carried 7,661 tons, and United States vessels carried 210,550 tons, or a total of 310,286 tons for Canadian and 810,444 tons for American vessels.

St. Lawrence Canals.

The total quantity of freight passed through these canals during 1898 was 1,439,134 tons, of this quantity 1,235,003 tons passed eastward and 204,131 tons passed westward.

East and west bound through freight.

The total quantity of through freight was 813,704 tons; of this quantity 783,976 tons were east bound and 29,728 tons were west bound.

Way freight.

Of the total quantity of (way) or local freight 451,027 tons were east bound and 174,403 tons west bound freight.

THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freights passed eastward and westward through the Welland and St. Lawrence Canals, from Lake Erie to Montreal, during fifteen years, is as follows:—

	Eastward to Montreal. Tons.	Westward from Montreal. Tons.
1884	168,715	9,425
1885	132,968	16,115
1886	244,514	16,801
1887	213,834	14,075
1888	183,899	19,310
1889	298,197	25,370
1890	231,746	13,951
1891	309,593	14,060
1892	263,144	9,452
1893	508,016	16,545
1894	292 191	9,439
1895	266,659	10,555
1896	480,077	10,050
1897	584,246	4,542
1898	538,108	4,436

FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of freight passed eastward and westward through the Welland Canal, from United States ports to United States ports, for a period of fifteen years, is as follows:—

	Eastward. Tons.	Westward. Tons.	Total. Tons.
1884	163,998	243,081	407,079
1885	168,212	216,297	384,509
1886	224,916	239,562	464,478
1887	189,427	151,074	340,501
1888	221,062	213,689	434,751
1889	297,353	266,231	563,584
1890	318,259	215,698	533,957
1891	306,257	247,543	553,800
1892	300,733	240,332	541,065
1893	384,559	247,108	631,667
1894	361,319	230,948	592,267
1895	255,259	214,520	469,779
1896	385,695	267,518	653,213
1897	353,863	210,831	564,694
1898	277,023	210,516	487,539

The total quantity of freight passed through the Welland Canal from United States ports to United States ports shows a decrease of 77,155 tons, as compared with the previous year; and an increase of 80,460 tons, as compared with 1884.

The following statement shows the aggregate number of vessels, and the total quantity of freight passed through the Welland Canal, and the quantity passed between United States ports during the years 1867 to 1898 inclusive:

Fiscal Year	Aggregate number of Vessels.	Total quantity transported on the Welland Canal.	Quantity passed from United States ports to United States ports.
	No.	Tons.	Tons.
1867	5,405	933,260	458,386
1868	6,157	1,161,821	641,711
1869	6,069	1,231,903	688,700
1870	7,356	1,311,956	747,567
1871	7,729	1,478,122	772,756
Season of Navigation.			
1872	6,063	1,333,104	606,627
1873	6,425	1,506,484	656,208
1874	5,814	1,389,173	748,557
1875	4,242	1,038,050	477,809
1876	4,789	1,099,810	488,815
1877	5,129	1,175,398	493,841
1878	4,429	968,758	373,738
1879	3,960	865,664	284,043
1880	4,104	819,934	179,605
1881	3,332	686,506	194,173
1882	3,334	790,643	282,806
1883	3,267	1,005,156	432,611
1884	3,138	837,811	407,079
1885	2,738	784,928	384,509
1886	3,589	980,135	464,478
1887	2,785	777,918	340,501
1888	2,647	878,800	434,753
1889	2,975	1,085,273	563,584
1890	2,883	1,016,165	533,957
1891	2,594	975,013	553,800
1892	2,615	955,554	541,065
1893	2,843	1,294,823	631,667
1894	2,412	1,008,221	592,267
1895	2,222	869,595	469,779
1896	2,766	1,279,987	653,213
1897	2,725	1,274,292	564,694
1898	2,384	1,140,077	487,539

The total quantity of freight passed through the several divisions of the canals during the season of 1898 is as follows :—

——	Farm Stock.	Forest Produce of Wood.	Manufactures.	Merchandise.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland	9	140,031	32,203	235,364	732,470	1,140,077
St. Lawrence	1,106	61,502	76,285	348,091	952,150	1,439,134
Chambly	234	155,939	6,152	99,539	9,472	271,336
Ottawa	1,684	538,250	649	3,200	6,203	549,986
Rideau	19	30,238	2,395	18,989	3,305	54,946
St. Peters	40	5,878	1,449	50,666	6,457	64,490
Murray	6	4,037	3,235	5,067	3,198	15,543
Trent Valley	249	26,606	248	151	422	27,676

The total quantity of freight moved on the Welland Canal was 1,140,077 tons, of which 732,470 tons were agricultural products.

On the St. Lawrence Canals the total quantity of freight moved was 1,439,134 tons, of which 952,150 were agricultural products, and 348,091 tons were merchandise,

On the Ottawa Canals the total quantity of freight moved was 549,986 tons, of this quantity 538,250 tons were the produce of the forest.

STATISTICAL COMPARISON OF VARIOUS UNITED STATES ROUTES.

The statistical comparisons heretofore given in respect to the quantities of the principal articles carried through the Welland Canal, and those carried over routes in the United States, in competition with that work, have been continued to date.

By reference to statement H, as to the quantity of vegetable food carried to tidewater, it will be observed that the quantity carried by the New York Canals was 653,027 tons in 1898, 744,575 tons in 1897, 957,182 tons in 1896, 602,505 in 1895, 1,400,129 in 1894, 1,450,116 in 1893, 937,999 in 1892, and 1,092,355 in 1891.

The quantities of vegetable food carried by the New York Central, Erie and New York, West Shore and Buffalo Railways being :—

	Tons.
In 1898	7,060,542
1897	5,673,638
1896	5,183,540
1895	3,798,574
1894	4,281,056
1893	*5,107,426
1892	5,913,013
1891	3,565,381
1890	4,336,199
1889	3,654,984

	Tons.
In 1888	*3,197,734
1887	*3,847,766
1886	*3,802,262
1885	4,105,594
1884	3,639,805
1883	4,422,461
1882	3,885,557
1880	4,732,385
1869	1,087,809

*Flour and grain only

The following figures are an abstract of the quantities of vegetable food carried to tide-water by the canals and railways of the state of New York during thirty years :—

——	Canals.	Railways.	Total.	Proportions by Canals.
	Tons.	Tons.	Tons.	Tons.
1869	1,302,613	1,087,809	2,390,342	·545
1870	1,295,010	1,766,457	3,061,467	·423
1871	1,850,198	2,205,589	4,055,787	·456
1872	1,674,320	1,870,614	3,544,934	·472
1873	1,745,171	2,036,992	3,782,163	·461
1874	1,767,598	2,791,517	4,559,115	·387
1875	1,305,550	2,343,241	3,648,791	·357
1876	1,064,293	2,875,803	3,940,096	·270
1877	1,498,984	2,493,683	3,992,667	·375
1878	1,912,734	3,695,764	5,608,498	·341
1879	1,833,399	4,353,617	6,187,016	·296
1880	2,371,090	4,732,385	7,103,475	·333
1881	1,116,561	4,983,722	6,100,283	·183
1882	1,118,776	3,885,557	5,004,333	·223
1883	1,379,000	4,422,461	5,801,461	·237
1884	1,236,986	3,639,805	4,876,791	·253
1885	1,063,310	4,105,594	5,168,904	·205
1886	1,489,886	3,802,262	5,292,148	·281
1887	1,539,403	3,847,766	5,387,169	·285
1888	1,166,958	3,197,734	4,364,692	·267
1889	1,296,896	3,654,984	4,951,880	·262
1890	1,167,901	4,336,199	5,504,100	·212
1891	1,092,355	3,565,381	4,657,736	·234
1892	937,999	5,913,013	6,851,012	·137
1893	1,452,563	5,107,426	6,599,989	·284
1894	1,400,129	4,281,056	5,681,185	·327
1895	602,505	3,798,574	4,401,079	·159
1896	957,182	5,183,540	6,140,722	·156
1897	744,575	5,673,638	6,418,213	·116
1898	653,027	7,060,542	7,713,569	·085

COMPARATIVE STATEMENT OF TRAFFIC BY RAILWAYS AND CANALS VIA THE STATE OF NEW YORK.

On reference to the returns made by the railways to the state authorities of New York, and to the canal statistics submitted to the state legislature, I find that of the total tonnage of freight carried by the canals and railways, the state canals carried :—

	Per cent.		Per cent.
In 1859	68·9	In 1884	19·0
1869	47·0	1885	17·1
1879	38·9	1886	16·9
1871	38·9	1887	16·3
1872	40·1	1888	18·8
1873	34·9	1889	15·1
1874	31·7	1890	13·9
1875	28·4	1891	13·4
1876	24·6	1892	9·8
1877	28·3	1893	10·1
1878	27·1	1894	10·2
1879	23·7	1895	9·7
1880	25·1	1896	8·5
1881	18·5	1897	8·3
1882	19·0	1898	6·9
1883	18·7		

The quantity of freight carried by the canals and railways was greater in 1898 by 5,599,518 tons than the quantity carried in 1897, and an increase of 36,857,856 tons over 1869.

The quantities carried were as follows:—

	Total Tonnage.	Proportion by Canals.
In 1859	5,485,076	·6890
1869	12,453,174	·4705
1870	15,148,274	·3895
1871	15,844,152	·3896
1872	16,631,609	·4012
1873	18,200,208	·3497
1874	18,283,547	·3174
1875	17,101,758	·2841
1876	16,948,627	·2462
1877	17,489,770	·2833
1878	19,017,301	·2719
1879	22,590,766	·2373
1880	25,706,586	·2512
1881	27,857,394	·1859
1882	28,693,054	·1905
1883	30,167,119	·1877
1884	26,293,844	.1905
1885	27,543,948	·1718
1886	31,168,744	·1698
1887	34,029,791	·1632
1888	26,244,610	·1883
1889	35,466,042	·1514
1890	37,624,199	·1394
1891	38,524,179	·1343
1892	43,618,569	·0982
1893	42,953,233	·1009
1894	37,916,412	·1024
1895	36,170,339	·0967
1896	43,756,051	·0849
1897	43,711,512	·0828
1898	49,311,030	·0682

Average freight rates, grain, Chicago to Buffalo:—(as reported by the Secretary Merchants' Exchange, Buffalo).

Year.	Wheat.	Year.	Wheat.
1879	4·7	1890	1·9
1880	5·7	1891	2·5
1881	3·2	1892	2·2
1882	2·5	1893	1·6
1883	3·5	1894	1·2
1884	2·1	1895	1·9
1885	2·0	1896	1·7
1886	3·6	1897	1·5
1887	4·1	1898	1·5
1888	2·7		
1889	2·5	Average twenty years	2·6

COMPARATIVE STATEMENT of the Commerce through the United States, St. Mary's Falls Canal and Canadian Sault Ste. Marie Canal, for the seasons of 1897 and 1898.

		TRAFFIC FOR 1898.		TOTAL TRAFFIC FOR		INCREASE.	DECREASE.
		United States Canal.	Canadian Canal.	Season of 1898.	Season of 1897.	Amount.	Amount.
Vessels	Number.	14,058	3,675	17,733	17,080	655	
Lockages	"	7,008	2,520	9,528	8,571	957	
Tonnage, registered	Net tons.	15,871,609	2,757,630	18,629,239	17,621,318	1,007,921	
" freight	"	18,184,151	3,055,287	21,239,438	18,986,689	2,252,749	
Passengers	Number.	27,558	16,584	44,142	40,450	3,692	
Coal, (hard)	Net tons.	465,188	67,445	532,633	534,726		2,093
" (soft)	"	2,669,904	573,067	3,242,971	2,507,049	735,922	
Flour	barrels.	6,917,025	847,048	7,764,073	8,908,201		1,144,128
Wheat	bushels.	52,693,452	9,746,452	62,439,904	55,931,779	6,508,125	
Grain (excluding wheat)	"	22,950,940	3,188,177	26,139,117	24,968,136	1,170,981	
Manufactured and pig iron	net tons.	237,150	13,655	250,805	136,703	114,102	
Salt	barrels.	271,783	32,370	304,153	290,014	14,139	
Copper	net tons.	118,403	3,515	121,918	130,077		8,159
Iron ore	"	9,841,124	1,831,731	11,672,855	10,621,440	1,051,415	
Lumber	ft, B.M.	885,176,000	13,611,580	898,787,580	802,240,156	96,547,424	
Silver ore	net tons.				5		5
Building stone	"	4,670	2,493	7,163	8,262		1,099
†Unclassified freight	"	544,259	72,697	616,956	588,324	28,632	

† Included in unclassified freight for,—

1897.	Tons.	1898.	Tons.
Wool	2,905	Wool	2,601

The United States canal was open to navigation during the season of—

1889	234	days.
1890	228	"
1891	225	"
1892	233	"
1893	219	"
1894	234	"
1895	231	"
1896	232	"
1897	234	"
1898	241	"

The Canadian canal was open to navigation during the season of—

1895	87	days.
1896	218	"
1897	238	"
1898	243	"

The average number of vessels passing per day through the two canals for the season of 1898 was seventy-four.

R. DEVLIN,
Compiler of Canal Statistics.

OTTAWA, June 8, 1899.

SHIPMENTS of Grain (in Transit through Canada and Export) by Lake from Chicago during 1898.
(From Report of Board of Trade, Chicago.)

SHIPPED TO.	BARLEY.	CORN.		OATS.		RYE.		WHEAT.		TOTALS.
	Export.	Transit.	Export.	Transit.	Export.	Transit.	Export.	Transit.	Export.	
	Bush.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Sarnia, Ont.		247,215		2,961,047						3,208,262
Collingwood, Ont.		138,145	289,060							427,205
Depot Harbour "		759,771	2,338,604		46,375		64,830		609,450	3,819,030
Kingston "			4,258,096		180,150		124,650		758,482	5,321,378
Midland "		916,553	2,599,759					312,018		3,828,330
Owen Sound "		327,075	1,529,383						134,000	1,990,458
Parry Sound "		309,708	3,238,235		50,000				202,100	3,800,043
Prescott "	223,929		3,940,666				204,610		406,078	4,775,283
Totals.	223,929	2,698,467	18,193,803	2,961,047	276,525		394,090	312,018	2,110,110	27,169,989

EXPORTS by Lake from Chicago to Canada during the Season of Navigation in 1898.

(From report of Board of Trade, Chicago.)

Commodities.		Quantity.	Value.
			$ cts.
Barley	Bush.	223,929	89,708 00
Corn	"	18,193,803	6,391,443 00
Flaxseed	"	181,760	159,353 00
Oats	"	276,525	84,927 00
Rye	"	394,090	196,937 00
Wheat	"	2,110,110	1,853,899 00
Grass seed	Sacks	3,405	3,183 00
Flour	Barrels	23,096	90,215 00
Flourine	"	900	1,134 00
Cereal foods	"	130	527 00
Dextrine gum	Sacks	90	360 00
Gluten meal	"	1,968	1,574 00
Malt	"	3,620	1,833 00
Mill stuffs	"	3,520	2,820 00
Starch	Pkgs.	25,375	73,695 00
Sugar	"	72,246	113,205 00
Glucose	Barrels	2,835	33,071 00
Corn oil	"	480	5,618 00
Oils	"	2,080	12,995 00
Oilcake	Sacks	2,265	6,264 00
Cured meats	Barrels	277	3,104 00
Grease	Tierces	620	6,482 00
Lard	"	12,235	205,460 00
Pork	Barrels	10,860	115,974 00
Tallow	Tierces	1,405	13,971 00
Steel rails	Tons	13,977	240,731 00
Steel plates	"	3,788	67,572 00
Angle bars	"	880	18,439 00
Wire rods	"	6,945	118,930 00
Bolts	"	10	324 00
Spikes	"	37	1,082 00
Hardware	Pkgs.	1,551	2,971 00
Cement	Sacks	300	60 00
Coal	Tons	7	24 00
Soap	Boxes	550	1,330 00
Dried fruits	Pkgs.	600	1,155 00
Woods (manufactured)	Feet	1,100	126 00
Miscellaneous merchandise		3,849	5,563 00
Total value			9,926,059 00

GRAIN FREIGHTS BY LAKE, SEASON OF 1898.

THE following were the current rates of freight on Wheat and Corn from Chicago to Buffalo, Kingston, Odgensburg and Montreal (Steam), also to New York by Lake and Erie Canal, for each week, during the Season of Navigation.

1898.	To Buffalo.		To Ogdensburg.		To Kingston.		To Montreal (Steam).		Erie Canal, Buffalo to New York.		Chicago to New York, Lake and Canal, Exclusive of Buffalo Charges.	
	Wheat, per bushel.	Corn, per bushel.	Wheat, per bushel.	Corn, per bushel.	Wheat, per bushel.	Corn, per bushel.	Wheat, per bushel.	Corn, per bushel.	Wheat, per bushel.	Corn, per bushel.	Wheat, per bushel.	Corn, per bushel.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
April 2....	1¼	1⅛	.....	.....	.....	2⅜	.....	4⅜	.....	.....	.....	.....
" 9....	1¼	1¼	.....	.....	.....	2¼	.....	4⅜	.....	.....	.....	.....
" 16....	1¼	1¼	.....	.....	.....	3	.....	4⅜	.....	.....	.....	.....
" 23....	1	1¼	.....	.....	.....	2⅞	.....	4½	.....	.....	.....	.....
" 30....	1⅛	1¼	.....	2⅜	.....	2⅜	.....	4⅜	3	2¼	4⅜	3⅜
May 7....	1⅛	1¼	.....	2¼	3	2⅜	4¼	4⅜	3	2¼	4⅜	3⅜
" 14....	1⅛	1¼	.....	.....	.....	2¼	.....	4½	3	2⅜	4⅜	3⅜
" 21....	1⅛	1¼	.....	2½	.....	2⅜	.....	4⅜	3	2¼	4⅜	3⅜
" 28....	1⅛	1¼	.....	.....	.....	2½	.....	4⅜	3	2¼	4⅜	3⅜
June 4....	1⅛	1¼	.....	.....	2¼	.....	4	.....	3	2¼	4¼	3¼
" 11....	1¼	1	.....	.....	.....	1¾	.....	.....	3	2¼	4	3¼
" 18....	1¼	1	.....	.....	.....	.....	.....	.....	2¾	2¼	4	3¼
" 25....	1¼	1	.....	.....	.....	1⅝	.....	3¼	3	2⅜	4⅛	3⅜
July 2....	1⅛	⅞	.....	.....	.....	.....	.....	.....	3	2⅜	4⅛	3⅜
" 9....	1	¾	.....	1⅝	.....	1⅝	.....	3¼	3	2½	4	3¼
" 16....	⅞	⅝	.....	.....	.....	.....	.....	.....	3	2½	3⅞	3¼
" 23....	1¼	1¼	.....	1⅝	.....	1¾	.....	3⅜	2¾	2¼	4	3⅜
" 30....	1¼	1⅛	.....	1⅞	.....	1⅛	.....	3½	2¼	2¼	4	3⅜
Aug. 6....	1¼	1⅛	.....	.....	2	.....	3¾	.....	2⅝	2⅛	3⅞	3¼
" 13....	1¼	1⅛	.....	.....	.....	2	.....	3⅝	2½	2⅛	3⅞	3⅜
" 20....	1⅜	1⅛	.....	.....	.....	2⅛	.....	3¾	2¾	2¼	4⅛	3⅜
" 27....	1⅜	1⅛	.....	.....	.....	2⅛	.....	3¾	2⅝	2⅛	4⅛	3⅜
Sept. 3....	1½	1¼	.....	.....	2½	.....	4¼	.....	2⅝	2⅛	4	3⅜
" 10....	1⅜	1¼	.....	.....	.....	.....	.....	4	2⅝	2⅛	3⅞	3¼
" 17....	1¼	1⅛	.....	.....	2¼	.....	4	.....	2⅝	2⅛	4⅛	3⅜
" 24....	1⅛	1¼	.....	.....	.....	3	.....	4⅝	2⅝	2⅜	4⅜	3⅝
Oct. 1....	1⅜	1⅛	.....	.....	.....	3	.....	4⅝	2⅝	2⅜	4⅜	4⅛
" 8....	2	1⅝	.....	.....	.....	3⅛	.....	5⅛	2⅝	2½	4⅝	4¼
" 15....	2	1¾	.....	.....	.....	3½	.....	5⅛	3⅛	3	5⅛	5
" 22....	2¼	2	.....	.....	.....	.....	.....	.....	3⅛	3	5¼	5¼
" 29....	2½	2¼	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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LAKE FREIGHTS FROM CHICAGO TO BUFFALO ON WHEAT AND CORN.

STATEMENT showing the dates of the changes of the ruling rates of Lake freights, on Wheat and Corn, from Chicago to Buffalo, during 1898 (as reported by the Secretary of Merchants' Exchange, Buffalo.)

1898.	Wheat, Bushels.	Corn, Bushels.	1898.	Wheat, Bushels.	Corn, Bushels.
Opening.	cts.	cts.	Opening.	cts.	cts.
April 2	1⅝	1½	Aug. 9	1¼	1⅛
do 4		1½ to 1⅝	do 10		1⅛
do 6		1⅛ to 1¼	do 18		1⅛ to 1¼
do 7		1 to 1⅛	do 20	1¼ to 1⅜	1⅛ to 1¼
do 8		1⅛	do 22		1¼
do 9	1¼	1¼	do 31	1¼	1⅛
do 11		1⅛	Sept. 1	1¼	1⅛
do 13	1⅜	1⅛	do 17	1⅜	1¼
do 14		1¼	do 21	1½	1¼
do 16		1⅛	do 22	1⅜	1⅜ to 1½
do 18		1 to 1⅛	do 24		1⅛
do 20	1¼	1⅛	do 26		1½ to 1⅝
do 26		1⅛	do 27	2	1⅝
May 2	1⅜	1¼	Oct. 4	1⅞ to 2	1⅝
do 5		1¼	do 6	2	1⅝
do 9	1⅜	1¼	do 7	2	1⅜ to 1⅞
do 10	1⅜	1⅛ to 1¼	do 8	2¼	2
do 11	1⅜	1¼	do 12	2½	2¼
June 2		1⅛	do 15	2¼	2½
do 3		1 to 1⅛	do 19	3	2½ to 2¾
do 4		1	do 20	3¼	3
do 7		⅞ to 1	do 21	3⅛ to 3¼	3
do 8		⅞	do 25	3	2¾ to 2⅞
do 10		1	do 26	2¾	2½ to 2⅝
do 13		⅞	do 27	2¾	2⅝
do 15		⅞	do 31		2½
do 18		⅝ to ⅞	Nov. 2		2¼
do 20		⅞	do 4	2½	2¼
do 27		⅝ to ⅞	do 5		2¼
do 28		⅞	do 7		2⅛ to 2¼
do 29		⅝ to ⅞	do 8		2¼
July 1		⅞	do 11		2⅛
do 21		⅞	do 15	2¼	2
do 26		1	Dec. 1 to close	2	1¾

NOTE.—Corn from Chicago to Kingston ranged from 1⅝ to 3⅞ cents, and wheat, 3 cents per bushel during the season. Corn to Port Huron, ¾ to 1¾ cents.

Rates from Milwaukee about the same as from Chicago.

AVERAGE LAKE FREIGHTS.

The following statement shows the average rates of lake freights on wheat and corn between Chicago and Buffalo during each month in the past ten years, the highest and lowest rate on wheat in each year, and the average rate on wheat each year in cents, per bushel :—

(Per Report of the Secretary of Merchants' Exchange, Buffalo.)

	Grain, bushel.	May. Cents.	June. Cents.	July. Cents.	Aug. Cents.	Sept. Cents.	Oct. Cents.	Nov. Cents
1889	Wheat	2·2	2·0	2·1	2·7	3·0	3·0	2·5
	Corn	2·0	1·8	1·9	2·4	2·7	2·7	2·3

Highest rate, wheat, 1889, 3·6c.; lowest, 2c.; average for the season, 2·5c.

1890	Wheat	1·8	2·2	2·3	1·5	2·0	1·8	2·0
	Corn	1·6	2·0	2·0	1·3	1·8	1·6	1·8

Highest rate, wheat, 1890, 2½c.; lowest, 1·5c.; average for the season, 1·9c.

1891	Wheat	1·4	1·2	2·1	2·7	3·3	2·2	4·1
	Corn	1·2	1·1	2·0	2·5	3·0	2·1	3·8

Highest rate, wheat, 1891, 5¼c.; lowest, 1c.; average for the season, 2·4c.

1892	Wheat	1·9	1·8	2·0	2·3	2·3	2·3	2·6
	Corn	1·7	1·6	1·8	2·1	2·1	2·1	2·3

Highest rate, wheat, 1892, 3c.; lowest, 1c.; average for the season, 2·2c.

1893	Wheat	1·3	1·8	1·2	1·3	1·7	2·1	2·0
	Corn	1·2	1·6	1·1	1·2	1·5	1·9	1·8

Highest rate, wheat, 1893, 2¾c.; lowest, 1c.; average for the season, 1·6c.

1894	Wheat	1·4	1·2	0·9	1·0	1·4	1·1	1·3
	Corn	1·2	1·1	0·9	0·9	1·3	1·0	1·3

Highest rate, wheat, 1894, 3c.; lowest, ⅞c.; average for the season, 1·2c.

1895	Wheat	1·2	1·2	1·1	1·6	2·1	3·0	3·0
	Corn	1·1	1·1	1·0	1·4	1·9	2·9	2·7

Highest rate, wheat, 1895, 3c.; lowest, 1c.; average for the season, 1·9c.

1896	Wheat	1·6	1·5	1·2	1·3	1·4	2·0	2·1
	Corn	1·4	1·3	1·1	1·2	1·2	1·9	1·9

Highest rate, wheat, 1896, 2⅝c.; lowest, 1¼c.; average for the season, 1·7c.

1897	Wheat	1·3	1·2	1·3	1·5	2·0	1·8	1·5
	Corn	1·2	1·1	1·2	1·4	1·8	1·7	1·4

Highest rate, wheat, 1897, 2⅝c.; lowest, 1c.; average for the season, 1·5c.

1898	Wheat	1·3	0·1	0·9	1·2	1·4	2·5	2·3
	Corn	1·2	0·8	0·8	1·1	1·3	2·3	2·1

Highest rate, wheat, 1898, 3¼c.; lowest, 1¼c.; average for the season, 1·5c.

LAKE FREIGHTS FROM DULUTH TO BUFFALO ON WHEAT (AS REPORTED BY THE SEC. OF THE MERCHANTS' EXCHANGE, BUFFALO, N.Y.).

The following statement shows the lake freight rates on wheat from Duluth to Buffalo, during the season of 1898 :—

1898.	Wheat, Bushels.	1898.	Wheat, Bushels.
	cts.		cts.
April 16	1⅜	Oct. 12	2¾
" 22	1¼	" 13	3
May 3	1¼	" 17	3¼
" 13	1⅜	" 20	3½
June 14	1¼	" 26	3¼
July 1	1	Nov. 1	3
" 7	1¼	" 5	2½
Aug. 17	1½	" 22	2¾
" 22	1¾	" 27	2½
Sept. 16	2	Dec. 1	2¾
" 25	2¼	" 2	3½
Oct. 11	2½		

In 1885, the range of freights on wheat, Duluth to Buffalo, was 1½ to 5c. ; in 1886, 3¼ to 8c. ; in 1887, 5 to 8c.; in 1888, 2 to 5c. ; in 1889, 2 to 5c. ; in 1890, 2 to 5c. ; in 1891, 1¼ to 9½c. ; in 1892, 2¼ to 4c. ; in 1893, 1¼ to 3½c.; in 1894, 1¼ to 3c.; in 1895, 2 to 6c.; in 1896, 1¼ to 3c.; in 1897, 1 to 2½c.; in 1898, 1 to 3½c. per bushel.

The first departure by lake, at Duluth in 1898, was on April 16; in 1896 on April 22, and in 1895 on April 27. In 1894, season opened on April 19 ; in 1893, on May 8 ; in 1892, on April 21 ; in 1891, on April 30 ; in 1890, on March 26 ; in 1889, on April 20 ; in 1888, on May 12 ; in 1887, on May 4 ; in 1886, on May 7.

Wheat was shipped at Kingston, Canada, per bushel, during the season of 1887, at 6¼ to 7¾c. ; in 1888, at 4 to 5c.; in 1889, at — ; in 1890, 5¾, 5½, 4½, 4¼, 4c.; in 1891, during May, 3⅜, 3½, 2½c .; during June, 3c.; and on July 25, 2½c. ; in 1892, 5c. in April ; 5 to 5¼c. in May ; 4c. in June ; 4½c. in July ; 3c. in August ; 6 to 6¼c. in October ; in 1893, ranged from 5½ to 4½c. in April ; 4½ to 4⅜c. in May ; 4 to 3½c. in June ; 2¾ to 3c. in July ; 3½ to 3¾c. in September ; no figures quoted after that date. In 1894, ranged from 3¼ to 3½c. in May ; 3½c. in June ; 2½c. in July ; 2½ to 3¼c. in August ; 4c. in September ; and 4¼c. in October. On August 25 and November 3, 1894, wheat to Ogdensburg at 3¼c. and 4½c. respectively. In 1895, wheat to Kingston from 3c. to 5c. In 1896, wheat to Kingston from 3c. to 5½c.; and in 1897, wheat to Kingston 3c. to 3⅛c. according to time of year ; 1898 not given.

LAKE FREIGHTS FROM TOLEDO TO BUFFALO ON WHEAT.

The following statement shows the ruling rates of lake freights, on wheat from Toledo to Buffalo, during the season of 1898, on the dates specified, as reported by the Secretary Merchants' Exchange, Buffalo.

Date, 1898.	Wheat, Bushels.	Date, 1898.	Wheat, Bushels.
	cts.		cts.
Opening to October 24	1	November 1 to close of season	1½
October 24 to November 1	1¼		

The range for 1886 was 1¾ to 3c.; for 1887, 2¼ to 3c.; for 1888, 1½ to 2⅛c.; for 1889, 1¾ to 2c.; for 1890, 1½ to 2c.; for 1891, 1 to 3c.; for 1892, 1½ to 2½c.; for 1893, 1 to 2c.; for 1894, 1 to 2c.; for 1895, 1 to 2¼c.; for 1896, 1¼ to 1⅜c.; for 1897, 1 to 1¼c., and for 1898, 1 to 1½c. per bushel.

From Toledo to Ogdensburg, wheat and corn shipped, at 6 to 7c. in 1887; at 4½ to 6c. for wheat and 5c. for corn in 1888; and 5c. to 5⅞c. for wheat in 1889 per bushel. From Toledo, on October 8, 1887, corn shipped to Kingston at 3½c. and on November 12 at 4½c. per bushel. In 1888, corn Toledo to Kingston at 4½c. to 3c.; and wheat at 3½ to 3c. per bushel. In 1889, wheat Toledo to Kingston, 3c.; and in 1891, rye Toledo to Kingston at 3c. per bushel. From Toledo, on June 2, 1887, wheat shipped to Montreal by propeller at 6½c.; on June 14, corn at same price; but on September 26 the rate on corn was only 5c. per bushel. In 1888, corn Toledo to Montreal, at 6 to 5¾c. and wheat at 5½c. per bushel. From 1889 to 1898, no shipments to Montreal or other places in Canada reports.

Canal Freights from Buffalo to New York.

The following shows the changes in the ruling rates of freight to New York from Buffalo, on the days specified in 1898 as reported by the Secretary, Merchants' Exchange, Buffalo).

Date, 1898.	Wheat. Bush.	Corn. Bush.	Date, 1898.	Wheat. Bush.	Corn. Bush.
	cts.	cts.		cts.	cts.
May 21	3	2⅛	Sept. 10	2⅛	2⅛
June 2	3	2¼	" 20	2⅛	2¼
" 15	2⅞	2¼	" 29	2⅛	2⅛
" 25	3	2⅛	Oct. 4	2⅛	2⅛
July 21	2⅞	2⅛	" 14	2⅛	2⅛
" 22	2⅞	2⅛	" 17	3	2⅛
" 27	2⅞	2¼	" 20	3⅛	2⅞
Aug. 3	2⅛	2⅛	" 22	3⅛	3
" 9	2⅛	2⅛	" 31	3¼	2⅞
" 19	2⅛	2¼	Nov. 1	3¼	2⅞
" 20	2⅞	2¼	" 4	3	2⅛
" 29	2⅞	2⅛	" 14 to close	2⅞	2⅛
Sept. 7	2⅛	2¼			

The freight on oats varied from 1⅝ to 2¼c. per bushel.

Pine lumber per 1,000 feet, was carried from Buffalo and Tonawanda to New York as follows: Opened at $1.25 to $1.75; changed October 10 to $2.00 and continued at that rate to the close. Rates to Albany, $1.50 to $1.75 and continued to close.

AVERAGE CANAL FREIGHTS.

BUFFALO TO NEW YORK.

The following statement shows the average rates of canal freights on wheat and corn between Buffalo and New York during each month in the past ten years, and the highest and lowest rates on wheat and average rate on wheat in each:—

(Reported by Sec. Merchants' Exchange, Buffalo.)

	Grain.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
		Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
1889	Wheat	4·0	3·8	4·0	4·4	5·0	5·0	5·0
	Corn	3·6	3·4	3·6	3·9	4·5	4·5	4·4
Highest rate, wheat, 1889, 5c.; lowest, 3·7c.; average for the season, 4·8c.								
1890	Wheat	3·9	3·8	3·6	3·8	3·9	4·0	3·5
	Corn	3·5	3·4	3·2	3·4	3·5	3·6	3·1
Highest rate, wheat, 1890, 4·2c.; lowest, 3c.; average for the season, 3·8c.								
1891	Wheat	2·8	2·9	2·8	3·8	4·2	4·6	4·0
	Corn	2·5	2·6	2·5	3·5	3·8	4·2	3·6
Highest rate, wheat, 1891, 3⅜c.; lowest, 2·5c.; average for the season, 3·5c.								
1892	Wheat	2·7	2·2	2·4	3·0	3·8	4·7	4·6
	Corn	2·4	2·0	2·2	2·6	3·4	4·4	4·3
Highest rate, wheat, 1892, 6c.; lowest, 2⅛c.; average for the season, 3·5c.								
1893	Wheat	4·8	4·8	4·6	4·6	4·0	4·7	4·8
	Corn	4·4	4·4	4·3	4·2	3·6	4·3	4·5
Highest rate, wheat, 1893, 5c.; lowest, 3·6c.; average for the season, 4·6c.								
1894	Wheat	3·1	2·9	3·3	3·4	3·6	2·9	3·0
	Corn	2·8	2·6	3·0	3·1	3·3	2·6	2·7
Highest rate, wheat, 1894, 4c; lowest, 2·6c. average for the season, 3·2c.								
1895	Wheat	1·9	1·7	2·0	2·0	2·1	2·5	2·7
	Corn	1·7	1·5	1·7	1·7	2·0	2·2	2·5
Highest rate, wheat, 1895, 3c.; lowest, 1·9c; average for the season, 2·2c.								
1896	Wheat	3·7	3·7	3·7	3·7	3·7	3·7	3·8
	Corn	3·5	3·5	3·5	3·5	3·5	3·5	3·6
Highest rate, 1896, 4c.; lowest, 3·1c.; average for the season, 3·7c.								
1897	Wheat	2·6	2·2	2·3	2·5	3·3	3·1	3·5
	Corn	2·2	1·8	2·0	2·2	2·8	2·6	3·0
Highest rate, wheat, 1897, 3·5c; lowest, 2c.; Average for the season, 2·8c.								
1898	Wheat	3·0	2·9	2·8	2·7	2·6	3·0	3·0
	Corn	2·5	2·3	2·4	2·1	2·2	2·6	2·6
Highest rate, wheat, 1898; 3·4c.; lowest, 2·5c.; average for the season, 2·8c.								

NOTE.—Canal free of tolls since 1882.

FREIGHT, TOLLS, ELEVATING AND STORAGE RATES COMPARED.

The following statement shows the receipts of grain and flax-seed at Buffalo, the average canal freight on wheat, and the tolls on wheat to New York, and the elevating and storage rates at Buffalo for a series of years (as reported by Secretary, Merchants' Exchange, Buffalo):

Year.	Grain received.	Average Canal Freight on Wheat.	Tolls on Wheat.	Elevating, including Storage.
	Bush.	cts.	cts.	cts.
1870	32,208,039	11·2	3·1	1¼
1871	61,319,313	12·6	3·1	1¼
1872	58,703,666	13·0	3·1	1¼
1873	65,498,955	11·4	3·1	1¼
1874	55,660,198	10·0	3·1	1¼
1875	52,833,451	7·9	2·0	1
1876	44,207,121	6·6	2·0	1
1877	61,822,292	7·4	1·0	1
1878	78,828,443	6·0	1·0	1
1879	75,089,768	6·8	1·0	1
1880	105,133,009	6·5	1·0	1
1881	56,389,827	4·7	1·0	⅞
1882	51,501,503	5·4	1·0	⅞
1883	65,722,080	4·9	None.	⅞
1884*	58,011,800	4·2	do	⅞
1885*	52,671,090	3·8	do	⅞
1886*	75,570,850	5·0	do	⅞
1887*	87,073,570	4·6	do	⅞
1888*	73,977,390	3·4	do	⅞
1889*	92,290,550	4·8	do	⅞
1890*	91,994,680	3·8	do	⅞
1891*	135,315,510	3·5	do	⅞
1892*	138,872,560	3·5	do	⅞
1893*	140,796,410	4·6	do	⅞
1894*	105,435,577	3·2	do	⅞
1895*	121,225,497	2·2	do	⅞
1896*	172,474,664	3·7	do	⅞
1897*	204,964,103	2·8	do	⅞
1898*	221,383,945	2·8	do	⅝ to

NOTE—Prior to 1870 tolls 6·21 cents per bushel, and the elevating charge 2 cents per bushel.

* Including flax seed.

AVERAGE FREIGHT CHARGES PER BUSHEL.

For the transportation of wheat and corn from Chicago to New York for a series of years.

(From Report of Board of Trade, Chicago.)

	Corn.			Wheat.		
	By lake and canal.	By lake and rail.	By all rail.	By lake and canal.	By lake and rail.	By all rail.
1858	·127	.....	·3619	·1550	.....	·3861
1859	·1570	.....	·3248	·1663	.....	·3480
1860	*a* ·0833	.....	·3248	*a* ·095	.....	·3480
1861	*a* ·1062	.....	·3881	*a* ·1210	.....	·4158
1862	*a* ·0957	.....	·4480	*a* ·1062	.....	·4800
1863	*a* ·063	.....	·4592	*a* ·072	.....	·4920
1864	*a* ·09	.....	·5600	*a* ·0952	.....	·60
1865	*a* ·0864	.....	·4188	*a* ·0894	.....	·4488
1866	*a* ·1075	.....	·4312	*a* ·1377	.....	·4620
1867	*a* ·0511	.....	·4176	*a* ·08	.....	·4475
1868	*a* ·0604	.....	·3532	*a* ·0802	.....	·3784
1869	*a* ·0584	·2355	·3320	*a* ·0651	·2520	·3557
1870	*a* ·16	·2220	·28	*a* ·0677	·2250	·30
1871	*a* ·0754	·2372	·2968	*a* ·0687	·2542	·3180
1872	*a* ·1072	·2660	·3266	*a* ·1110	·2950	·3499
1873	*a* ·0816	·2298	·2893	*a* ·0917	·2461	·3102
1874	*a* ·0382	·1388	·2450	*a* ·0400	·1709	·2625
1875	*a* ·034	·1303	·2240	*a* ·0378	·1389	·2400
1876	*b* ·0875	·1079	·1574	*b* ·0982	·1136	·1686
1877	*b* ·0959	·1406	·1890	*b* ·1109	·1546	·2050
1878	*b* ·0883	·1053	·1652	*b* ·0996	·1209	·1770
1879	*b* ·1049	·1220	·1456	*b* ·1187	·1313	·1774
1880	*b* ·1341	·1443	·1748	*b* ·1313	·1580	·1980
1881	*b* ·0777	·0942	·1340	*b* ·0867	·1049	·1440
1882	*b* ·0672	·1028	·1350	*b* ·0723	·1091	·1447
1883	*b* ·0803	·11	·1512	*b* ·0901	·1163	·1620
1884	*b* ·0655	·085	·1232	*b* ·07	·10	·1320
1885	*b* ·063	·0801	·1232	*b* ·0654	·0902	·1320
1886	*b* ·0845	·1120	·14	*b* ·0910	·12	·1500
1887	*b* ·0850	·1120	·1470	*b* ·0950	·12	·1575
1888	*b* ·0671	·1026	·1354	*b* ·0705	·1114	·1450
1889	*b* ·0632	·0819	·126	*b* ·0692	·0897	·1500
1890	*b* ·0593	·0732	·1136	*b* ·0676	·0852	·1430
1891	*b* ·0632	·0753	·1400	*b* ·0695	·0857	·1500
1892	*b* ·0595	·0721	·1296	*b* ·0645	·0759	·1380
1893	*b* ·0718	·0797	·1365	*b* ·0766	·0848	·1463
1894	*b* ·0493	·0650	·1232	*b* ·0511	·0700	·1320
1895	*b* ·0450	·0640	·1029	*b* ·0486	·0696	·1189
1896	*b* ·0575	·0615	·1050	*b* ·0619	·0661	·1200
1897	*b* ·0453	·0692	·1143	*b* ·0522	·0742	·1250
1898	‡ ·0381	·0441	·0980	‡ ·0445	·0491	·1200

a To Buffalo only. *b* Including Buffalo charges and tolls. ‡ Exclusive of Buffalo charges.

FOREIGN FREIGHT RATES.

ANNUAL average Freight Rates on Grain, Flour and Provisions (per 100 lbs.) from Chicago to European Ports, by all Rail to Sea-board and thence by steamers.

Shipped to	Articles.	1898.	1897.	1896.	1895.	1894.
		$	$	$	$	$
Liverpool	Grain	·3435	·3360	·3350	·3200	·3250
"	Sacked flour	·3766	·3681	·3430	·3400	·3316
"	Provisions	·4715	·4440	·4491	·4181	·4406
Glasgow	Grain	·3600	·3523	·3422	·3419	·3463
"	Sacked flour	·3906	·3906	·3650	·3625	·3503
"	Provisions	·5250	·5250	·4997	·4969	·4659
London	Grain	·3500	·3400	·3348	·3329	·3288
"	Sacked flour	·3725	·3612	·3528	·3513	·3493
"	Provisions	·4969	·4814	·4715	·4603	·4575
Antwerp	"	·5250	·5109	·4969	·4828	·4688
Hamburg	"	·5200	·5100	·5100	·5000	·5000
Amsterdam	"	·5250	·5200	·5200	·5000	·5000
Rotterdam	"	·5250	·5200	·5200	·4800	·5000
Copenhagen	"	·5813	·5728	·5812	·5531	·5531
Stockholm	"	·6925	·6853	·6937	·6656	·6656
Stettin	"	·5813	·5728	·5812	·5531	·5531
Bordeaux	"	·6575	·6413	·6413	·6413	·6250

LAKE FREIGHTS ON COAL FROM BUFFALO TO CHICAGO AND OTHER PORTS.

The following statement shows the ruling freight rates on coal per net ton in cents from Buffalo to ports named during the season of 1898, for the week ending on the dates specified.

1898 Week ending	Chicago.	Milwaukee.	Duluth and Superior Ports	Green Bay	Gladstone.	Sheboygan.	Toledo.	Racine.	Saginaw.	Bay City.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
April 9	20	20	20	20			20	20		
" 16	20	20	20	20			20	20		
" 23	20	20	20	20			20	25		
" 30	20	20	20	20			20	25		
May 7	20	20	20		20			25		
" 14	20	20	20				20			
" 21	20	20	20					25	35	25
" 28	20	20	20				20	25		
June 4	20	20	20				20	25		
" 11	20	20	20	20	20		20			
" 18	20	20	20	20	20		20	25		
" 25	20	20	20	20	20		20	25	35	35
July 2	20	20	20		20		20		35	
" 9	20	20	20		20		20		35	
" 16	20	20	20		20					
" 23	30	30	25		25		20			
" 30	30	30	25	30	25		20	35		
Aug. 6	30	30	25	30		30	20	35	35	25
" 13	25	25	25	25			20			25
" 20	25	25	25		25	30	20	25		25
" 27	30	30	20	30	25		20			
Sept. 3	30	30	20	30			25			
" 10	25	25	20	25	20		25	30		
" 17	25	25	20	25	20		25	30		25
" 24	25	25	20	25	20		25	30		25
Oct. 1	25	25	20		20		25			25
" 8	25	30	20	25	20		25	40		25
" 15	30	50	20		20		20	40		
" 22	50	50	20	40			20	40		
" 29	50	50	20	40	20		20	40		
Nov. 5	40	40	20	50	20		50	40		
" 12	40	40	40	50	40		50	60		
" 19	40	40	40	50	40		50	60		
" 26	40	40	40	50	40		50	60		
Dec. 3	40	40	40	50	40		50	60		
" 10	40	40	40	50	40		50	60		

TOTAL VALUES of Merchandise Received from British North America for Immediate Transit across United States Territory, for Immediate Tran hipment in Ports of the United States to British North America, and so shipped, during each year from 1873 to 1898 inclusive.

YEAR ENDING JUNE 30.	COUNTRIES FROM WHICH RECEIVED.					COUNTRIES TO WHICH SHIPPED.				
	British North America.					British North America.				
	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, Ontario, Manitoba and the North-west Territories.	British Columbia.	Newfoundland and Labrador.	Total.	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, Ontario, Manitoba and the North-west Territories.	British Columbia.	Newfoundland and Labrador.	Total.
	$	$	$	$	$	$	$	$	$	$
1873	495,289	12,894,164	5,240	.....	13,394,693	5,282,290	21,320,174	181,720	.....	26,784,184
1874	449,655	13,616,344	97,691	.....	14,163,690	7,150,036	19,843,169	317,534	.....	27,310,739
1875	443,570	17,342 933	256,074	.....	18,042,577	8,999,596	20,283,639	517,060	.....	29,800,295
1876	261,443	22,134,275	195,047	1,137	22,591,902	9,102,600	14,658,358	658,836	94	24,419,888
1877	160,658	12,092,619	218,418	.....	12,471,695	2,879,422	15,551,238	544,018	2,475	18,977,153
1878	163,978	11,627,114	412,966	.....	12,204,058	951,268	11,436,470	524,013	934	12,912,685
1879	194,129	11,606,832	280,079	55	12,081,095	889,539	11,520,877	476,824	2,347	12,889,587
1880	215,131	16,782,315	137,271	.....	17,134,717	1,643,716	14,866,663	531,436	288	17,042,103
1881	171,383	16,758,108	72,555	.....	17,002,046	1,778,836	20,857,827	719,268	333	23,356,264
1882	164,990	28,265,083	113,018	87	28,543,178	2,732,665	34,005,845	855,784	1,190	37,595,484
1883	561,791	29,204,031	36,973	25	29,802,820	2,455,557	35,878,389	971,307	7,335	39,312,568
1884	656,233	12,574,953	188,041	.....	13,419,227	1,740,900	19,717,466	1,475,833	5,186	22,939,385
1885	933,806	12,280,483	308,691	633	13,523,613	1,635,442	16,448,942	1,615,293	781	19,700,458
1886	1,165,973	9,303,864	359,104	32,079	10,861,020	2,040,298	16,369,429	1,825,178	6,174	20,241,079
1887	1,684,730	9,606,175	213,816	.....	11,504,721	1,621,748	19,930,296	635,841	70	22,187,955
1888	1,525,048	6,417,701	372,934	27,134	8,542,817	1,781,028	13,459,169	370,322	1,137	13,611,656
1889	2,596,233	8,355,178	294,859	89,853	11,336,123	2,484,787	18,993,957	665,527	2,704	22,146,975
1890	3,070,657	12,449,772	306,897	174,584	16,001,910	5,277,210	21,140,198	913,106	4,690	27,335,204
1891	3,859,079	15,310,945	422,806	187,640	19,780,470	5,605,614	21,695,992	547,144	34,273	27,883,023
1892	4,393,062	19,005,704	201,373	328,116	23,928,255	2,079,783	24,189,181	428,188	6,962	26,704,114
1893	1,009,597	16,404,425	89,565	381,986	17,885,573	2,052,357	20,232,400	409,055	26,289	22,720,111
1894	1,070,676	15,649,881	348,069	273,467	17,342,093	1,831,417	17,880,688	463,471	6,640	20,182,216
1895	1,199,782	17,774,108	411,557	236,415	19,621,862	1,834,745	19,320,714	558,991	7,844	21,722,294
1896	1,118,185	18,038,931	582,469	404,020	20,143,605	1,572,783	19,441,279	772,586	1,768	21,788,416
1897	1,118,055	22,497,151	611,322	367,295	24,593,823	1,682,538	17,660,211	1,312,797	8,130	20,663,676
1898	1,440,950	35,596,039	1,744,289	555,706	39,336,984	1,536,413	22,400,622	2,294,356	19,247	26,250,638

TOTAL VALUES of Merchandise received from the Principal and other Foreign Countries for Immediate Transit across United States Territory or for Immediate Transhipment in Ports of the United States to other foreign countries, and so shipped, for each Year from 1868 to 1898 inclusive.

Year ending June 30.	COUNTRIES FROM WHICH RECEIVED.						COUNTRIES TO WHICH SHIPPED.						Total Value of Merchandise received and shipped.
	Great Britain and Ireland.	Germany.	British North American Possessions.	Mexico.	Cuba.	Other Countries.	Great Britain and Ireland.	Germany.	British North American Possessions.	Mexico.	Cuba.	Other Countries.	
	$	$	$	$	$	$	$	$	$	$	$	$	$
1868	10,664,576	132,074	4,864,209	14,967	4,263,621	1,576,157	2,025,023	3,212,123	14,375,419	481,643	116,521	1,304,875	21,516,604
1869	10,891,698	150,382	5,852,678	60,715	2,373,474	1,767,037	2,693,525	1,547,602	15,033,821	448,300	72,875	1,299,861	21,095,984
1870	10,210,455	302,806	7,215,973	103,977	3,309,227	2,049,422	2,946,053	2,116,249	16,689,037	321,331	135,915	983,275	23,191,860
1871	13,473,915	322,110	7,954,060	344,179	1,367,573	1,913,200	4,031,319	1,033,307	18,406,475	346,872	345,224	1,211,840	25,375,037
1872	17,633,231	227,232	9,276,169	174,104	2,227,422	1,847,162	2,743,494	2,263,819	24,042,790	358,151	179,570	1,797,496	31,385,320
1873	19,144,815	250,704	13,394,693	286,607	5,737,904	1,284,462	5,144,175	5,622,325	26,784,184	235,113	319,771	1,993,617	40,099,185
1874	18,832,900	211,907	14,163,690	151,920	4,563,869	926,390	5,391,201	3,866,642	27,310,739	665,214	520,493	1,096,387	38,850,676
1875	18,657,276	325,648	18,042,577	115,527	1,759,308	1,785,947	7,229,912	1,495,285	29,860,295	1,155,004	248,358	757,429	40,686,283
1876	14,304,197	290,489	22,591,902	226,315	2,962,963	1,686,789	11,791,200	2,958,558	24,419,888	1,129,440	600,061	1,163,508	42,062,655
1877	13,732,085	337,897	12,471,695	158,852	1,095,451	1,460,793	7,758,501	1,108,298	18,977,153	329,577	306,311	776,933	29,256,773
1878	10,084,510	378,768	12,204,058	146,822	3,041,957	1,481,033	9,577,050	2,905,230	12,912,685	316,664	319,611	1,305,908	27,337,148
1879	8,795,340	521,917	12,081,095	222,320	1,954,042	1,521,153	8,175,951	2,252,572	12,889,587	330,968	174,757	1,272,032	25,095,867
1880	10,311,139	620,704	17,134,747	239,655	3,606,099	1,942,405	10,856,579	3,658,477	17,042,103	300,148	224,848	1,775,594	33,857,749
1881	14,898,052	721,344	17,002,046	217,444	2,642,550	2,222,122	9,122,079	2,729,246	23,356,264	671,008	177,340	1,648,121	37,704,048
1882	18,911,637	755,560	28,543,178	380,100	5,662,926	3,812,058	11,592,806	5,336,361	37,595,484	800,025	319,257	2,421,526	58,065,459
1883	20,242,222	1,149,195	29,802,820	281,309	3,126,069	4,276,712	11,089,865	2,758,994	39,312,568	2,282,473	352,552	3,081,875	58,878,327
1884	14,038,694	948,901	13,419,227	408,124	3,655,568	4,345,878	5,288,389	2,960,488	22,939,385	2,748,434	221,061	2,656,635	36,814,392
1885	11,064,186	1,140,548	13,523,613	308,293	4,853,354	3,545,544	7,235,519	3,771,524	19,700,458	1,262,515	119,376	2,346,146	34,435,538
1886	13,142,644	1,462,414	10,861,020	216,078	6,797,879	4,558,229	8,510,097	3,803,566	20,241,079	1,279,399	452,700	2,751,423	37,038,264
1887	17,977,200	1,670,952	11,504,721	111,635	6,780,853	4,720,760	10,052,219	4,353,992	22,187,955	2,002,476	608,121	3,561,358	42,766,121
1888	13,707,240	1,817,511	8,342,817	120,497	4,820,846	4,534,298	6,853,195	2,551,043	15,611,656	3,766,180	563,539	3,997,596	33,343,209
1889	19,080,647	2,582,456	11,336,123	296,654	9,054,736	5,052,610	9,233,659	4,581,064	22,146,975	4,781,110	892,158	5,768,287	47,403,253
1890	20,664,427	2,735,546	16,002,384	639,050	9,759,256	5,898,763	10,656,465	5,097,434	27,335,678	4,944,149	1,215,399	6,450,301	55,699,426
1891	20,879,851	2,819,238	19,780,470	565,338	6,977,901	6,475,119	11,968,808	3,640,940	27,883,023	5,052,318	966,851	7,985,977	57,497,917
1892	21,334,783	2,930,571	23,928,255	1,383,455	11,054,445	8,936,228	20,141,862	6,995,419	26,704,114	4,953,911	1,472,980	9,299,451	69,567,737
1893	20,387,339	3,466,885	17,885,573	1,652,200	10,131,171	14,426,669	18,511,287	7,986,637	22,720,111	4,607,549	2,034,761	12,089,492	67,949,837
1894	19,641,622	3,717,740	17,342,093	1,858,367	9,916,742	19,031,011	18,394,865	11,154,933	20,182,216	4,543,455	2,586,919	16,645,187	71,507,575
1895	18,531,083	4,122,899	19,621,862	2,515,091	10,420,277	10,465,981	20,562,325	6,684,735	21,722,294	4,512,293	1,951,985	10,243,561	65,677,193
1896	19,420,751	3,460,489	20,143,605	1,797,161	11,668,243	13,272,521	20,022,263	7,942,844	21,788,416	5,210,607	1,890,705	12,907,932	69,762,770
1897	17,513,324	3,183,390	24,593,823	1,903,924	9,589,820	13,275,822	24,809,259	5,333,860	20,663,676	5,320,563	2,058,454	11,874,291	70,060,103
1898	18,931,226	3,775,038	39,336,984	2,625,521	4,763,587	11,587,069	33,276,696	3,807,811	26,250,638	5,543,843	1,728,780	10,411,607	81,019,375

FOREIGN CARRYING TRADE.

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, in American vessels and in foreign vessels during each Fiscal Year, from 1857 to 1898 inclusive, with the percentage car ied in American vessels (coin and bullion are included from 1857 to 1879 inclusive,) as method of transportation of specie and merchandise cannot be separately stated.

Year ending June 30.	Imports.			Exports.			Total Imports and Exports.				Percentage carried in American vessels.
	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	Total.	
	$	$	$	$	$	$	$	$	$	$	
1857		259,116,170	101,773,971		251,214,857	111,745,825		510,331,027	213,519,796	723,850,823	70·5
1858		203,700,016	78,913,134		243,491,288	81,153,133		447,191,304	160,066,267	607,257,571	73·7
1859		216,123,428	122,644,702		249,617,953	107,171,509		465,741,381	229,816,211	695,557,592	66·9
1860		228,164,855	134,001,399		279,082,902	121,039,394		507,247,757	255,040,793	762,288,550	66·5
1861		201,544,055	134,106,098		179,972,733	69,372,180		381,516,788	203,478,278	584,995,066	65·2
1862		92,274,100	113,497,629		125,421,318	104,517,667		217,695,418	218,015,296	435,710,714	50·0
1863		109,744,580	143,175,340		132,127,891	199,880,691		241,872,471	343,056,031	584,928,502	41·4
1864		81,212,077	248,350,818		102,849,409	237,442,730		184,061,486	485,793,548	669,855,034	27·5
1865		74,385,116	174,170,336		93,017,756	262,839,588		167,402,872	437,010,124	604,412,996	27·7
1866		112,040,395	333,471,763		213,671,466	351,754,928		325,711,861	685,226,691	1,010,938,552	32·2
1867		117,209,536	300,622,035		180,625,368	280,708,368		297,834,904	581,330,403	879,165,307	33·9
1868		122,965,225	248,659,583		175,106,348	301,886,491		297,981,573	550,546,074	848,527,647	35·1
1869		136,802,024	300,512,231		153,154,748	285,979,781		289,956,772	586,492,012	876,448,784	33·1
1870		153,237,077	309,140,510		199,732,324	329,786,978		352,969,401	638,927,488	991,896,889	35·6
1871	15,187,354	163,285,710	363,020,644	7,798,156	190,378,462	392,801,932	22,985,510	353,664,172	755,822,576	1,132,472,258	31·2
1872	17,635,681	177,286,302	445,416,783	10,015,089	168,044,799	393,929,579	27,650,770	345,341,101	839,346,362	1,212,328,233	28·5
1873	17,070,548	174,739,834	471,806,765	10,799,430	171,566,758	494,915,886	27,869,978	346,306,592	966,723,651	1,340,899,221	25·8
1874	14,513,335	176,027,778	405,320,135	8,509,205	174,424,216	533,885,971	23,022,540	350,451,994	939,206,106	1,312,680,640	26·7
1875	13,083,859	157,872,726	382,949,568	7,304,356	156,385,066	501,838,949	20,388,235	314,257,792	884,788,517	1,119,434,544	25·8
1876	12,148,667	143,389,704	321,139,500	6,324,487	167,686,467	492,215,487	18,473,154	311,076,171	813,354,987	1,142,904,312	27·2
1877	10,697,640	151,834,067	329,565,833	6,767,170	164,826,214	530,354,703	17,464,810	316,660,281	859,920,536	1,194,045,627	26·5
1878	12,965,999	146,499,282	307,407,565	7,511,365	166,551,624	569,583,564	20,477,364	313,050,906	876,991,129	1,210,519,399	25·9
1879	11,983,823	143,590,353	310,499,599	7,439,862	128,425,339	600,769,633	19,423,685	272,015,692	911,269,232	1,202,708,609	22·6
1880	15,142,465	149,317,368	503,494,913	5,838,928	109,029,209	720,770,521	20,981,393	258,346,577	1,224,265,434	1,503,593,404	17·18
1881	17,193,213	133,631,146	491,840,269	8,259,308	116,955,324	777,162,714	25,452,521	250,586,470	1,269,002,983	1,545,041,974	16·22
1882	22,854,946	130,266,826	571,517,802	12,118,371	96,962,919	641,460,967	34,973,317	227,229,745	1,212,978,769	1,475,181,831	15·40
1883	23,003,048	136,002,290	564,175,576	25,089,844	104,418,210	694,331,348	48,092,892	240,420,500	1,258,506,024	1,547,020,316	15·54
1884	20,140,294	135,046,207	512,511,192	26,573,774	98,652,828	615,287,007	46,714,068	233,699,035	1,127,798,199	1,408,211,302	16·60
1885	21,149,476	112,864,052	443,513,801	24,183,299	82,001,691	636,004,765	45,332,775	194,865,743	1,079,518,566	1,319,717,084	14·76
1886	24,555,683	118,942,817	491,937,636	19,144,667	78,406,680	581,973,477	43,700,350	197,349,503	1,073,911,113	1,314,960,966	15·01
1887	27,562,059	121,365,493	543,392,216	21,389,666	72,991,253	621,802,292	48,951,725	194,356,746	1,165,194,508	1,408,502,979	13·80

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, &c.—*Concluded.*

Year ending June 30.	IMPORTS.			EXPORTS.			TOTAL IMPORTS AND EXPORTS.				Percentage carried in American vessels.
	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	Total.	
	$	$	$	$	$	$	$	$	$	$	
1888	32,209,459	123,525,298	568,222,357	22,147,368	67,332,175	606,474,964	54,356,827	190,857,473	1,174,697,321	1,419,911,621	13·44
1889	38,227,861	120,782,910	586,120,881	28,436,517	83,022,198	630,942,660	66,664,378	203,805,108	1,217,063,541	1,487,533,027	13·70
1890	40,621,361	124,948,948	623,740,100	32,049,902	77,502,138	747,376,644	73,576,263	202,451,086	1,371,116,744	1,647,139,093	12·29
1891	40,932,755	127,471,678	676,511,763	31,923,439	78,968,047	773,589,324	72,856,194	206,439,725	1,450,101,087	1,729,397,006	11·94
1892	39,726,595	139,139,891	648,535,976	33,220,629	81,033,844	916,023,675	72,947,224	220,173,735	1,564,559,651	1,857,680,610	11·85
1893	44,121,094	127,095,434	695,184,394	43,862,947	70,670,073	733,132,174	87,984,041	197,765,507	1,428,316,568	1,714,066,116	12·2
1894	29,623,095	121,561,193	503,810,334	49,221,427	73,707,023	769,212,122	78,844,522	195,268,216	1,273,022,456	1,547,135,194	13·3
1895	33,201,988	108,229,615	590,538,362	49,902,754	62,277,581	695,357,830	83,104,742	170,507,196	1,285,896,192	1,589,508,130	11·7
1896	35,535,079	117,299,074	626,890,521	61,131,125	70,392,813	751,083,000	96,666,204	187,691,887	1,377,973,521	1,662,331,612	12·00
1897	35 812,620	109,133,454	619,784,338	65,082,305	79,441,823	905,969,428	100,894,925	189,075,277	1,525,753,766	1,815,723,968	11·00
1898	30,427,784	93,535,867	492,086,003	73,283,704	67,792,150	1,090,406,476	103,711,488	161,328,017	1,582,492,479	1,847,531,984	9·30

NOTES.—1. The amounts carried in cars and other land vehicles, were not separately stated prior to July 1, 1870. 2. Exports are stated in mixed gold and currency values from 1862 to 1879, inclusive.

SESSIONAL PAPER No. 10

STATEMENT showing the Total Values of Foreign Merchandise transported in the In-Transit and Transhipment Trade of the United States with the British North American Possessions during each year from 1871 to 1898.

Year ending June 30.	Received for transit and transhipment from British North American Possessions.			Shipped in transit to or transhipment for British North American Possessions.		
	By Land.	By Water.	Total.	By Land.	By Water.	Total.
	$	$	$	$	$	$
1871	6,035,585	1,918,475	7,954,060	15,624,591	2,781,884	18,406,475
1872	8,237,859	1,038,310	9,276,169	19,357,342	4,685,448	24,042,790
1873	11,700,787	1,693,906	13,394,693	20,178,666	6,605,518	26,784,184
1874	12,695,590	1,468,100	14,163,690	20,572 299	6,938,430	27,510,739
1875	16,890,022	1,152,555	18,042,577	23,794,129	6,006,166	29,800,295
1876	21,301,262	1,290,640	22,591,902	19,369,958	5,049,930	24,419,888
1877	10,835,642	1,636,053	12,471,695	17,066,855	1,910,298	18,977,153
1878	10,314,534	1,889,524	12,204,058	11,914,321	998,364	12,912,685
1879	10,098,998	1,982,097	12,081,095	12,030,635	858,952	12,889,587
1880	15,265,177	1,869,570	17,134,747	16,388,673	653,430	17,042,003
1881	15,200,967	1,801,079	17,002,046	22,828,270	527,994	23,356,264
1882	24,665,029	3,878,149	28,543,178	36,613,465	982,019	37,595,484
1883	26,382,370	3,420,450	29,802,820	38,389,318	923,250	39,312,568
1884	13,043,498	375,729	13,419,227	22,120,587	818,798	22,939,385
1885	12,755,686	767,927	13,523,613	19,105,476	594,982	19,700,458
1886	9,593,344	1,267,676	10,861,020	19,428,867	812,212	20,241,079
1887	9,377,041	2,127,680	11,504,721	20,178,365	2,009,590	22,187,955
1888	6,309,024	2,033,793	8,342,817	13,347,876	2,063,780	15,611,656
1889	8,303,171	3,032,952	11,336,123	19,299,966	2,849,263	22,149,229
1890	13,524,298	2,477,612	16,001,910	24,788,152	2,547,052	27,335,201
1891	18,065,925	1,714,545	19,780,470	25,185,706	2,697,317	27,883,023
1892	21,346,413	2,581,842	23,928,255	23,989,746	2,714.368	26,704,114
1893	13,807,662	4,077,911	17,885,573	20,151,432	2,568,679	22,720,111
1894	13,501,664	3,840,429	17,342,093	17,974,332	2,207,884	20,182,216
1895	14,068,922	5,552,940	19,621,862	18,752,226	2,970,068	21,722,294
1896	13,408,578	6,735 027	20,143,605	18,335,373	3,453,043	21,788,416
1897	17,665,422	6,928,401	24,593,823	18,430,841	2,232,835	20 663,676
1898	27,277,049	12,059,935	39,336,984	22,792,971	3,457,667	26,250,638

NOTE.—This movement forms no part of the import and export trade.

C.--TABLE showing the Tonnage of the undermentioned Articles moved

Years.	Vegetable Food.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Vegetable Food.*
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	71,051	670,534	256,475	99,012	92,309	13,489	99,743
1870	54,978	658,524	193,129	123,191	117,941	19,520	127,727
1871	41,211	748,549	672,057	113,992	129,891	34,563	109,935
1872	20,534	403,903	902,753	120,061	92,959	13,357	120,753
1873	19,307	803,064	637,296	70,586	70,023	30,160	114,735
1874	29,134	772,163	519,203	98,654	59,408	8,215	280,821
1875	17,635	744,293	282,031	104,475	62,717	8,309	86,090
1876	9,290	416,376	365,254	96,494	52,147	19,949	104,783
1877	8,923	448,043	723,458	139,453	66,045	35,948	77,114
1878	5,904	844,555	734,993	89,534	85,029	64,613	88,106
1879	7,164	949,466	621,180	96,144	23,164	59,210	77,071
1880	8,266	966,052	1,156,619	106,247	20,893	26,340	86,673
1881	6,926	444,832	475,823	81,587	30,321	15,484	61,588
1882	9,372	642,215	251,687	96,650	22,180	43,372	53,300
1883	9,047	573,740	522,978	58,787	51,607	95,246	67,595
1884	7,251	790,409	198,216	65,008	52,696	71,462	51,944
1885	6,869	565,922	359,982	64,587	8,234	10,211	47,505
1886	9,005	993,129	354,765	62,854	7,278	3,073	59,782
1887	4,089	936,840	446,617	75,458	35,365	6,717	47,678
1888	3,287	491,419	499,218	41,100	70,315	12,532	49,087
1889	4,429	484,141	592,550	66,110	63,674	36,329	49,663
1890	3,489	353,738	616,702	90,754	48,438	21,657	33,125
1891	3,126	756,101	142,141	71,903	16,362	68,771	33,951
1892	4,879	620,768	150,269	51,596	72,444	4,236	33,807
1893	2,367	1,093,927	252,283	49,651	24,714	6,518	20,656
1894	2,909	903,361	275,377	89,700	100,874	5,288	22,620
1895	2,210	283,550	94,403	77,868	87,839	205	59,400
1896	7,963	408,872	100,227	109,967	197,713	77,210	55,230
1897	3,206	180,035	312,776	100,337	50,345	66,387	31,489
1898	1,854	69,986	364,248	89,906	76,244	7,745	43,044

*Apples, meal, all kinds, pease, potatoes.

on all Canals in the State of New York, during a series of thirty years.

	Heavy Goods.					
Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1,302,613	137,677	79,652	263,333	1,324,408	183,992	1,989,062
1,295,010	135,930	89,708	266,740	1,558,185	238,802	2,289,365
1,850,198	178,269	100,310	248,709	1,194,037	289,952	2,011,277
1,674,320	161,667	96,996	248,558	1,462,590	377,592	2,347,403
1,745,171	53,363	62,581	216,706	1,625,859	415,968	2,374,477
1,767,598	24,511	82,955	173,590	1,413,162	232,544	1,926,762
1,305,550	36,603	95,305	186,785	1,217,091	283,219	1,819,003
1,064,293	11,691	69,450	114,070	1,036,698	173,530	1,405,439
1,498,984	10,341	58,828	156,918	1,286,881	250,573	1,763,541
1,912,734	8,385	65,642	139,927	889,873	210,078	1,313,905
1,833,399	27,634	99,568	136,021	971,074	314,411	1,548,708
2,371,090	93,613	139,993	144,487	959,342	370,884	1,709,319
1,116,561	78,650	205,005	113,756	1,092,003	337,873	1,827,287
1,118,776	58,921	122,786	108,040	1,228,435	364,361	1,882,543
1,379,000	46,553	47,412	190,392	1,152,849	293,892	1,731,098
1,236,986	28,513	54,471	161,788	954,288	210,610	1,400,670
1,063,310	12,215	38,726	161,272	1,025,941	195,750	1,433,904
1,489,886	10,878	152,030	112,002	857,884	269,914	1,402,708
1,552,764	21,368	224,979	124,054	905,424	243,578	1,539,403
1,166,958	2,596	43,881	106,344	1,219,680	259,269	1,631,770
1,296,896	3,278	78,135	112,100	1,094,897	234,948	1,523,358
1,167,901	5,800	26,804	93,181	830,154	202,072	1,157,291
1,092,355	1,960	36,770	81,232	881,502	215,686	1,217,150
937,999	524	40,073	93,216	832,397	136,612	1,102,822
1,450,116	536	25,204	52,094	741,934	102,275	922,043
1,400,129	267	22,614	70,353	609,368	37,641	740,243
602,505	4,263	59,402	71,334	766,723	144,076	1,045,798
957,182	1,568	74,651	83,309	682,167	89,998	931,693
744,575	5,080	71,117	66,879	646,803	76,311	866,190
653,027	6,288	101,216	85,525	626,616	73,199	892,844

D.—TABLE showing the total Tonnage of the undermentioned Articles moved Up and Down

YEAR.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	45,674	313,825	120,599	20,951	.....	904	1,937
1872.....	26,651	239,998	254,902	6,035	7,752	64	2,745
1873.....	30,665	355,847	180,169	8,225	1,194	3	3,777
1874.....	24,019	413,212	181,151	18,871	5,954	513	8,677
1875.....	13,964	253,835	103,749	35,751	3,383	917	6,337
1876	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877.....	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878.....	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879.....	10,710	274,570	144,506	4,655	1,239	440	2,444
1880.....	12,679	242,020	163,738	17,772	477	1,016	1,480
1881.....	9,959	127,832	101,075	24,509	.....	1,844	2,086
1882.....	12,261	215,056	54,799	20,126	611	3,226	403
1883.....	13,471	152,794	182,269	10,436	731	1,642	10,983
1884.....	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885.....	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886.....	19,474	154,169	219,442	1,595	4,911	564	14,657
1887.....	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888.....	16,983	160,963	194,886	5,906	26,629	811	13,608
1889.....	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890.....	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891.....	13,517	198,658	185,180	8,113	52,959	65,888	28,042
1892.....	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893.....	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894.....	33,628	270,993	169,233	28,353	27,962	567	60,673
1895.....	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896.....	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897.....	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898.....	5,578	207,647	437,861	12,286	17,502	16,127	23,182

* Fiscal. † Apples, meal, all kinds, pease, potatoes.

through the Welland Canal, during a period of Twenty-eight years, ended Dec. 31, 1898.

	Heavy Goods.						
Total.	Railway Iron.	Other Iron.	Salt.	Iron and salt having paid full tolls on St. Lawrence Canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons
503,860	68,064	16,924	91,575	37,153	103,126	58,781	275,623
538,147	26,217	17,141	50,540	44,243	186,932	98,605	423,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	543,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	81,654	378,540
464,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,349
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
527,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
591,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788.974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468

E.—Table showing the tonnages of the undermentioned Articles Cleared at Buffalo and Tonawanda, for transit through the Erie Canal, for a series of thirty years.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.	5,609	490,904	219,874	1,978	63,728	2,150	2,193	786,436	.....	.....
1870.	8,258	502,158	165,577	19,944	89,156	10,593	6,906	802,592	2·05	.....
1871.	5,607	570,849	579,709	19,810	106,391	27,622	5,705	1,315,693	67·59	.....
1872.	.....	330,032	866,169	41,515	73,572	5,900	88	1,317,276	67·50	.....
1873.	6	737,167	611,675	8,636	51,615	22,441	634	1,432,174	82·10	.....
1874.	.....	650,161	459,728	3,192	44,079	112	237	1,157,509	47·18	.....
1875.	5,859	695,315	273,006	1,156	36,609	2,242	3,372	1,017,559	29·38	.....
1876.	231	377,317	356,064	6,334	24,488	12,205	4,691	783,331	.....	0·39
1877.	1,710	398,416	709,723	26,351	52,559	27,365	4,976	1,223,100	55·52	.....
1878.	987	775,953	718,714	21,665	69,256	51,064	6,662	1,644,301	109·08	.....
1879.	1,239	892,404	602,171	7,193	14,537	40,471	7,528	1,565,543	99·07	.....
1880.	2,743	897,603	131,857	434	16,154	12,137	4,256	2,065,184	162·06	.....
1881.	1,491	386,605	458,318	86	24,751	107	7,484	878,842	11·75	.....
1882.	1,123	586,019	241,406	1,858	9,046	19,158	6,216	864,826	9·96	.....
1883.	538	535,150	517,219	6,816	47,190	79,010	6,051	1,191,974	51·06	.....
1884.	520	767,784	194,368	4,910	47,060	57,856	4,411	1,078,909	37·18	.....
1885.	323	540,533	356,737	3,317	5,610	6,405	5,427	918,352	14·36	.....
1886.	488	955,851	351,272	6,799	5,180	.....	4,001	1,353,591	72·11	.....
1887.	334	914,152	438,069	15,207	32,907	4,612	44,693	1,449,984	85·64	.....
1888.	534	469,965	494,110	6,589	68,922	10,997	1,717	1,052,834	33·87	.....
1889.	845	457,922	579,526	16,380	61,175	34,167	5,160	1,155,175	46·88	.....
1890.	195	329,531	498,641	58,563	45,202	16,903	4,362	953,397	21·23	.....
1891.	1,071	733,967	137,679	43,779	14,803	66,278	2,594	1,000,171	27·18	.....
1892.	2,485	611,177	141,506	37,570	70,363	3,997	3,472	870,570	10·69	.....
1893.	424	1,086,834	240,767	38,986	21,981	6,156	243	1,395,391	77·43	.....
1894.	327	887,908	265,947	69,707	99,898	5,191	2,123	1,331,101	69·26	.....
1895.	98	271,957	83,611	71,185	85,507	205	15	508,596	.....	35·32
1896.	6,971	402,114	89,726	101,154	194,442	77,162	5,575	877,144	11·53	.....
1897.	8566	168,870	303,761	88,293	48,591	65,490	11,965	688,635	.....	12·44
1898.	7,119	64,760	354,917	85,359	74,336	7,367	20,818	607,557	.....	22·74

*Apples, meals all kinds, pease, potatoes.

STATEMENT to Table E showing the shipment at Oswego during the same period.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869	7,361	141,360	28,585	66,794	1,113	8,569	14,033	267,815	..	.....
1870	11,440	115,732	10,120	77,906	3,953	7,402	11,628	238,181	...	11·06
1871	10,043	123,173	70,218	72,675	1,806	6,250	13,259	297,424	11·05	.....
1872	4,773	57,865	27,148	62,172	684	6,751	10,425	169,818	... ..	36·59
1873	4,061	53,361	10,578	46,337	670	6,019	10,739	131,765	.....	50·80
1874	.....	108,288	46,127	77,007	1,103	7,053	3,747	243,325	.....	9·14
1875	1,728	32,690	3,034	75,083	3,308	4,989	5,931	126,763	.....	52·67
1876	967	21,890	1,324	63,336	117	5,703	6,638	99,975	.....	62·67
1877	855	28,955	3,308	80,306	316	6,603	6,556	126,899	.....	52·61
1878	1,394	24,171	1,383	50,381	.....	10,598	5,222	93,149	.....	65·21
1879	734	25,740	9,268	71,693	....	16,623	3,110	127,168	.....	52·51
1880	951	17,466	15,656	82,743	....	12,598	5,996	135,410	.....	49·43
1881	758	25,352	8,064	62,793	206	14,444	4,027	115,638	.....	56·82
1882	813	20,274	4,401	70,862	416	22,265	7,773	126,804	.....	52·65
1883	432	22,634	535	32,557	.....	14,384	1,967	72,507	.....	73·00
1884	404	5,932	413	48,391	.....	12,173	2,819	70,132	.....	73·43
1885	519	6,484	22	45,264	.....	4,613	2,945	59,847	.....	77·62
1886	737	9,579	154	42,261	.....	1,671	4,814	59,216	. ..	77·88
1887	790	675	2	44,580	.. ...	716	1,370	48,133	.....	82·02
1888	384	2,206	168	6,237	.....	.....	2,196	11,191	....	95·82
1889	473	8,002	8,950	40,096	16	1,405	1,003	59,945	.....	77·61
1890	545	10,378	10,408	26,639	8	4,635	2,356	54,969	.....	79·47
1891	292	4,298	1,652	27,418	.....	2,130	3,620	39,410	.....	85·28
1892	273	4,806	5,657	5,283	. . . .	199	2,340	18,558	....	93·07
1893	119	2,036	3,968	8,476	.....	237	2,784	17,620	.....	93·43
1894	8	10,293	10,514	17,160	....	.....	2,609	40,584	.....	84·84
1895	66	3,073	7,352	1,900	1,816	.....	258	14,465	.....	94·23
1896	.....	1,825	7,778	7,552	.....	.....	2,468	19,623	...	93·01
1897	.....	6,588	5,550	7,349	498	219	245	20,449	.....	92·37
1898	160	2,111	5,886	1,450	16	.....	784	10,407	.....	96·12

* Apples, meal all kinds, potatoes.

F.—TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland Canal, during a series of Twenty-eight Years, ended December 31, 1898.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1873	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877	13,588	248,894	169,185	10,216	2,810	2,405	1,833	448,931
1878	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879	10,588	271,545	114,276	803	1,196	.....	2,387	430,795
1880	12,467	240,601	162,891	.....	477	.....	1,418	417,853
1881	9,655	121,393	103,075	252	.....	6	1,371	235,752
1882	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883	13,256	146,741	182,143	975	731	518	10,971	355,335
1884	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886	19,418	146,151	218,897	.....	4,891	.....	14,581	403,928
1887	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895	43,895	202,636	164,894	8,689	18,236	.....	46,435	484,785
1896	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814

* Fiscal † Apples, meal all kinds, pease, potatoes.

G.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland Canal in transit between Ports in the United States during a series of Twenty eight Years, ended December 31, 1898.

YEAR.	VEGETABLE FOOD.								HEAVY GOODS.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.*	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	30,681	211,085	91,149	2,942	.....	667	1,006	337,530	68,064	14,334	89,086	28,566	35,912	235,962
1872	10,482	124,695	89,761	1,391	7,400	.....	608	234,337	24,040	13,239	49,843	95,741	59,401	242,264
1873	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176
1874	8,230	229,053	125,627	.....	5,948	.....	5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895
1875	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451
1876	5,187	96,247	58,138	.....	1,905	525	403	162,405	.....	5,531	29,395	167,110	25,808	227,844
1877	3,342	107,396	65,260	1,603	2,314	258	413	180,586	8,976	8,688	8,336	172,868	41,107	239,975
1878	1,316	65,542	60,026	859	277	.....	341	128,361	.....	10,713	3,892	150,583	13,535	178,723
1879	159	53,791	33,401	.....	464	.....	11	87,826	2,405	3,648	6,318	118,573	17,797	148,741
1880	.....	30,611	16,122	1,551	296	.....	...	48,580	4,743	3,515	371	65,945	18,380	92,954
1881	.....	34,320	30,031	924	.....	.....	10	65,285	1,313	5,570	.....	83,858	6,464	97,205
1882	107	30,227	32,433	537	.....	684	14	64,002	.....	4,076	.....	158,552	14,533	177,161
1883	2,041	54,382	66,128	735	731	.....	8,579	132,496	1,209	6,901	8	196,462	24,891	229,471
1884	1,715	40,956	53,707	.....	9,874	.....	8,170	114,422	698	599	.....	210,790	15,100	227,187
1885	124	53,235	63,229	732	882	.....	1	118,203	.....	1,594	.....	198,416	15,029	215,039
1886	7,591	53,258	94,048	.....	4,790	.....	13,201	172,888	156	5,328	1	189,964	11,364	206,813
1887	11,780	37,678	83,431	1,732	12,050	.....	10,859	157,530	15	4,406	.....	82,780	6,7	87,828
1888	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	56	173,259	2,309	177,288
1889	5,017	39,229	147,045	.....	27,492	.....	17,225	236,208	.....	1,587	896	227,476	1,204	231,163
1890	9,204	31,527	180,842	6,519	27,030	.....	20,497	275,619	.....	504	208	162,231	1,620	164,563
1891	6,802	32,097	127,494	8,113	52,823	.....	26,115	253,444	.....	292	705	186,572	1,773	189,342
1892	11,018	26,950	131,222	6,433	36,935	.....	31,992	244,550	.....	576	2	183,895	.....	184,473
1893	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389	.....	344	.....	206,827	.....	207,171
1894	17,795	53,846	10,539	28,095	27,621	.....	60,462	198,358	.....	297	.....	188,521	.....	188,818
1895	10,169	27,881	100,512	7,904	17,020	.....	46,316	209,802	181	246	.....	149,490	.....	149,917
1896	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407	.....	146	.....	207,348	.....	207,494
1897	7,237	28,919	169,057	14,173	14,969	.....	41,887	276,242	965	15	.....	165,143	.....	166,123
1898	4,212	11,268	150,667	6,909	12,732	1,197	22,671	209,656	770	339	4	156,814	.....	157,927

*Apples, meals all kinds, pease, potatoes.

H.—TABLE showing the Tonnage of Vegetable Food carried on each of the Lines of Canals and the two principal Railways, competing for the Carrying Trade between Lake Erie and Tidewater, for a series of Twenty-eight years, ended December 31, 1898.

Year.	Total on New York Canals.	Total on Welland Canal.	Total on New York Central and Erie Railways.	Quantity cleared at Buffalo and Tonawanda by Erie Canal.	Quantity cleared at Oswego by Canal.	Quantity cleared through the Welland Canal in transit between ports in the United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	1,302,613	503,860	1,087,809	786,436	267,815	337,530
1872	1,674,320	538,147	1,870,614	1,317,276	169,818	234,337
1873	1,745,171	579,880	2,036,992	1,432,174	131,765	243,366
1874	1,767,598	647,397	2,791,517	1,557,509	243,325	374,226
1875	1,305,550	417,936	2,343,241	1,017,559	126,763	177,908
1876	1,064,293	409,788	2,875,803	783,331	99,975	162,405
1877	1,498,984	464,181	2,493,683	1,223,100	126,899	180,586
1878	1,912,734	403,403	3,695,764	1,644,301	93,149	128,361
1879	1,833,399	438,564	4,353,617	1,565,543	127,168	87,826
1880	2,371,090	442,182	4,732,385	2,065,184	135,410	48,580
1881	1,116,561	269,395	4,983,722	878,842	115,638	65,285
1882	1,118,776	306,482	3,885,557	864,826	126,804	64,002
1883	1,379,000	372,236	4,422,461	1,191,974	72,507	132,496
1884	1,236,986	305,734	3,639,805	1,078,909	70,132	114,422
1885	1,063,310	273,905	4,105,594	918,352	59,847	118,203
1886	1,489,886	414,812	3,802,262	1,353,591	59,216	172,898
1887	1,552,764	394,971	3,847,766	1,449,984	48,133	157,530
1888	1,166,958	419,786	3,197,734	1,052,834	11,191	189,825
1889	1,296,896	542,043	3,654,984	1,155,175	59,945	236,208
1890	1,167,901	519,291	4,336,199	953,397	54,969	275,619
1891	1,092,355	367,177	3,565,381	1,000,171	39,410	253,444
1892	937,999	527,426	5,913,013	870,570	18,558	244,550
1893	1,452,563	805,253	5,107,426	1,395,391	17,620	311,389
1894	1,400,129	591,409	4,281,056	1,331,101	40,584	293,148
1895	602,505	486,421	3,798,574	508,596	14,465	209,802
1896	957,182	788,974	5,183,540	877,144	19,623	300,407
1897	744,575	816,914	5,673,638	688,635	20,449	276,242
1898	653,027	720,183	7,060,542	607,557	10,407	209,656

*Fiscal.

1.—STATEMENT showing the Quantity of Through Freight passed DOWN the Welland Canal in Canadian and United States Vessels entering the Canal at Port Colborne during the seasons of Navigation in 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897 and 1898.

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	250	86,344	372	101,745	107	94,029	163	46,152	892	328,270
1887.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		80,757		81,652		200		46,186		208,796
Corn		12,341		14,775		65,981		20,582		113,679
Barley						9		575		584
Oats				1,376		11,098		279		12,753
Pease				362						362
Rye										
Coal		1,436		25,165				2,108		28,709
Miscellaneous merchandise		2,179		4,609		24,395		415		31,598
Shingles, woodenware, &c.		1,716		1,081		26				2,823
Sawed lumber Ft. B.M.		2,894,767		12,329,728		4,161,349		15,091,355		34,477,199
Square timber Cub. ft.		498,770		1,285,594						1,784,364
Staves No.				266,697						266,697
Firewood Cords		299		466						765
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	242	86,838	339	93,450	114	104,505	219	60,500	914	345,293
1888.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		45,481		60,379		1,353		40,779		147,992
Corn		38,620		14,251		71,988		71,175		196,024
Barley										
Oats		672				24,967		1,311		26,950
Pease				54		57				111
Rye						71		632		703
Coal		1,603		20,064				4,208		25,897
Miscellaneous merchandise		2,165		3,291		22,719		3,722		31,875
Shingles, woodenware, &c.		66		84		141		6		297
Sawed lumber Ft. B.M.		5,262,700		11,977,905		4,451,360		12,539,672		34,230,637
Square timber Cub. ft.		687,728		1,555,307		19,000				2,262,035
Staves No.		106,972		211,436				34,000		352,408
Firewood Cords.		179		201						380
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	317	106,048	427	118,071	208	172,873	268	92,442	1220	489,434
1889.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		38,127		28,054		1,679		46,767		114,627
Corn		60,218		42,819		152,858		96,700		353,595
Barley										
Oats		320				25,347		2,145		27,812
Pease										
Rye		948		634		336				1,918
Coal		3,976		21,148		712		1,664		27,500
Miscellaneous merchandise		6,339		5,749		25,082		3,030		40,200
Shingles, woodenware, &c.				1				51		52
Sawed lumber Ft. B.M.		5,789,226		11,632,330		11,792,850		21,026,211		50,240,617
Square timber Cub. ft.		924,645		2,934,989						3,859,634
Staves No.		35,700		174,649						220,349
Firewood Cords.				46						46

I.—STATEMENT showing the Quantity of Through Freight passed DOWN the Welland Canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	342	110,056	443	117,400	202	204,542	142	50,622	1129	482,620
1890.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	43,308		35,633		7,514		32,239		118,694	
Corn	63,095		51,439		172,756		40,104		327,394	
Barley					3,304		3,215		6,519	
Oats	479		73		27,030				27,582	
Pease					14				14	
Rye	1,121								1,121	
Coal	1,049		21,732				615		23,396	
Miscellaneous merchandise	3,146		5,683		32,194		2,510		43,533	
Shingles, woodenware, &c.	15		1,266		8				1,289	
Sawed lumber.....Ft. B.M.	5,921,240		5,167,201		10,274,335		14,290,800		35,653,576	
Square timber .....Cub. ft.	1,141,194		3,395,832						4,537,026	
Staves .....No.	12,255		19,947						32,202	
Firewood.....Cords.	15		566						581	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	256	107,575	173	68,061	241	241,317	130	50,063	800	467,016
1891.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	62,859		56,953		36,425		33,853		190,090	
Corn	20,510		9,550		137,852		17,039		184,951	
Barley					5,444		4,061		9,505	
Oats					50,212		1,076		51,288	
Pease	390								390	
Rye	29,581		11,296		16,361		7,343		64,581	
Coal	158		20,388				3,851		24,397	
Miscellaneous merchandise	8,369		6,607		37,537		2,578		54,491	
Shingles, woodenware, &c							4		4	
Sawed lumber.....Ft. B.M.	4,268,874		4,648,824		8,067,351		18,745,628		35,730,677	
Square timber.....Cub. ft.	449,406		566,109						1,015,515	
Staves.....No.	1,000								1,000	
Firewood .....Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage	No.	Tonnage.	No.	Tonnage.
	239	100,324	186	73,140	245	248,837	134	52,087	804	474,388
1892.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	74,578		54,764		60,364		36,898		226,604	
Corn	17,477		7,369		146,080		21,631		192,548	
Barley					3,995		2,438		6,433	
Oats					36,935				36,935	
Pease	524								524	
Rye	5,066				3,718		608		9,392	
Coal	775		13,350				1,365		15,490	
Miscellaneous merchandise	2,139		2,786		44,117				49,042	
Shingles, woodenware, &c	1				45		9		55	
Sawed lumber.....Ft. B.M.	6,278,253		7,504,256		10,494,692		26,832,564		51,109,765	
Square timber.....Cub. ft.	754,213		1,421,260		2,601		1,310		2,179,384	
Staves.....No.	46,800		32,838						79,638	
Firewood..... Cords.										

SESSIONAL PAPER No. 10

I.—STATEMENT showing the Quantity of Through Freight passed DOWN the Welland Canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	193	100,107	143	58,652	390	375,682	236	122,326	962	656,767
1893.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		83,447		31,185		72,671		68,628		255,931
Corn		23,817		12,946		313,246		91,083		441,092
Barley		1,527		183		16,189		562		18,461
Oats		223				27,903		3,038		31,164
Pease										
Rye						3,216		455		3,671
Coal		638		13,580				5,849		20,067
Miscellaneous merchandise		6,179		286		44,976		1,647		53,088
Shingles, woodenware, &c				15		22				37
Sawed lumber.....Ft. B.M.		13,750,267		2,748,941		17,359,573		41,863,852		75,722,633
Square timber.....Cub. ft.		836,048		1,437,893		5,133				2,279,074
Staves .....No.				18,484						18,484
Firewood .....Cords										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage
	199	104,649	112	57,668	287	279,621	144	63,770	742	505,708
1894.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		98,586		54,444		79,715		37,095		268,840
Corn		10,368		5,614		122,211		31,040		169,233
Barley		258				28,095				28,353
Oats		175		107		27,621				27,903
Pease										
Rye										
Coal		1,483		1,892		61		11,109		14,545
Miscellaneous merchandise		16,949		664		83,198		1,977		102,788
Shingles, woodenware, &c		22								22
Sawed lumber.....Ft. B.M.		8,423,295		279,330		11,719,664		31,891,456		52,313,745
Square timber.....Cub. ft.		771,328		1,578,981						2,350,309
Staves .....No.										
Firewood.....Cords										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	209	108,776	151	73,895	205	223,743	101	41,327	666	447,741
1895.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		72,895		68,935		29,345		30,723		201,898
Corn		16,854		3,724		126,943		17,369		164,890
Barley		798		162		7,729				8,689
Oats		1,531		246		16,442				18,219
Pease										
Rye										
Coal		2		3,984				4,426		8,412
Miscellaneous merchandise		37,356		2,361		67,705		1,324		108,746
Shingles, woodenware, &c		20				863		1,079		1,962
Sawed lumber ... Ft. B.M.		1,057,146		248,071		9,385,890		14,929,734		25,620,841
Square timber ....Cub. ft.		1,027,913		2,049,368				35,000		3,112,281
Staves.....No.										
Firewood .....Cords										

I.—STATEMENT showing the Quantity of Through Freight passed DOWN the Welland Canal in Canadian and United States Vessels, &c.—*Concluded.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	224	122,521	181	82,543	343	337,983	163	96,506	911	639,553
1896.	Tons.		Tons.		Tons.		Tons.		Tons	
Wheat	113,331		90,979		78,741		34,476		317,527	
Corn	9,360		3,855		218,315		88,914		320,440	
Barley	240		...		11,128		...		11,368	
Oats	441		1,270		24,847		1,620		28,178	
Pease	1,403		1,354		...		273		3,030	
Rye	5,035		644		2,837		454		8,970	
Coal	7		11,106		1,255		629		11,997	
Miscellaneous merchandise	29,820		1,452		82,319		4,374		117,965	
Shingles, woodenware, &c.	134		...		22		...		156	
Sawed lumber.....Ft. B.M.	2,123,213		...		18,259,810		27,796,146		48,179,169	
Square timber. ... Cub. ft.	942,923		1,649,145		...		246,024		2,838,092	
Staves .....No.	...		...		...		...		...	
Firewood.....Cords.	...		...		...		55		55	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	225	131,907	163	76,760	388	382,231	144	86,675	920	677,573
1897.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	121,762		55,724		106,064		37,891		321,441	
Corn	33,694		15,244		274,355		66,822		390,615	
Barley	...		...		14,173		...		14,173	
Oats	223		...		23,515		1,168		24,906	
Pease	1,851		...		...		...		1,851	
Rye	2,047		919		5,517		...		8,483	
Coal	3,873		3,947		368		1,615		9,803	
Miscellaneous merchandise	15,739		3,290		70,968		4,174		94,071	
Shingles, woodenware, &c.	1,268		5		404		...		1,677	
Sawed lumber.....Ft. B.M.	1,573,447		...		20,284,446		20,673,202		42,531,095	
Square timber.....Cub. ft.	1,327,823		2,217,629		...		616,093		4,161,545	
Staves .....No.	2,577,160		...		...		...		2,577,160	
Firewood.....Cords.	4		...		...		...		4	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	126,398	104	59,532	354	355,702	195	108,720	869	650,352
1898.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	95,567		36,157		54,934		18,355		205,013	
Corn	56,538		30,455		284,059		66,761		437,813	
Barley	...		...		9,465		2,821		12,286	
Oats	...		...		17,329		...		17,329	
Pease	260		...		45		...		305	
Rye	3,564		1,480		9,135		1,948		16,127	
Coal	575		1,916		759		2,620		5,870	
Miscellaneous merchandise	19,385		4,104		47,271		8,758		79,518	
Shingles, woodenware, &c.	2		9		...		...		11	
Sawed lumber .... Ft. B.M.	4,910,669		1,641,783		16,220,972		24,484,283		47,257,707	
Square timber.....Cub. ft.	825,545		1,183,821		...		388,410		2,397,776	
Staves.....No.	...		...		...		...		...	
Firewood.....Cords.	249		...		...		...		249	

STATEMENT showing the Quantity of Through Freight passed up the Welland Canal in Canadian and United States Vessels during the Season of 1898.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	208	127,509	104	58,103	336	348,241	137	80,887	785	614,740
1898.	Tons.		Tons.		Tons.		Tons.		Tons.	
Class 3.										
Cement and water lime	996								996	
Fish	10				87				97	
Iron railway										
" pig										
" all other	1,248				15				1,263	
Salt	35				4				39	
Steel	19				183				202	
Articles not enumerated	416				470		5		891	
Class 4.										
Crockery and earthenware	52				1				53	
Marble										
Manilla					112				112	
Nails	313								313	
Paint	31								31	
Pitch and tar	44								14	
Sugar	634				5,261				5,895	
Tin	237				34				271	
Merchandise not enumerated	2,129				48,151				50,280	
Class 5.										
Produce of wood	561				172				733	
Special Class.										
Coal	985				121,907		34,148		157,041	
Unenumerated articles										
Total	7,661				176,397		34,153		218,211	

Canadian steam vessels carried	7,661
" sailing vessels carried	
United States steam vessels carried	176,397
" " sailing vessels carried	34,153

WELLAND CANAL THROUGH FREIGHT RECAPITULATION.

WELLAND CANAL—WEST BOUND FREIGHT.

The total quantity of Through Freight passed Up the Welland Canal in Canadian and United States Vessels, during the Season of Navigation in 1898, is as follows:—

SUMMARY.	Tons.	Tons.
In Canadian steam vessels	7,661	
do sail do		
Total quantity in Canadian vessels		7,661
In United States steam vessels	176,397	
do sail do	34,153	
Total, in United States vessels		210,550
Grand total freight passed up the Welland Canal in Canadian and United States vessels		218,211

STATEMENT of the Quantity of Through Freight passed Up and Down on the Welland Canal during the Season of Navigation in 1898.

SUMMARY.	Tons.	Tons.
In Canadian steam vessels up	7,661	
do do down	202,077	
Total in Canadian steam vessels		209,738
In Canadian sail vessels up		
do do down	100,548	
Total in Canadian vessels		100,548
Total quantity in Canadian sail vessels		310,286
In United States steam vessels up	176,397	
do do down	450,042	
Total in United States steam vessels		626,439
In United States sail vessels up	34,153	
do do down	149,852	
Total in United States sail vessels		184,005
Total quantity in United States vessels		810,444
Total in Canadian and United States vessels		1,120,729

	East bound.	West bound.
In Canadian vessels	302,625	7,661
In United States vessels	599,894	210,550
Total	902,519	218,211

J.—STATEMENT of Large Class of Vessels Lightened at the Welland Railway Elevator at Port Colborne, showing the Tonnage, Dimensions, Depth of Water, Number of Cargoes passed through the enlarged Welland Canal, during the Season of Navigation in 1898.

CANADIAN STEAM VESSELS.

Date of Arrival.	Name of Vessels.	Registered Tonnage	Dimensions. Length over all.	Width of beam.	Depth of hold.	Depth of Water on Arrival. Forward.	Aft.	Original Cargo to the Welland Canal. Wheat.	Wheat.	Corn.	Corn.	Barley.	Barley.	Rye.	Rye.	Oats.	Rolling Freight.	Lighterage over Welland Railway. Wheat.	Corn.	Barley.	Rye.	Lighterage over Welland Railway in Tons. Wheat.	Corn.	Barley.	Rye.	Oats.	Rolling Freight.	Grain Cargo and Rolling Freight through Welland Canal. Wheat.	Corn.	Barley.	Rye.	Wheat.	Corn.	Barley.	Rye.	Oats.	Rolling Freight.	Total Cargo through Canal.	Depth of Water, Midship through Canal.	Destination. From	To	Cost of Lighterage per bushel.	Time occupied in Lightage. Hrs.	Min.
1898.		Tons.	Feet.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Bushels.	Tons.	Bushels.	Tons.	Bushels	Tons.	Bushels.	Tons.	Tons.	Tons.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Ft. in.			$ cts.		
May 16	Rosemount..	989	253	41	24 3	15 0	15 11	79,802	2,395									15,890				477						63,912				1,918						1,918	14	Ft. William	Kingston	0 02	4	30
" 26	Bannockburn	1,035	245	40	18 4	16 7	16 2	79,501	2,386									19,365				581						60,136				1,805						1,805	14	"	"	0 02	3	30
" 30	Rosemount..	989	253	41	24 3	16 0	15 10	79,928	2,398									16,430				493						63,498				1,906						1,906	13 11	"	"	0 02	6	15
Oct. 17	Arabian	770	180	31	18 6	13 11	14 0	41,000	1,231									3,832				115						37,168				1,116						1,116	13	Duluth	Prescott	0 02	1	30
" 27	Rosemount	989	253	41	24 3	14 0	14 0	64,000	1,921									2,650				80						61,350				1,841						1,841	13 9	Ft. William	Kingston	0 02	1	35
" 30	Rosedale	977	254	35	22 6	14 0	14 0	60,000	1,800									10,910				328						49,090				1,472						1,472	13 6	Duluth	"	0 02	3	10
Nov. 11	Rosemount.	989	253	41	24 3	15 3	15 7	74,500	2,236									13,729				412						60,771				1,824						1,824	13 10	Ft. William	"	0 02	3	10
" 13	Bannockburn	1,035	245	40	18 4	15 1	15 3	70,000	2,101									9,245				278						60,755				1,822						1,822	14	"	"	0 02	2	10
" 23	Rosemount	989	253	41	24 3	15 3	15 5	74,000	2,221									13,260				398						60,740				1,823						1,823	13 10	"	"	0 02	3	30
Dec. 2	Bannockburn	1,035	245	40	18 4	15 4	14 10	70,000	2,101									11,242				338						58,758				1,763						1,763	13 11	"	"	0 02	2	00
" 6	Rosemount	989	253	41	24 3	15 2	15 5	73,000	2,191									16,653				500						56,347				1,691						1,691	13 05	"	"	0 02	3	10
								765,731	22,981									133,206				4,000						632,525				18,981						18,981						

CANADIAN SAILING VESSELS.

Oct. 27	Melrose	740	184	34 5	14 5	14 9	14 3	51,500	1,546									3,816				115						47,684				1,431						1,431	13 9	Ft. William	Kingston	0 02	1	05
" 27	Selkirk	719	183	34 5	14 5	15	14 6	50,000	1,501									5,523				166						44,477				1,335						1,335	13 10	"	"	0 02	2	00
Nov. 12	Minnedosa	1,041	240	36 3	15 2	14 6	14 6	64,672	1,941									5,483				165						59,189				1,776						1,776	13 10	"	"	0 02	2	00
Dec. 2	"	1,041	240	36 3	15 2	14 6	14 6	64,500	1,936									4,806				145						59,694				1,791						1,791	14 00	"	"	0 02	1	30
								230,672	6,924									19,628				591						211,044				6,333						6,333						

UNITED STATES STEAM VESSELS.

Apr. 22	Germanic	892	216	36 2	18 2	15 7	15 8	61,000	1,831									11,895				357						49,105				1,474						1,474	14	Chicago	Kingston	0 02	3	05
" 22	Black Rock	1,330	237	43	16 5	15 7	15 5			87,800	2,459								17,097			479						70,703					1,980						1,980	13 11	"	"	0 02	4	05
" 22	St. Lawrence	1,030	239	41 1	20	15 2	16 0			80,000	2,241								17,020			477						62,980					1,764						1,764	13 10	"	"	0 02	4	
" 22	Elfinmere	796	190	34	21	15	15 6			50,000	1,401								8,254			232						41,746					1,169						1,169	13 10	"	Ogdensburg	0 02	2	10
" 23	D. C. Whitney	1,013	229	40	14 2	15 7	15 6													14,138			396							52,462						1,469				1,469	14	"	Prescott	0 02	3	05
" 24	J. R. Langdon	1,550	240	42	23 4	14 4	15 4			69,978	1,960					58		13,568				380						56,410					1,580				58		1,638	14	"	Ogdensburg	0 02	3	30
" 25	W. J. Averill	1,425	265	36 7	25 5	14 6	15 3			60,000	1,681					89		7,705				216						52,295					1,465				89		1,554	14	"	"	0 02	2	20
" 25	A. McVittie	1,553	240	42	23 4	14 8	15 2			70,000	1,961					45		11,344				318						58,656					1,643				45		1,688	13 10	"	"	0 02	3	
" 25	Samoa	837	205	34 5	17 7	15	15 2			53,112	1,488							8,778				246						44,334					1,242						1,242	14	"	"	0 02	2	30
" 25	H. R. James	1,553	240	42	23 4	14 8	15 4			70,000	1,961					49		11,290				317						58,710					1,644				49		1,693	13 11	"	"	0 02	3	40
" 26	Niko	929	189	35	13	15 6	15 6	49,100	1,474									9,218			277							39,882				1,197						1,197	14	"	Kingston	0 02	3	25
" 26	W. A. Haskell	1,441	265	37	25 6	13 7	14 8			14,700	412					971	252		2,848			80						11,852					332				971	252	1,555	14	"	Ogdensburg	0 02	0	30
" 28	Escanaba	918	201	35 6	20 1	15 1	14 8			50,000	1,401								5,368			151						44,632					1,250						1,250	14	"	Prescott	0 02	1	15
" 28	J. N. Glidden	1,111	221	35 1	19 3	15 2	15 5			56,200	1,575								10,111			284						46,089					1,291						1,291	13 11	"	Ogdensburg	0 02	3	
May 3	Gov. Smith	1,547	240	42	23 4	15 3	15 6			69,396	1,944					137			14,521			407						54,875					1,537				137		1,674	13 11	"	"	0 02	3	30
" 5	F. H. Prince	1,548	240	42	23 4	15 6	16			70,604	1,978					252			17,290			485						53,314					1,493				252		1,745	13 11	"	"	0 02	4	35
" 7	Elfinmere	796	190	34	21	14 8	15 6							50,515	1,416					7,792			219							42,723						1,197				1,197	14	Duluth	"	0 02	2	
" 9	J. R. Langdon	1,550	240	42	23 4	14 11	15 4			69,999	1,961					103		15,825				444						54,174					1,517				103		1,620	13 10	Chicago	"	0 02	4	
" 10	Black Rock	1,330	237	43	16 5	16 3	16	86,500	2,596									20,395			612						66,105				1,984						1,984	13 11	"	Kingston	0 02	4	15
" 11	W. J. Averill	1,425	265	36 7	25 5	15	15 3			50,000	1,401					428		10,066				282						39,934					1,119				428		1,547	13 11	"	Ogdensburg	0 02	2	20
" 11	A. McVittie	1,553	240	42	23 4	14 8	15 8			70,000	1,961					128		12,721				357						57,279					1,604				128		1,732	13 11	"	"	0 02	3	
" 16	H. R. James	1,553	240	42	23 4	15 2	15 6			70,000	1,961					115		13,638				382						56,362					1,579				115		1,694	13 10	"	"	0 02	3	15
" 16	W. A. Haskell	1,441	265	37	25 6	14 8	15 3			40,000	1,121					703		10,108				284						29,892					837				703		1,540	13 11	"	"	0 02	2	15
" 27	Black Rock	1,330	237	43	16 5	15 11	15 11	86,500	2,596									19,162			575						67,338				2,021						2,021	14	"	Kingston	0 02	4	
Oct. 29	Pueblo	1,054	225	36	19	14	14 3					63,000	1,513							3,635			88							59,345						1,425				1,425	13	"	Oswego	0 02	0	50
Nov. 8	Gov. Smith	1,547	240	42	23 4	14 8	15 3			50,000	1,401					565		9,536				268						40,464					1,133				565		1,698	14	"	Ogdensburg	0 02	2	00
" 8	A. McVittie	1,553	240	42	23 4	14 4	14 10	30,000	901							955	5,572		8,708		168						24,428				733						955	1,688	14	"	"	0 02	2	
" 9	H. R. James	1,553	240	42	23 4	14 5	14 10			50,000	1,401					436		8,708				244						41,292					1,157				436		1,593	13 9	"	"	0 02	3	30
" 11	Mont Eagle	1,035	237	35	19 8	15 9	15 10			59,570	1,669							11,876				333						47,694					1,336						1,336	13 9	"	Prescott	0 02	3	15
" 17	John Ruges	950	216	35 1	18 7	14 10	15 1			57,000	1,597							7,808				219						49,192					1,378						1,378	14	"	"	0 02	2	
" 25	J. R. Langdon	1,550	240	42	23 4	13 10	15 4	50,008	1,502							417	9,637				290						40,371				1,212						1,629	13 6	"	Ogdensburg	0 02	3	20
" 27	Gov. Smith	1,547	240	42	23 4	14 6	14 10			50,000	1,401					511		9,497				266						40,503					1,135				511		1,646	14	"	"	0 02	2	10
Dec. 1	A. McVittie	1,553	240	42	23 4	13 8	15			50,000	1,401					407		3,904				110						46,096					1,291				407		1,698	13	"	"	0 02	0	45
" 1	H. R. James	1,553	240	42	23 4	14 9	15 4			60,000	1,681					287		10,695				300						49,305					1,381				287		1,668	13 11	"	"	0 02	2	20
" 3	W. B. Morley	1,565	240	42 5	20 9	14 1	14 1					86,500	2,077							2,014			49							84,486						2,028				2,028	13 9	Milwaukee	Oswego	0 02	1	
" 6	W. J. Averill	1,425	265	36 7	25 5	14 8	14 8			54,000	1,513					213		7,573				213						46,427					1,300				213		1,513	13 9	Chicago	Ogdensburg	0 02	2	
" 6	F. H. Prince	1,548	240	42	23 4	13 11	14 11			66,000	1,849					31		5,783				162						60,217					1,687				31		1,718	13 10	"	"	0 02	1	40
								363,108	10,900	1,598,359	44,780	149,500	3,590	117,115	3,281	971	6,181	75,879	282,932	5,669	21,930	2,279	7,936	137	615			287,229	1,315,427	143,831	95,185	8,621	36,844	3,453	2,666	971	6,181	58,736						

UNITED STATES SAILING VESSELS.

Apr. 22	E. C. Hutchinson	700	195	34 2	14 0	14 8	14 8			52,200	1,463							5,154				145						47,046					1,318						1,318	14	Chicago	Kingston	0 02	1	10
" 24	Wayne	917	186	34 2	13 7	15 3	15 3			54,470	1,526							8,475				238						45,995					1,288						1,288	13 11	"	Ogdensburg	0 02	2	25
" 26	Churchill	960	202	38 3	16 3	15 8	15 7	68,200	2,074									10,805			325						57,395				1,722						1,722	13 11	"	Kingston	0 02	3	00
" 26	Tasmania	931	221	35 0	16 0	15 3	15 3			61,600	1,726							8,956				251						52,644					1,475						1,475	14	"	"	0 02	3	00
" 29	Dundee	992	211	35 0	16 6	15 3	14 11			70,930	1,987							8,172				229						62,758					1,758						1,758	14	"	Ogdensburg	0 02	2	10
May 9	J. C. Fitzpatrick	1,207	242	39 0	17 0	15 8	15 7					85,000	2,381							15,450										69,550						1,948				1,948	14	Duluth	Prescott	0 02	4	40
								68,200	2,047	239,200	6,702	85,000	2,381					10,805	30,757		15,450	325	863		433			57,395	208,443		69,550	1,722	5,839		1,948			9,509							

RECAPITULATION.

	Number.																																												
Canadian Vessels—																																												
Steam	11	765,731	22,981															133,206				4,000						632,525				18,981						18,981						
Sail	4	230,672	6,924															19,628				591						211,044				6,333						6,333						
Total, Canadian	15	996,503	29,905															152,834				4,591						843,569				25,314						25,314						
United States Vessels—																																												
Steam	37	363,108	10,900	1,598,359	44,780	149,500	3,590	117,115	3,281	971	6,181	75,879	282,932	5,669	21,930	2,279	7,936	137	615			287,229	1,315,427	143,831	95,185	8,621	36,844	3,453	2,666	971	6,181	58,736						
Sail	6	68,200	2,047	239,200	6,702			85,000	2,381			10,805	30,757		15,450	325	863		433			57,395	208,443		69,550	1,722	5,839		1,948			9,509						
Total, United States	43	431,308	12,947	1,837,559	51,482	149,500	3,590	202,115	5,662	971	6,181	86,684	313,689	5,669	37,380	2,604	8,799	137	1,048			344,624	1,523,870	143,831	164,735	10,343	42,683	3,453	4,614	971	6,181	68,245						
Total, Canadian and United States	58	1,427,711	42,852	1,837,559	51,482	149,500	3,590	202,115	5,662	971	6,181	239,518	313,689	5,669	37,380	7,195	8,799	137	1,048			1,188,193	1,523,870	143,831	164,735	35,657	42,683	3,453	4,614	971	6,181	93,559						

K.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, during the Seasons of Navigation in 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897 and 1898.

Articles.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Cement and water lime											12		
Clay, lime and sand												38	52
Iron, pig						371			195	79	5		
do all other	15		418						1	1,766	2,020	7,564	6,217
Steel										394	542	375	1,351
Stone for cutting											200		
Apples	49	33					54		50	28	1,263		
Barley								600	258	959	240		3,960
Corn	116,517	24,609	66,443	195,350	139,798	52,539	53,689	278,564	60,661	70,235	182,330	267,583	310,498
Flaxseed												3,293	5,687
Flour	2,934	6,140	3,865	6,841	3,065	3,324	2,874	5,514	16,503	30,916	11,964	1,029	653
Meal, all kinds	125	87	100	148	222	67	16		4	65			
Oats				320	479			9,761	175	1,654	12,373	6,847	3,975
Pease	608	362				390	524				3,020	2,078	260
Rye				1,284	1,120	64,978	9,119	3,669			8,323	8,435	15,488
Salt												216	144
Seeds, all kinds	33		12	3	2	2	75				20		
Tobacco, raw	25					1						51	
Wheat	86,815	160,063	93,915	70,815	75,515	159,785	194,281	209,212	212,557	158,643	255,198	278,498	184,154
All other agricultural products, vegetable		17		798	3	2			29		29		56
Hides, skins, horns and hoofs							20						
Horses	1	1	2	2	3	2	2	1	1	1	1	1	4
Lard and lard oil	22		54			100							
Pork	936	418	265	1,220	221	201			717		1		
All other agricultural products, animal	68	29	39	32	117		103						
Total, Class 3	208,148	191,759	165,113	276,813	220,545	281,762	260,757	507,321	201,151	264,740	477,541	576,008	532,499
Class 4.													
Ashes	44	113	85	107	70	40	17	23	19	34	94	133	73
Crockery											5		

K.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, &c.—*Concluded.*

Articles.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.													
Furniture	6	9	2	.....	1	2	1	.....	2	.....	.....	1	.....
Glass, all kinds	.....	.....	3	.....	1	1	.....	.....	.....	.....	9	53	75
Molasses	28	.....	.....	.....	.....	.....	.....	.....	.....	100	167	9	56
Nails	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oil	6	14	.....	4	6	.....	.....	.....	.....	6	23	112	1,141
Paint	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Pitch and tar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rags	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Sugar	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Stone, wrought	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turpentine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whisky, beer, and other spirits	8	.....	3	20	26	105	6	1	.....	101	.....	46	4
Merchandise, not enumerated	100	72	105	193	142	278	36	4	330	558	376	1,226	866
Total, Class 4	193	236	198	324	246	426	60	28	351	801	679	1,580	2,215
Class 5.													
Barrels, empty	6	88	40	.....	.....	.....	1	.....	.....	1	.....	.....	.....
Hoops	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	257	.....
Sawed lumber	18,707	7,001	5,175	6,118	3,579	3,908	1,678	667	683	1,117	657	478	3,065
Staves, pipe and barrel	332	184	139	.....	.....	.....	8	.....	.....	.....	.....	4,716	.....
" West India and pipe	287	131	1,623	270	.....	.....	200	.....	.....	.....	.....	.....	.....
Timber, square, in vessels	1,330	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" in rafts	15,410	14,390	11,586	9,302	.....	5,680	400	.....	.....	.....	1,200	1,207	329
Woodenware	101	45	25	.....	1	.....	.....	.....	6	.....	.....	.....	.....
Total, Class 5	36,173	21,839	18,588	15,690	3,580	9,588	2,327	667	689	1,118	1,857	6,658	3,394
Special Class.													
Coal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total	244,514	213,834	183,899	292,827	224,371	291,776	263,144	508,016	292,191	266,659	480,077	584,246	538,108

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canal to Lake Erie, during the Seasons of Navigation in 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897 and 1898.

Articles.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Bricks	66	3	187	84	252	469	.....	.....	1	24	15	70	70
Cement and water lime	498	1,740	1,177	823	62	2,380	1,570	3,169	2,281	1,859	1,686	837	996
Clay, lime and sand	1	134	95	3	8	206	240	.....	253	.....	.....	4	144
Fish	1	95	1	80	26	7	426	465	512	.....	11	10	9
Gypsum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iron, railway	6,629	153	9,148	15,513	20,003	2,855	1,171	6,576	20	.....	1,687	.....	.....
" pig	10	368	573	250	20	112	74	25	.....	56	28	6	.....
" all other	76	1,997	297	290	584	595	387	543	114	1,831	727	559	699
Salt	5,609	4,197	3,599	4,216	7,440	4,391	2,034	995	843	932	822	25	35
Steel	1	423	3	3	1	.....	269	426	248	528	.....	.....	19
Stone for cutting	.....	.....	.....	.....	12	.....	145	.....	.....	.....	4	62	.....
Flour	.....	.....	.....	.....	48	.....	.....	3	.....	.....	.....	.....	.....
Hay	.....	.....	.....	.....	.....	.....	.....	.....	.....	124	.....	.....	.....
Meals	.....	.....	31	.....	.....	.....	.....	.....	15	.....	.....	.....	.....
Oats	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Potatoes	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seeds, all kinds	.....	.....	24	215	100	.....	.....	.....	33	25	99	121	56
Agricultural products not enumerated, vegetables	.....	.....	35	19	.....	52	.....	.....	5	26	.....	4	.....
Hides and skins	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	.....	.....	.....
Horses	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....	1
Lard and lard oil	.....	3	.....	.....	72	.....	16	.....	.....	1	.....	.....	2
Pork	.....	.....	.....	.....	33	.....	.....	.....	.....	.....	.....	.....	.....
Wool	.....	4	.....	.....	13	2	13	.....	.....	.....	.....	.....	.....
All other articles not enumerated	6	4	77	.....	1	2	.....	.....	10	.....	.....	.....	.....
Total, Class 3	12,897	9,125	15,247	21,498	28,675	11,071	6,345	12,202	4,335	5,432	5,080	1,698	2,031
Class 4.													
Ashes, pot and pearl	20	.....	.....	.....	10	31	88	.....	.....	.....	.....	1	.....
Crockery and earthenware	40	164	336	112	11	251	8	98	107	12	83	4	33
Dye woods, &c	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Furniture	9	1	1	.....	.....	1	3	.....	.....	.....	.....	2	.....

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canals to Lake Erie, &c.—*Concluded.*

Articles.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1888.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.													
Glass, all kinds	39	53	77	71	23	30	152	365	175	394	612	799	150
Manilla	7	5	1						11				
Molasses	23	1	7	56			32	43	42	20	1		
Nails	389	147	578	736	453	560	276	472	500	1,149	409	129	229
Oil, in barrels	82	28	22	9	11	64	2	44	8	31	33	12	15
Paint	36	80	59	49	24	61	15	70	8	75	49	20	35
Pitch and tar	5	1			13	22	15	26	152	67	60	20	37
Resin					1								
Soda, ash	975	1,116	1,196	766	554	377	352	68	94	84	74	249	88
Stone, wrought								14			17	25	31
Sugar	316	207	98	7	551	412	1,320	2,218	2,724	1,430	1,873	311	566
Tin	549	2,225	198	480	40	23	27	34	327	396	395	359	237
Turpentine	1	1	1	1	2								
White lead	3	4	2	4	19	3	6	35	2	7	10	5	
Whiting		7		33	34	50	71	31	1	113	56	104	93
Whisky, beer, &c	174	287	228	124	350	294	220	26	53	77	51	93	98
Merchandise not enumerated	1,008	619	1,259	1,422	1,180	810	538	799	900	1,268	1,247	711	793
Total, Class 4	3,677	4,950	4,063	3,870	3,276	2,989	3,125	4,343	5,104	5,123	4,970	2,844	2,405
Class 5.													
Barrels, empty	227			2									
Lumber, sawn, in vessels													
Woodenware													
Total, Class 5	227			2									
Special Class.													
Coal													
Grand total	16,801	14,075	19,310	25,370	31,951	14,060	9,470	16,545	9,439	10,555	10,050	4,542	4,436

M.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1886 to 1898, inclusive.

Articles.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Bricks	41				4							845	
Cement and water lime	31		4										300
Fish		2				1		5	5				
Iron, railway										181		965	770
" all other	45			520	1	10	1	102		214			324
Salt	1					494							
Steel			3				1				498		2,951
Stone for cutting													
Apples													
Barley		1,709	2		6,519	8,113	6,433	16,751	28,095	7,904	11,128	14,173	6,909
Corn	93,503	83,431	102,974	147,045	180,342	127,494	131,222	198,777	105,329	100,512	175,094	169,057	150,667
Flour	7,591	11,780	8,563	5,017	9,204	6,802	11,018	6,588	17,795	10,169	16,224	7,237	4,212
Hay, pressed												301	
Meal, all kinds	13,201	10,726	11,598	17,224	20,482	26,096	31,724	36,352	60,390	46,316	46,456	41,644	22,626
Oil cake									29				
Oats	4,790	12,050	26,510	27,492	27,030	52,823	36,935	23,870	27,621	16,442	16,137	14,969	12,729
Pease													45
Potatoes				1	1								
Rye			179					864			490		1,197
Seeds, all kinds	236	44	48	151	135	256	50	16		14	78	299	44
Wheat	53,258	37,678	39,999	39,229	31,527	32,097	26,950	28,187	53,846	27,881	34,878	28,919	11,268
Agricultural products, vegetables	2	2			14	42							
Hides and skins, &c.	414	170	39							8	41	23	
Horses	1	2		1	1	3		2	4		3	3	2
Lard and lard oil, &c	13	14	19	32	30	10		1		6	1,348	1,444	3,671
Meats, other than pork	1	18	14	3	15	2	29			30			
Pork	106	108	19	21	88	73	1	52	56	87	390	243	1,271
Sheep													
Tallow													359
Wool	1,125	86	18	452		1,237	70	80	1,484	1,536	900	197	89
Total, Class 3	174,359	157,820	189,989	237,188	275,893	255,553	244,434	311,647	294,654	211,300	303,665	280,319	219,434
Class 4.													
Agricultural implements		9											
Crockery and earthenware			1	1									
Furniture	21	24	30	30	21	7		6		2			2

M.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1886 to 1898, inclusive—*Concluded.*

Articles.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.													
Glass, all kinds	2					1							
Nails	4								57				
Oil, in barrels	6	8				1				30	1,005	198	119
Paint					3		44						3
Soda, ash													
Stone, wrought	38			2									
Sugar										59	165	31	
White lead					1								
Whisky, beer and all other spirits	21	63	151	190	228	167	46	83		15			34
Merchandise	824	469	1,453	1,679	1,822	1,865	1,331	1,693	2,976	7,656	3,990	3,591	3,828
Total, Class 4	916	573	1,635	1,902	2,075	2,041	1,421	1,782	3,033	7,762	5,160	3,820	3,986
Class 5.													
Empty barrels								9			10		
Firewood in vessels											165		
Lumber, sawn, in vessels	43,776	29,845	28,333	55,074	38,030	45,504	54,173	68,985	62,905	41,974	75,515	68,280	52,844
Masts and spars, in vessels												403	
Hoops													
Railway ties, in vessels										446			
Shingles	463		6	51				13					
Staves, barrel			82										
Timber, square, in vessels										500		1,040	
Woodenware, &c	2	26	141	333	8	4	54				12	1	
Total, Class 5	44,241	29,871	28,562	55,458	38,038	45,508	54,227	69,007	62,905	42,920	75,702	69,724	52,844
Special Class.													
Coal	5,400	1,163	878	1,124	615	1,382	651	2,123	727	603	1,255		759
Stone, not suitable for cutting				1,681	18								
Kryolite					1,620	1,773							
Total, Special Class	5,400	1,163	878	2,805	2,253	3,155	651	2,123	727	603	1,255		759
Grand Total	224,916	189,427	221,064	297, 53	318,259	306,257	300,733	384,559	361,319	262,585	385,782	353,863	277,023

N.—STATEMENT showing the number of Vessels which took their Cargoes of Wheat through the Welland Canal from ports west of Port Colborne, the quantity transhipped at Kingston and Prescott, and the quantity of each Cargo through the St. Lawrence Canals to Montreal during the Season of Navigation in 1898.

Name of Vessels.	Original quantity through the Welland Canal.	Quantity transhipped at Kingston and Prescott.	Cargo through the St. Lawrence Canals to Montreal.
	Tons.	Tons.	Tons.
Canadian Steamer "Arabian"	1,200	648	552
" "	1,200	673	527
" "	1,200	696	504
" "	1,200	684	516
" "	1,230	748	482
" "	1,215	691	524
" "Cuba"	360	.....	360
" "	360	.....	360
" "Iona"	300	.....	300
" "	360	.....	360
" "	360	.....	360
" "Melbourne"	360	.....	360
" "Lake Michigan"	540	227	313
" "	528	228	300
" "	525	224	301
" "S. L. Tilley"	841	490	351
" "	1,200	780	420
" "	1,200	792	408
" "	1,202	814	388
Canadian Schooner "Dunmore"	1,260	520	740
" "Winnipeg"	1,500	861	639
Total	18,141	9,076	9,065

Number of cargoes of wheat	21	
Quantity through Welland Canal to Kingston and Prescott	18,141	tons.
" transhipped at Kingston and Prescott	9,076	"
" taken to Montreal in vessels in which it arrived at Kingston and Prescott	9,065	"

N.—STATEMENT showing the number of Vessels which took their Cargoes of Corn through the Welland Canal from ports west of Port Colborne, the quantity transhipped at Kingston and Prescott, and the quantity of each Cargo through the St. Lawrence Canals to Montreal during the Season of Navigation in 1898.

Name of Vessels.	Original quantity through the Welland Canal.	Quantity transhipped at Kingston and Prescott.	Cargo through the St. Lawrence Canals to Montreal.
	Tons.	Tons.	Tons.
Canadian Steamer "Arabian"	1,176	678	498
" "Cuba"	336	.....	336
Canadian Schooner "Dunmore"	1,204	420	784
" "	1,187	431	756
" "Melrose"	1,529	843	686
" "	1,497	475	1,022
" "Selkirk"	1,476	832	644
" "	1,470	840	630
" "Winnipeg"	1,493	844	649
" "	1,475	831	644
" "	1,476	846	630
Total	14,319	7,040	7,279

Number of cargoes of corn	11	
Quantity through Welland Canal to Kingston and Prescott	14,319	tons.
" transhipped at Kingston and Prescott	7,040	"
" taken to Montreal in vessels in which it arrived at Kingston and Prescott	7,279	"

RECAPITULATION of the number of Vessels passed down the Welland Canal, with cargoes of grain for Montreal, the quantity transhipped at Kingston and Prescott, and the quantity taken to Montreal for the season of 1898.

——	Number of Cargoes.	Total Number
Wheat	21	
Corn	11	
Total		32
	Tons.	Tons.
Quantity of wheat through the Welland Canal bound for Montreal	18,141	
" corn " " " " "	14,319	
Total through Welland Canal		32,460
Quantity of the above transhipped at Kingston and Prescott:—		
Wheat	9,076	
Corn	7,040	
Total transhipped		16,116
Quantity of the above cargoes taken to Montreal in vessels in which it arrived at Kingston and Prescott:—		
Wheat	9,065	
Corn	7,279	
Total quantity to Montreal		16,344
Total		32,460

O.—STATEMENT showing the quantity of Grain passed down the Welland Canal to Kingston, Prescott, Ogdensburg and other ports, in Canadian and United States vessels, entering the canal at Port Colborne during the season of navigation in 1898.

	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	118	90,337	48	35,036	271	310,431	68	48,194	505	483,998
	Tons.		Tons.		Tons.		Tons.		Tons.	
Barley					9,465		2,821		12,286	
Corn		56,538		30,455	284,059		66,761		437,813	
Oats					17,329				17,329	
Pease		260			45				305	
Rye		3,564		1,480	9,135		1,948		16,127	
Wheat		95,567		36,157	54,934		18,355		205,013	
Total		155,929		68,092	374,967		89,885		688,873	

118 cargoes in Canadian steam vessels, total quantity..... 155,929 tons.
48 " " sail " " " ..... 68,092 "
271 " United States steam vessels, total quantity..... 374,967 "
68 " " sail " " " ..... 89,885 "

P.—STATEMENT of the Quantity of Grain arrived at Kingston, Prescott and Ogdensburg in Vessels which passed down the Welland Canal during the Season of Navigation in 1898.

Summary.	Tons.	Tons.
Canadian steam vessels, 118 cargoes of grain	155,929	
" sail " 48 " "	68,092	
Total in Canadian vessels		224,021
United States steam vessels, 271 cargoes of grain	374,967	
" sail " 68 " "	89,885	
Total in United States vessels		464,852
Total in Canadian and United States vessels		688,873
Distributed as follows :—		
32 cargoes arrived at Kingston and Prescott in Canadian vessels with an aggregate quantity of	32,460	
Transhipped at Kingston and Prescott	16,116	
Quantity taken to Montreal in vessels in which it arrived at Kingston and Brescott		16,344
Vessels arrived at Kingston and Prescott and discharged all their cargoes as follows :—		
134 cargoes in Canadian vessels 191,561		
339 " United States vessels 464,852		
Quantity discharged	656,413	
Quantity transhipped to Montreal	480,522	
Total quantity transhipped from Kingston, Prescott and Ogdensburg to Montreal		*496,638
" " " " " Cardinal		4,450
" remaining at Kingston, Prescott and Ogdensburg		171,441
Total		688,873

* Of this quantity 38,203 tons were transhipped from Ogdensburg to Montreal.

Q.—Comparative Statement of the Quantity of Grain passed Down the Welland Canal to Kingston, Prescott and Ogdensburg, for the Seasons of Navigation in 1897 and 1898.

	1897.		1898.	
	No. of Cargoes.	Tons.	No. of Cargoes.	Tons.
Quantity arrived at Kingston and Prescott in Canadian vessels	180	229,265	166	224,021
Quantity arrived at Kingston, Prescott and Ogdensburg in United States vessels	197	285,847	339	464,852
Total	377	515,112	505	688,873
Quantity transhipped at Kingston, Prescott and Ogdensburg in Canadian vessels for Montreal		457,250		496,638
Quantity taken to Montreal in vessels in which it arrived at Kingston and Prescott		8,131		16,344
Quantity remaining at Kingston, Prescott, Ogdensburg and Cardinal	*	49,731		175,891
Total		515,112		688,873

*Of this quantity 6,550 tons were transhipped to Montreal in 1898.
7 vessels took their cargoes through to Montreal intact in 1898, against 7 in 1897.
25 " discharged part of their cargo in 1898 against 11 in 1897.
473 " " all their cargoes in 1898 " 359 in 1897.

R.—STATEMENT showing the number of Vessels, their Tonnage, Number of Passengers, and Tons of Freight passed Down the Rapids of the St. Lawrence Canals, during the season of Navigation in 1898.

Destination.	Number of sections.	Number of vessels.	Tonnage of vessels.	Number of passengers.	Class Three.	Class Four.	Class Five.	Tolls.
					Tons.	Tons.	Tons.	$ cts.
Prescott to Montreal	4	161	65,597	10,445	84	1,132	....	1,776 52
" Lachine	3	29	15,309	952	1,417	390	.....	375 81
" Valleyfield	2	2	1,046	153	.....	4	.....	11 98
Valleyfield to Montreal	2	20	7,660	93	.....	5	2	34 59
" Lachine	1	166	29,596	3,619	1,320	345	21	213 82
Lachine to Montreal	1	338	63,859	16,273	910	431	.. .	538 72
Total	....	716	183,067	31,535	3,731	2,307	23	2,951 44

S.—The quantity of Coal passed through the Welland Canal during a series of years from 1885 to 1898, inclusive, and the amount of Tolls collected thereon, is as follows :—

Year.	From Canadian Ports to Canadian Ports.	From Canadian Ports to Canadian Ports.	From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total Tons.	Amount of Tolls Paid — Rate 20 cents a ton.
	Up.	Down.	Up.	Down.	Up.	Down.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		$ cts.
1885			193,442	4,974	10,321	31,350	240,087	48,017 40
1886			184,564	5,400	22,187	49,724	261,875	52,375 00
1887			81,617	1,163	26,775	25,968	135,523	27,104 60
1888			172,381	878	17,365	27,183	217,807	43,561 40
1889			226,352	1,124	12,036	25,931	265,443	53,188 60
1890	80		116,616	615	17,280	22,781	202,372	38,222 30
1891			185,190	1,382	17,374	20,698	224,644	44,928 20
1892			183,244	651	12,391	15,330	211,616	42,284 13
1893			204,704	2,123	8,325	17,944	233,096	46,619 20
1894			187,794	727	1,269	13,947	203,737	40,789 93
1895	4		148,887	603	1,565	7,807	158,866	31,773 05
1896	20	210	206,093	1,255	4,127	11,740	223,445	44,668 20
1897		4	165,143		1,277	9,799	176,223	35,244 60
1898			156,055	759	986	4,536	162,336	32,467 20

NOTE.—Tolls on soft coal passed down the Welland Canal, during the season of 1890, were reduced from 20 to 10 cents a ton, per O.C. May 11, 1890, for the season of 1890 only, the rate for 1891, 1892, 1893, 1894, 1895, 1896, 1897 and 1898, being 20 cents a ton for passage either eastward or westward.

T.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence Canals during the seasons of 1885 to 1898, inclusive.

Year.	Quantity passed up Free of Tolls.	Quantity passed down to Montreal.	Total Quantity passed up and down.	Amount of tolls on Quantity passed down to Montreal.
	Tons.	Tons.	Tons.	$ cts.
1885	5,035	122,829	127,864	18,424 35
1886	3,301	118,802	122,103	17,820 70
1887	7,579	121,618	129,197	18,242 70
1888	8,341	123,050	131,391	18,423 90
1889	5,360	124,290	129,650	18,604 90
1890	6,538	135,168	141,706	20,275 20
1891	7,951	141,701	149,652	21,255 15
1892	7,543	157,134	164,677	23,570 10
1893	2,285	147,139	149,424	22,070 85
1894	16,213	169,552	185,765	25,432 80
1895		165,151	165,151	24,772 65
1896	689	161,551	162,240	24,232 65
1897	40	164,963	165,003	24,722 37
1898	400	175,609	176,009	26,341 05

NOTE.—Coal is allowed to pass free up the St. Lawrence Canals.

SESSIONAL PAPER No. 10

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, showing the Quantity to Montreal, the Quantity to Canadian Ports between Port Dalhousie and Cornwall, and the Quantity to United States Ports, Oswego, Ogdensburg, &c., on the south side of Lake Ontario, for the years 1887 to 1898, inclusive.

Articles.	Quantity passed down to Montreal.	Quantity passed down Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1887.	Tons.	Tons.	Tons.
Ashes, pot and pearl	113		
Apples	33		
Agricultural products, not enumerated, vegetable			2
Agricultural implements			9
Barley			1,709
Coal		25,968	1,163
Corn	24,609	6,898	83,431
Fish			2
Flour	6,140		11,780
Furniture	9	9	24
Horses	1	1	2
Hides, skins, &c			170
Iron, pig		1,137	
" all other		7	
Lard, and lard oil		6	14
Meal, all kinds	87	42	10,726
Meats, other than pork	29	15	18
Nails	1		
Oats			12,050
Oil	14	190	8
Oil cake	17		
Pease	362		
Pork	418	86	108
Stone, for cutting		3,531	
" wrought	12	543	
Seeds		4	44
Sugar	15		1
Spirits		99	63
Wheat	160,063	4,940	37,678
Wool			86
All other merchandise not enumerated	72	123	468
Barrels, empty	88		24
Lumber, sawn	7,001	1,816	44,733
Staves and headings, barrel		27	
" " pipe	184		
" " West India	131	838	
Timber, square	14,390	21,351	
Woodenware and wood partly manufactured	45	1	2
Total	213,834	67,632	204,315

A refund of 18 cents per ton was allowed on wheat, corn, pease, barley and rye passed down to Montreal, per O. C. March 21, 1898.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1888.	Tons.	Tons.	Tons.
Ashes, pot and pearl	85		
Apples		45	
Barley			2
Cement and water lime			4
Coal		27,183	878
Corn	66,443	25,469	102,974
Crockery and earthenware		4	1
Flour	3,865		8,563
Furniture	2	1	30
Glass, all kinds	3	2	
Hay, pressed		20	
Horses	2		
Hides and skins			39
Iron, pig		549	
" all other	418	490	
Lard and lard oil	54	12	18
Meal, all kinds	100		11,598
Meats, other than pork	39	6	14
Oats			26,510
Oil		3	
Pease		54	
Pork	265	61	19
Rags			14
Rye		632	179
Stone, for cutting		6,535	
" wrought		126	
Seeds, all kinds	12	1	48
Steel			3
Sugar		2	4
Spirits	3	2	151
Tallow			1
Wheat	93,915	14,365	39,999
Wool			18
All other goods and merchandise not enumerated	105	34	1,435
Barrels, empty	40		133
Lumber, sawn	5,174	4,515	45,818
Staves and headings, barrel	15	7	
" " pipe	124		
" " West Indies	1,623	13	
" " salt barrel	1	1	
Shingles			6
Timber, square, in vessels	11,586	33,669	
Woodenware	25		8
Total	183,899	113,801	238,467

A refund of 18 cents per ton was allowed on wheat, corn, pease, barley and rye passed down Montreal, per O. C. April 20, 1838.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadians Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1889.	Tons.	Tons.	Tons.
Ashes, pot and pearl	107	5	.....
Coal	.....	25,931	1,124
Corn	195,350	11,200	147,045
Crockery and earthenware	.....	1	1
Fish	.....	5	.....
Flour	6,841	.....	5,017
Furniture	.....	4	30
Horses	2	.....	1
Iron, pig	.....	613	.....
" all other	.....	.....	520
Lard and lard oil	.....	5	19
Meal, all kinds	148	.....	17,224
Meats, other than pork	32	2	3
Molasses	.....	.....	88
Oats	320	.....	27,492
Oil, in barrels	4	2	.....
Oil cake	798	.....	.....
Potatoes	.....	.....	1
Pork	1,220	114	21
Rye	1,284	634	.....
Salt	.....	316	.....
Stone, for cutting	.....	6,784	.....
" wrought	.....	11	2
" not suitable for cutting	.....	375	1,681
Seeds, all kinds	3	.....	151
Spirits, beer, &c	20	8	190
Tallow	.....	.....	13
Wheat	70,815	7,241	39,229
Wool	.....	.....	452
Merchandise	193	129	1,591
Barrels, empty	.....	.....	173
Lumber, sawn	6,118	4,669	71,055
Masts, spars, &c	.....	220	.....
Railway ties	.....	852	.....
Saw logs	.....	.....	158
Staves and headings, barrel	.....	4	.....
" " pipe	202	304	.....
" " West India	68	559	.....
Shingles	.....	.....	51
Split posts, &c	.....	17	.....
Timber, square	9,302	70,579	240
Woodenware, &c	.....	.....	2
Total	292,827	130,584	313,574

A refund of 18 cents per ton was allowed on wheat, corn, pease, barley and rye, passsd down to Montreal, per Order in Council March 18, 1889.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1890.	Tons.	Tons.	Tons.
Ashes	70		
All other products, animal	14		
" vegetable	1		
Barley			6,519
Bricks			4
Coal		22,781	615
Corn	134,966	11,584	180,842
Fish	49		
Flour	3,065		9,204
Furniture	1	1	21
Glass, all kinds	1		
Horses	3		1
Iron, all other			1
Kryolite		1,280	1,620
Lard and lard oil		5	30
Meal	222		20,482
Meats			15
Oats	479	73	27,030
Oil, in barrels	6		
Oil cake	2		
Paint			3
Pease			14
Pork	221	19	88
Potatoes			1
Rye	1,120	1	
Salt		701	
Stone, for cutting		5,761	
" wrought		639	18
Seeds, all kinds	2		135
Spirits, &c	26		228
Tallow	54		
Wheat	75,515	5,241	31,527
White lead			1
Merchandise	142	32	1,822
Barrels, empty			7
Firewood, in vessels		1,398	
Lumber, sawn, in vessels	3,195	3,767	47,590
" " rafts	384		
Staves and headings, pipe		187	
" " West Indies		36	
Shingles			14
Square timber, in vessels		73,112	
" " rafts		17,683	
Woodenware	1		1
	219,539	144,301	327,833
Corn 16,033			
Oats 400			
	16,433		*16,433
Total	235,972	144,301	311,400

* This quantity of grain was transhipped at Ogdensburg and passed down the St. Lawrence canals to Montreal.

A refund of 18 cents Welland Canal tolls was allowed on wheat, Indian corn, pease, barley, rye (and oats for export), when shipped for Montreal or some port east of that point, per Orders in Council February 26 and May 5, 1890.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1891.	Tons.	Tons.	Tons.
Ashes	40		
Agricultural products	2		42
Barley			8,113
Corn	52,539	5,144	127,494
Coal		20,698	1,382
Flour	3,324		6,802
Fish			1
Furniture	2	2	7
Glass	1		1
Horses	2	2	3
Hay		21	
Iron, pig	371	128	
" all other		1,036	10
Lard and lard oil	100	16	10
Meal, all kinds	67		26,096
Meats, other than pork		1	2
Molasses		20	18
Oats			52,823
Oil			1
Pease	390		
Pork	201		73
Rags			60
Rye	64,978	969	
Seeds, all kinds	2		256
Salt		1,861	494
Stone for cutting		6,602	
" wrought		7	
Tobacco	1		
Tallow		9	8
Wheat	159,785	692	32,097
Staves, pipe		8	
Whisky and all other liquors	105	57	167
Wool			1,237
Merchandise	278	6	1,779
Kryolite		1,098	1,773
Lumber, in vessels	2,991	1,300	56,456
" in rafts	917		
Timber, square, in rafts	5,680	14,638	
Barrels			4
	291,776	54,315	317,209
Corn 12,169			
Wheat 5,648			
	17,817		*17,817
Total	309,593	54,315	299,392

* This quantity of grain was transhipped at Ogdensburg and passed down the St. Lawrence Canals to Montreal.

A refund of 18 cents a ton, Welland Canal tolls, on wheat, Indian corn, pease, barley, rye and (for export) oats, originally shipped for Montreal or some port east of Montreal, per Order in Council, March 25, 1891.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1892.	Tons.	Tons.	Tons.
Ashes, pot and pearl	17	2	
Apples	54		
Barley			6,433
Corn	53,689	7,637	131,222
Coal		14,839	651
Flour	2,874		11,018
Fish	9		
Furniture	1		7
Hides and skins	20		
Horses	2		
Iron, railway		100	
" all other		765	1
Meal, all kinds	16		31,724
Meats, other than pork	94		29
Oats			36,935
Oil		7	
Pease	524		
Potatoes			1
Pork			44
Rye	9,119	273	
Salt		865	
Seeds, all kinds	75		50
Steel			1
Stone for cutting		1,264	
Sugar			20
Wheat	194,281	5,373	26,950
Whisky, beer, spirits, &c.	6	15	46
Wool			70
Merchandise not enumerated	36	13	1,304
Barrels, empty	1		29
Lumber, sawn, in vessels	1,678	150	83,403
Square timber	440	42,768	440
Staves and headings, pipe	8	80	
" " West India	200	76	
Shingles			25
Total	263,144	74,227	330,403
*Wheat	+4,341	—4,341	
Total	267,485	69,886	330,403

*This quantity of wheat was taken from Kingston to Ogdensburg and stored in elevators, and subsequently transhipped to Montreal.

A refund of 18 cents a ton, Welland Canal tolls, was allowed on wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat which passed down the whole length of the Welland and St. Lawrence Canals, to Montreal, or any port east of Montreal, and such products exported out of the country, and in such cases only.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.— *Continued*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1893.	Tons.	Tons.	Tons.
Ashes, pot and pearl	23		
Barley	600	1,110	16,751
Bricks		1,251	
Corn	278,564	5,752	156,776
Coal		17,944	2,123
Flour	5,514		6,588
Fish			5
Furniture			6
Horses	1	1	2
Iron, pig			100
" all other			2
Meal, all kinds		1,025	36,352
Meats, other than pork			1
Oats	9,761	1,090	20,313
Pork			52
Rye	3,669	1	1
Salt		286	
Seeds, all kinds			16
Wheat	209,212	17,602	29,117
Whisky, beer, &c.	1		83
Wool			80
Merchandise not enumerated	4	2	1,693
Barrels empty			9
Firewood (in rafts)		15	
Lumber, sawn, in vessels	667	1,981	123,665
Shingles			13
Square timber		45,605	
Staves and headings, barrel		12	
" pipe		7	
" West India		53	
Total	508,016	93,737	393,748

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1893.

The tolls were, however, reduced by Order in Council of February 13, 1893, as follows:—"For the season of 1893, the canal toll for the passage of the following food products: wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton; and for passage eastward through the St. Lawrence Canals only, ten cents per ton, payment of the said toll of ten cents a ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals."

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1894.	Tons.	Tons.	Tons.
Apples	50	.....	.....
Ashes	19	.....	.....
Barley	258	.....	28,095
Bricks	.....	552	.....
Coal	.....	13,818	727
Corn	60,661	3,243	105,329
Dye woods and dye stuffs	.....	4	2
Fish	.....	.....	5
Flour	16,503	41	16,880
Furniture	2	3	.....
Horses	1	2	4
Iron, pig	195	2,170	.....
" all other	1	183	.....
Meals	4	.....	60,390
Nails	.....	.....	57
Oats	175	107	27,621
Oil cake	29	.....	.....
" in barrels	.....	27	.....
Pork	717	.....	56
Salt	.....	133	.....
Spirits, beer, &c	.....	3	.....
Sugar	.....	.....	52
Wheat	212,557	13,349	42,934
White lead	16	.....	.....
Wool	.....	.....	1,484
Merchandise not enumerated	314	.....	2,889
Barrels, empty	.....	16	.....
Sawn lumber, in vessels	683	.....	86,545
Square timber, "	.....	47,030	.....
Woodenware	6	.....	.....
Total	292,191	80,681	373,070

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1894.

The tolls were, however, reduced by Order in Council of April 16, 1894, as follows:—For the season of 1894, the canal tolls for the passage of the following food products: wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton; and for passage eastward through the St Lawrence Canals only, ten cents per ton, payment of the said toll of ten cents a ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals."

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1895.	Tons.	Tons.	Tons.
Apples	28		
Ashes	34	15	
Barley	959		7,730
Bricks		651	
Coal		7,809	603
Corn	70,235	2,912	91,743
Flour	30,916	1,824	10,265
Furniture		12	2
Glass		1	
Horses	1	1	
Hides, skins, &c			8
Iron, railway			181
" pig	79	1,994	
" all other	1,766	1,408	214
Lard and lard oil			6
Meal, all kinds	65		46,316
Meats other than pork			30
Molasses	100		
Oats	1,654	123	16,442
Oil, in barrels	6	41	30
Pork			87
Paint	2		
Salt		36	
Stone for cutting		430	
Seeds, all kinds			14
Steel	394		462
Sugar			59
Spirits, beer, &c	101	84	15
Tobacco		16	
Wheat	*158,643	29,061	17,908
Wool			1,536
Merchandise not enumerated	558	1,302	7,656
Barrels, empty	1		
Sawn lumber in vessels	1,117	492	43,286
Railway ties "			1,942
Shingles		19	
Square timber in vessels		63,715	500
Total	266,659	111,946	247,035

*Of this amount 3,469 tons came down to Kingston in 1894—was stored there and taken to Montrea in 1895 and 245 tons came down to Ogdensburg in 1894, stored there and transhipped to Montreal in 1895.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1896.	Tons.	Tons.	Tons.
All other (vegetable)	29		
Apples	†1,263		
Ashes	94		
Barley	240		11,128
Cement and water lime	12		
Coal		11,742	1,255
Corn	182,330	19,688	118,426
Crockery	5		
Fish		2	
Flour	11,964	13,846	16,224
Furniture		3	
Glass	9	3	
Hay, pressed		563	
Hides, skins, &c			41
Horses	1	1	3
Iron, railway		1,192	
" pig	5	1,559	
" all other	2,020	1,725	
Lard and lard oil			1,348
Meal, all kinds		500	46,456
Molasses	167		
Oats	12,373	1,454	14,351
Oil, in barrels	23		1,005
Pease	3,020	10	
Pork	1		390
Rags	4		
Rye	8,323	647	
Salt		80	
Seeds, all kinds	20		78
Steel	542	11,317	498
Sugar	1		165
Tobacco		1	
Wheat	254,763	51,587	16,467
Wool		8	900
Merchandise, not enumerated	376	54	3,990
Barrels, empty			10
Firewood in vessels			165
Sawn lumber "	657	1,286	78,397
Shingles		94	40
Square timber in vessels		55,588	
" rafts	1,200		
Woodenware			12
Total	479,442	172,950	311,349

†523 tons of this quantity of apples paid full tolls by sections on the Welland Canal, and consequently does not appear on the Welland through statement.

*Of this amount 5,290 tons came down to Kingston in 1895, was stored there, and transhipped to Montreal in 1896.

U.—COMPARATIVE STATEMENT of the Quantities of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports, between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1897.	Tons.	Tons.	Tons.
Agricultural products, vegetable			32
Ashes	133		
Barley			14,173
Bricks		739	845
Clay, lime and sand	38	430	
Coal		9,803	
Corn	*264,396	11,103	115,689
Flax seed	3,293	169	
Flour	1,029	211	7,237
Furniture	1	5	
Glass	53	9	
Hay, pressed			301
Horses	1	1	3
Hides and skins, &c			23
Iron, railway		6,241	965
" pig		2,828	
" all other	7,564	6,143	
Lard and lard oil			1,444
Meal, all kinds		699	41,644
Molasses	9		
Oats	*6,847	3,046	15,233
Oil, in barrels	112	51	198
Pease	*2,078	3	
Pork			243
Rye	8,435	48	
Salt	216		
Stone for cutting		330	
Seeds, all kinds			299
Steel	375	4,680	
Sugar			31
Spirits, beer, &c	46		
Tobacco	51		
Wheat	*278,498	†39,057	12,661
Wool			197
Merchandise, not enumerated	1,214	347	3,591
Firewood, in vessels		12	
Hoops	257	8	
Lumber, sawn, in vessels	478	1,158	69,710
Masts " "			403
" " rafts		5	
Railway ties, in vessels		999	
Split posts "		4	
Timber, square "	1,207	81,117	1,040
Staves and headings, salt barrel	4,716		
Woodenware			1
Total	581,047	169,246	285,963

* Of this quantity of corn 573 tons came down to Ogdensburg and Prescott in 1896, were stored there and transhipped to Montreal in 1897.

* Of this quantity of oats, 50 tons came down to Prescott in 1896 and passed down to Montreal in 1897 and 170 tons passed through on St. Catharines Reports; 136 tons of which passed down to Montreal.

* Of this quantity of pease 230 tons were transhipped and passed through on St. Catharines Reports.

* Of this quantity of wheat 624 tons were transhipped and passed through on St. Catharines Reports, and 7,072 tons came down to Kingston and Prescott in 1896, and passed down to Montreal in 1897.

† Of this quantity, 1,079 tons were transhipped and passed through on St. Catharines Reports.

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1898.	Tons.	Tons.	Tons.
Agricultural products, vegetable	56		
Ashes	73		
Barley	3,960	1,417	6,909
Cement and water lime			300
Clay, lime and sand	52	1	
Coal		4,536	759
Corn	*310,498	13,338	116,317
Flax seed	5,687	9	
Flour	653		4,212
Furniture			2
Glass	75		
Horses	4		
Iron, railway		674	770
" pig		4,187	
" all other	6,217	257	324
" ore		13,433	
Lard and lard oil			3,671
Meal, all kinds			22,626
Molasses	56		
Oats	3,975	625	12,729
Oil, in barrels	1,141	15	119
Paint			3
Pease	260		45
Pork			1,271
Rye	*16,133	39	
Salt	144	644	
Seeds, all kinds			44
Spirits, beer, &c	4		34
Steel	1,351	3,122	2,951
Stone for cutting		554	
Tallow			359
Wheat	*184,706	15,860	8,612
Wool			89
Merchandise, not enumerated	866	25	3,828
Firewood, in vessels		747	
Lumber, sawn, in vessels	3,065	2,840	72,897
Railway ties "		190	
Shingles		11	
Square timber	329	48,369	
Total	539,305	110,893	258,871

* Of this quantity of corn 2,340 tons came down to Ogdensburg and Prescott in 1897, were stored there and transhipped to Montreal in 1898.

* Of this quantity of rye 45 tons came down to Prescott in 1897, were stored there and transhipped to Montreal in 1898.

* Of this quantity of wheat 4,165 tons came down to Kingston in 1897, were stored there and transhipped to Montreal in 1898.

SESSIONAL PAPER No. 10

U.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1887.	Tons.	Tons.	Tons.
Barley	.....	.....	1,709
Corn	24,609	6,898	83,431
*Oats	.....	.....	12,050
Pease	362	.....	.....
Rye	.....	.....	.....
Wheat	160,063	4,940	37,678
Total grain	185,034	11,838	134,868
Other articles	28,800	55,794	69,447
Total	213,834	67,632	204,315
1888.			
Barley	.....	.....	2
Corn	66,443	25,469	102,974
*Oats	.....	.....	26,510
Pease	.....	54	.....
Rye	.....	632	179
Wheat	93,915	14,365	39,999
Total grain	160,358	† 40,520	169,664
Other articles	23,541	73,281	68,803
Total	183,899	113,801	238,467
1889.			
Barley	.....	.....	.....
Corn	195,350	11,200	147,045
*Oats	320	.....	27,492
Pease	.....	.....	.....
Rye	1,284	634	.....
Wheat	70,815	7,241	39,229
Total grain	267,769	19,075	213,766
Other articles	25,158	111,509	99,808
Total	292,927	130,584	313,574
1890.			
Barley	.....	.....	6,519
Corn	150,999	11,584	180,842
Oats	879	73	27,030
Pease	.....	.....	14
Rye	1,120	1	.....
Wheat	75,515	5,241	31,527
Total grain	228,513	16,899	‡245,932
Other articles	7,459	127,502	81,901
Total	235,972	144,301	327,833

* There was no rebate on oats for 1887, 1888 or 1889.

† Owing to a break in the Cornwall Canal 14,921 tons of the above quantity of grain were transhipped to Montreal via Canadian Pacific and Grand Trunk Railways, and the refund of 18 cents per ton allowed.

‡ Of this quantity of grain 16,433 tons were transhipped at Ogdensburg to Montreal.

U.—STATEMENT showing the Quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1891.	Tons.	Tons.	Tons.
Barley			8,113
Corn	52,539	5,144	127,494
Oats			52,823
Pease	390		
Rye	64,978	969	
Wheat	159,785	692	32,097
Total grain	277,692	6,805	220,527
Transhipped at Ogdensburg to Montreal	+17,817		−17,817
Total	295,509		202,710
Other articles	14,084	47,510	96,682
Grand total	309,593	54,315	299,392
1892.			
Barley			6,433
Corn	53,689	7,637	131,222
Oats			36,935
Pease	524		
Rye	9,119	273	
Wheat	194,281	5,373	26,950
Total grain	257,613	13,283	201,540
Quantity taken to Ogdensburg and transhipped to Montreal	* 4,341	4,341	
Total	261,954	8,942	201,540
Other articles	5,531	60,944	128,863
Total	267,485	69,886	330,403
1893.			
Barley	600	1,110	16,751
Corn	278,564	5,752	156,776
Oats	9,761	1,090	20,313
Pease			
Rye	3,669	1	1
Wheat	209,212	17,602	29,117
Total grain	501,806	25,555	222,958
Other articles	6,210	68,182	170,790
Total	508,016	93,737	393,748
1894.			
Barley	258		28,095
Corn	60,661	3,243	105,329
Oats	175	107	27,621
Pease			
Rye			
Wheat	212,557	13,349	42,934
Total grain	273,651	16,699	203,979
Other articles	18,540	63,982	169,091
Total	292,191	80,681	373,070

*This quantity of wheat was taken from Kingston to Ogdensburg, stored in elevators and subsequently transhipped to Montreal.

SESSIONAL PAPER No. 10

U.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal to Canadian Ports, &c.—*Concluded.*

RECAPITULATION—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1895.	Tons.	Tons.	Tons.
Barley	959	.....	7,730
Corn	70,265	2,912	91,743
Oats	1,654	123	16,442
Rye	.....	.....	.....
Wheat	*158,643	29,061	17,908
Total grain	231,491	32,096	133,823
Other articles	35,168	79,850	113,212
Total	266,659	111,946	247,035
1896.			
Barley	240	.....	11,128
Corn	182,330	19,688	118,426
Oats	12,373	1,454	14,351
Pease	3,020	10	.....
Rye	8,323	647	.....
Wheat	254,763	51,587	16,467
Total grain	†461,049	73,386	160,372
Other articles	18,393	99,564	150,977
Total	479,442	172,950	311,349
1897.			
Barley	.....	.....	14,173
Corn	264,396	11,103	115,689
Oats	6,847	3,046	15,233
Pease	2,078	3	.....
Rye	8,435	48	.....
Wheat	278,498	39,057	12,661
Total grain	‡560,254	53,257	157,756
Other articles	20,793	115,989	128,207
Total	581,047	169,246	285,963
1898.			
Barley	3,960	1,417	6,909
Corn	310,498	13,338	116,317
Oats	3,975	625	12,729
Pease	260	.....	45
Rye	16,133	39	.....
Wheat	184,706	15,860	8,612
Total grain	**519,532	31,279	144,612
Other articles	19,773	79,614	114,259
Total	539,305	110,893	258,871

* Of this amount, 3,469 tons came down to Kingston in 1894, was stored there and taken to Montreal in 1895, and 245 tons came down to Ogdensburg in 1894, was stored there and transhipped to Montreal in 1895.

† Of this amount, 5,290 tons came down to Kingston in 1895, was stored there and transhipped to Montreal in 1896.

‡ Of this quantity, 7,695 tons came down in 1896 and were transhipped to Montreal in 1897.

** Of this quantity, 6 550 tons came down in 1897 and were transhipped to Montreal in 1898.

CANAL

COMPARATIVE STATEMENT for years

——	January.	February.	March.	April.	May.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Welland Canal, 1897			11 98	9,217 52	20,735 71
" 1898			0 47	14,721 18	30,259 38
Increase				5,503 66	9,523 67
Decrease			11 51		
St. Lawrence Canals, 1897		150 00		374 61	11,955 97
" 1898		75 00		2,857 12	14,427 08
Increase				2,482 51	2,471 11
Decrease		75 00			
Chambly Canal, 1897				18 07	3,995 00
" 1898				30 84	3,125 07
Increase				12 77	
Decrease					869 93
Ottawa Canals, 1897				1,107 28	5,661 67
" 1898				35 13	5,888 45
Increase					226 78
Decrease				1,072 15	
Rideau Canal, 1897					580 11
" 1898				20 16	567 63
Increase				20 16	
Decrease					12 48
St. Peter's Canal, 1897	0 78		17 18	30 44	215 57
" 1898	3 32		5 98	92 78	311 29
Increase	2 54			62 34	95 72
Decrease			11 20		
Trent Valley Canals, 1897			0 25	38 22	76 69
" 1898			31 15	66 23	117 30
Increase			30 90	28 01	40 61
Decrease					
Murray Canal, 1897				1 79	71 81
" 1898				38 40	77 39
Increase				36 61	5 58
Decrease					
Sault Ste. Marie Canal, 1897					
" 1898					
Increase					
Decrease					
Total, increase	2 54		8 19	7,073 91	11,481 06
Total, decrease		75 00			

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

SESSIONAL PAPER No. 10

REVENUE.

ended 31st December, 1897 and 1898.

June.	July.	August.	September.	October.	November.	December.	Total.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
20,598 37	27,907 44	26,773 32	31,104 78	26,720 52	21,125 73	4,455 86	188,651 23
22,435 01	20,870 53	24,287 40	19,676 04	20,769 33	12,676 47	3,019 60	168,715 41
1,836 64	.....	.....	.....	.....	.....	.....	.....
....	7,036 91	2,485 92	11,428 74	5,951 19	8,449 26	1,436 26	19,935 82
12,749 37	13,302 41	13,392 10	13,235 20	12,764 42	11,575 80	188 50	89,688 38
13,957 50	17,128 92	17,685 67	15,010 03	15,174 10	10,659 43	66 56	107,041 41
1,208 13	3,826 51	4,293 57	1,774 83	2,409 68	.....	.....	17,353 03
....	....	....	....	....	916 37	121 94	.. ..
4,179 83	4,035 68	3,358 46	3,174 93	2,606 66	1,939 90	....	23,308 53
3,476 53	3,489 03	2,810 83	2,981 09	2 468 06	944 61	.. ..	19,326 06
....	....	....	....	....	....	....	....
703 30	546 65	547 63	193 84	138 60	995 29	....	3,982 47
7,846 53	5,959 58	4,566 18	3,688 72	2,607 22	2,603 10	.....	34,040 28
5,911 00	6,283 53	6,471 90	4,624 60	4,217 60	3,496 41	. ....	36,928 62
.....	323 95	1,905 72	935 88	1,610 38	893 31	..... .	2,888 34
1,935 53	.....	....	....	....	.....	.....	..... .
868 14	1,308 82	1,408 85	1,020 23	891 21	247 41	0 32	6,325 09
782 70	697 14	891 53	668 32	601 61	693 68	.....	4,922 77
....	....	....	....	....	446 27	..... .	....
85 44	611 68	517 32	351 91	289 60	.....	0 32	1,402 32
391 63	422 98	361 49	468 54	423 10	335 21	189 78	2,856 70
352 47	348 71	440 86	457 35	358 66	326 28	186 62	2,884 32
....	....	79 37	.. ...	....	....	....	27 62
39 16	74 27	.....	11 19	64 44	8 93	3 16	.....
160 67	285 30	238 98	189 33	175 61	68 60	... .	1,233 65
228 67	232 22	214 52	133 16	104 31	49 07	.... .	1,176 63
63 00	... .	....	....	....	....	....	....
....	53 08	24 46	56 17	71 30	19 53	.. ..	57 02
73 30	115 15	148 52	93 79	79 97	70 68	.....	655 01
68 61	100 42	148 42	88 67	97 69	64 41	.....	684 01
... .	... .	.....	....	17 72	....	....	29 00
4 69	14 73	0 10	5 12	.....	6 27	.....	... .
... .	....	.....	....	.....	.....	.....	.....
.....	..... .	.....	.....	....	.....	.....	. . ...
.....	....	.....	... .	.. ..	....	.. ....	....
..... .	.....	....	... .	....	.. ... .	....	.....
344 65	.....	2,703 23	.....	.....	.....	.....	..... .
. . ..	4,186 86	....	9,336 26	2,477 35	9,056 07	1,561 68	5,079 64

Total for year 1897 ..... 346,758 87
Total for year 1898 ..... 341,679 23

RICHARD DEVLIN, *Compiler of Canal Statistics.*

COMPARATIVE STATEMENT showing the Quantity of Vegetable Food and Lumber passed through the Canals during the Years ended December 31, 1897 and 1898.

	Vegetable Food.								Lumber.	Total.
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Buck-wheat.	All other.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland Canal, 1897	9,065	324,743	390,615	14,173	25,161	8,483	.....	44,674	72,270	889,184
do 1898	5,578	207,647	437,861	12,2 6	17,502	16,127	.....	23,182	80,574	800,757
Increase	.....	.....	47,246	.....	.....	.....	.....	.....	8,304	.....
Decrease	3,478	117,069	.....	1,887	7,659	7,644	.....	21,492	.....	88,427
St. Lawrence Canals, 1897	3,951	322,937	272,541	4,800	58,169	22,832	6,537	43,365	32,796	767,928
do 1898	26,094	274,335	501,836	6,496	53,048	25,976	3,051	25,036	21,744	937,616
Increase	22,143	.....	229,295	1,696	.....	3,144	.....	.....	.....	169,688
Decrease	.....	48,602	.....	.....	5,121	.....	3,486	18,329	11,052	.....
Chambly Canal, 1897	552	.....	.....	.....	2,666	.....	.....	313	53,838	57,369
do 1898	460	1	.....	.....	3,894	.....	.....	1,292	26,606	32,253
Increase	.....	1	.....	.....	1,228	.....	.....	979	.....	.....
Decrease	92	.....	.....	.....	.....	.....	.....	.....	27,232	25,116
Ottawa Canals, 1897	7	.....	.....	5	1,623	8	189	417	399,583	401,832
do 1898	41	225	.....	40	2,158	10	59	602	442,382	445,517
Increase	34	225	.....	35	535	2	.....	185	42,799	43,685
Decrease	.....	.....	.....	.....	.....	.....	130	.....	.....	.....
Rideau Canal, 1897	518	625	155	6	448	5	153	150	32,029	34,089
do 1898	335	264	93	4	1,393	8	110	204	21,556	23,967
Increase	.....	.....	.....	.....	945	3	.....	54	.....	.....
Decrease	183	361	62	2	.....	.....	43	.....	10,473	10,122

St. Peter's Canal, 1897	2,846	68	25	39	1,256			2,534	5,434	12,202
do 1898	2,177				894			1,888	4,955	9,914
Increase										
Decrease	669	68	25	39	362			646	479	2,288
Trent Valley Canals, 1897	20	49			8			31	1,807	1,915
do 1898		417			3			2	1,662	2,084
Increase		368								169
Decrease	20				5			29	145	
Murray Canal, 1897		243		65	43	340	70	1,268	443	2,472
do 1898	29	320	12	644	162	215	154	1,370	429	3,335
Increase	29	77	12	579	119		84	102		863
Decrease						125			14	
Sault Ste. Marie Canal, 1896	121,526	537,775	7,213	15,991	15,277	5,698		21,629	13,015	738,124
do 1897	94,099	292,398	21,524	6,305	13,869	15,814		15,290	22,701	482,000
Increase			14,311			10,116			9,686	
Decrease	27,427	245,377		9,686	1 408			6,339		256,124
Total increase			290,777			20,784			11,394	
Total decrease	9,672	410,833		9,304	11,728		3,575	45,515		167,672

Total for year 1897	2,905,115
do 1898	2,737,443

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A.

No. (A) 1.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal and the Amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl		20			23			53	23	73	96	3 45	14 60	18 05
Apples	11	239							11	239	250	1 65	5 99	7 64
Agricultural products not enumerated, vegetables	5	37		400				19	5	456	461	0 75	31 20	31 95
Agricultural products not enumerated, animal														
Agricultural implements														
Barley						6,909		5,377		12,286	12,286		1,228 60	1,228 60
Bricks	43								43		43	4 86		4 86
Bones														
Brimstone														
Buckwheat														
Cement and water lime	53					300			53	300	353	1 24	60 00	61 24
Clay, lime and sand	105	50						439	105	489	594	1 98	21 50	23 48
Coal					156,055	759	986	4,536	157,041	5,295	162,336	31,408 20	1,059 00	32,467 20
Corn	7	36	5			150,667		287,146	12	437,849	437,861	1 14	43,782 21	43,783 35
Cattle														
Cotton (raw)														
Crockery and earthenware	19				1				20		20	3 00		3 00
Dye wood and dye stuffs														
Fish	44				44				88		88	13 20		13 20
Flax and hemp					135				135		135	20 25		20 25
Flour		743				4,212		623		5,578	5,578		990 84	990 84
Furniture	4	1	7			2			11	3	14	1 13	0 43	1 56
Gypsum														
Glass (all kinds)	34	2						73	34	75	109	3 92	15 00	18 92
Hay (pressed)														
Hogs														
Horses	2				2	2		2	4	4	8	0 34	0 80	1 14

Hides and skins, horns and hoofs					93				93		93	13 95		13 95
Ice														
Iron, railway						770		674		1,444	1,444		288 80	288 80
" pig	74	74						4,187	74	4,261	4,335	1 38	839 25	840 63
" all other	508	18	48		15	324		6,474	571	6,816	7,387	84 74	1,360 05	1,444 79
Iron ore		575						12,858		13,433	13,433		671 65	671 65
Kryolite chemical ore and other ore, except iron														
Lard and lard oil	8					3,671			8	3,671	3,679	1 20	734 20	735 40
Meal, all kinds						22,626				22,626	22,626		4,525 20	4,525 20
Meats, other than pork	23								23		23	3 19		3 19
Marble					205				205		205	30 75		30 75
Manilla					119				119		119	17 85		17 85
Molasses	3				36			56	39	56	95	5 85	11 20	17 05
Nails	127								127		127	13 44		13 44
Oats	8	162			3	12,729		4,600	11	17,491	17,502	0 90	1,749 10	1,750 00
Oil (in barrels)	20				1	119		1,156	21	1,275	1,296	1 59	255 00	256 59
Oil cake														
Pease	1					45		260	1	305	306	0 02	30 50	30 52
Potatoes														
Pork	11					1,271			11	1,271	1,282	1 65	254 20	255 85
Paint	22					3			22	3	25	0 57	0 60	1 17
Pitch and tar	11								11		11	1 26		1 26
Rags														
Rye						1,197		14,930		16,127	16,127		1,612 70	1,612 70
Flax seed								5,676		5,696	5,696		569 60	569 60
Rosin														
Salt	7	773			4			15	11	788	799	0 74	157 60	158 34
Stone intended for cutting								554		554	554		110 80	110 80
" wrought														
" not suitable for cutting, unwrought	361	60							361	60	421	19 86	3 00	22 86
Seeds, all kinds	24				50	44			74	44	118	8 89	8 80	17 69
Sheep														
Soda ash	10								10		10	0 20		0 20
Steel					183	2,951		4,473	183	7,424	7,607	27 45	1,484 80	1,512 25
Sugar	128		32		5,261				5,421		5,421	801 12		801 12
Spirits, beer, &c	96	9	27		195	34		4	318	47	365	44 71	7 83	52 54
Tobacco (raw)														
Tallow					175	359			175	359	534	26 25	71 80	98 05
Tin	6				34				40		40	5 22		5 22
Turpentine	1								1		1	0 15		0 15
Wheat	391	79,989	943			11,268		115,056	1,334	206,313	207,647	98 02	20,612 93	20,710 95
White lead														
Whiting	1								1		1	0 02		0 02
Wool						89				89	89		17 80	17 80
All other goods and merchandise not enumerated	2,122	1,310	61		47,710	3,828		891	49,893	6,029	55,922	7,291 23	976 85	8,268 08
Bark														

No. (A) 1.—General Statement showing the Quantity of each Article transported on the Welland Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
												3 02		
Barrels, empty	14	1			6				20	1	21		0 18	3 20
Boat knees														
Floats														
Fire wood, in vessels	6	6,250			156				162	6,250	6,412	10 70	346 16	356 86
" " rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels		4,063	540	20,053		52,844		3,074	540	80,034	80,574	97 05	14,314 70	14,411 75
" " rafts														
Masts, spars, and telegraph poles, in vessels														
Masts, spars, and telegraph poles, in rafts														
Railway ties, in vessels		190								190	190		30 04	30 04
" " rafts														
Saw logs	341	1,913	917	504					1,258	2,417	3,675	19 13	134 41	153 54
Staves and headings, barrel				40						40	40		3 20	3 20
" " pipe														
" " West India														
" salt barrel														
Shingles		12								12	12		7 28	7 28
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels	200	9,712						39,186	200	48,898	49,098	3 75	7,305 10	7,308 85
" " rafts	30								30		30	0 85		85
Traverses														
Woodenware and wood partly manufactured	7				10				17		17	6 80		6 80
Total freight paying tolls	4,888	106,239	2,580	20,997	210,516	277,023	986	512,412	218,970	916,671	1,135,641	40,108 61	105,705 50	145,814 11

Articles having paid full tolls on the St. Lawrence Canals, free:—														
Bricks	34		36						70		70			
Cement and water lime	413		583						996		996			
Clay, lime and sand	130		14						144		144			
Crockery and earthenware	15		18						33		33			
Fish			9						9		9			
Glass	58		92						150		150			
Horses	1								1		1			
Iron, all other	142		557						699		699			
Lard and lard oil	2								2		2			
Nails	60		169						229		229			
Oils	3		12						15		15			
Paint	6		29						35		35			
Pitch and tar	7		30						37		37			
Salt	5		30						35		35			
Seeds, all other	29		27						56		56			
Soda ash	24		64						88		88			
Steel	3		16						19		19			
Stone, wrought	31								31		31			
Sugar	109		457						566		566			
Tin	3		234						237		237			
Whiting	48		45						93		93			
Whiskey, etc.	50		48						98		98			
Merchandise	282		511						793		793			
Grand total freight	6,343	106,239	5,561	20,997	210,516	277,023	986	512,412	223,406	916,671	1,140,077			

Total tolls on vessels	10,580 65	11,648 14	22,228 79
" passengers	273 95	281 22	555 17
" free goods $665.40			
Total tolls	50,963 21	117,634 86	168,598 07
Fines			75 00
*Damages			
Harbour dues			42 34
Total revenue, exclusive of hydraulic rents	50,963 21	117,634 86	168,715 41

* Amount of damages not included in above, $276.06.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, November 18, 1893.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 2.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the Welland Canal, and the Amount of Tolls collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl		20			23			53	23	73	96	3 45	14 60	18 05
Apples	11								11		11	1 65		1 65
Agricultural products not enumerated, vegetable	5	37						19	5	56	61	0 75	11 20	11 95
Agricultural products not enumerated, animal														
Agricultural implements														
Barley						6,909		5,377		12,286	12,286		1,228 60	1,228 60
Bricks	30								30		30	4 50		4 50
Bones														
Brimstone														
Buckwheat														
Cement and water lime						300				300	300		60 00	60 00
Clay, lime and sand								53		53	53		10 60	10 60
Coal					156,055	759	986	4,536	157,041	5,295	162,336	31,408 20	1,059 00	32,467 20
Corn			5			150,667		287,146	5	437,813	437,818	0 75	43,781 30	43,782 05
Cattle														
Cotton (raw)														
Crockery and earthenware	19				1				20		20	3 00		3 00
Dye, wood and dye stuffs														
Fish	44				44				88		88	13 20		13 20
Flax and hemp					135				135		135	20 25		20 25
Flour		30				4,212		623		4,865	4,865		973 00	973 00
Furniture			7			2			7	2	9	1 05	0 40	1 45
Gypsum														
Glass (all kinds)	25	2						73	25	75	100	3 75	15 00	18 75
Hay (pressed)														
Hogs														
Horses					2	2		2	2	4	6	0 30	0 80	1 10

Hides and skins, horns and hoofs					93				93		93	13 95		13 95
Ice														
Iron, railway						770		674		1,444	1,444		288 80	288 80
" pig								4,187		4,187	4,187		837 40	837 40
" all other	501		48		15	324		6,474	564	6,798	7,362	84 60	1,359 60	1,444 20
Iron ore		575						12,858		13,433	13,433		671 65	671 65
Kryolite chemical ore and other ore, except iron														
Lard and lard oil	8					3,671			8	3,671	3,679	1 20	734 20	735 40
Meal, all kinds						22,626				22,626	22,626		4,525 20	4,525 20
Meats, other than pork	21								21		21	3 15		3 15
Marble					205				205		205	30 75		30 75
Manilla					119				119		119	17 83		17 85
Molasses	3				36			56	39	56	95	5 85	11 20	17 05
Nails	84								84		84	12 60		12 60
Oats					3	12,729		4,600	3	17,329	17,332	0 45	1,732 90	1,733 35
Oil (in barrels)	8				1	119		1,156	9	1,275	1,284	1 35	255 00	256 35
Oil cake														
Pease						45		260		305	305		30 50	30 50
Potatoes														
Pork	11					1,271			11	1,271	1,282	1 65	254 20	255 85
Paint	1					3			1	3	4	0 15	0 60	0 75
Pitch and tar	8								8		8	1 20		1 20
Rags														
Rye						1,197		14,930		16,127	16,127		1,612 70	1,612 70
Flax seed								5,696		5,696	5,696		569 60	569 60
Rosin														
Salt		773			4			15	4	788	792	0 60	157 60	158 20
Stone intended for cutting								554		554	554		110 80	110 80
" wrought														
" not suitable for cutting, unwrought														
Seeds, all kinds	7				50	44			57	44	101	8 55	8 80	17 35
Sheep														
Soda ash														
Steel					183	2,951		4,473	183	7,424	7,607	27 45	1,484 80	1,512 25
Sugar	36		32		5,261				5,329		5,329	799 35		799 35
Spirits, beer, &c	73		27		195	34		4	295	38	333	44 25	7 60	51 85
Tobacco (raw)														
Tallow					175	359			175	359	534	26 25	71 80	98 05
Tin					34				34		34	5 10		5 10
Turpentine	1								1		1	0 15		0 15
Wheat		78,689	12			11,268		115,056	12	205,013	205,025	1 80	20,501 30	20,503 10
White lead														
Whiting														
Wool						89				89	89		17 80	17 80
All other goods and merchandise not enumerated	624		61		47,710	3,828		891	48,395	4,719	53,114	7,259 25	943 80	8,203 05
Bark														

No. (A) 2.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the Welland Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels, empty	14				6				20		20	3 02		3 02
Boat knees														
Floats														
Firewood, in vessels		747			156				156	747	903	10 40	49 80	60 20
" rafts.														
Hoops														
Hop poles														
Lumber, sawn, in vessels		2,831	540	20,053		52,844		3,074	540	78,802	79,342	97 05	14,176 22	14,273 27
" " rafts														
Masts, spars and telegraph poles, in vessels														
" " in rafts.														
Railway ties, in vessels		190								190	190		30 04	30 04
" rafts														
Sawlogs														
Staves and headings, barrel														
" " pipe														
" " West India														
Staves, salt barrel														
Shingles		11								11	11		6 90	6 90
Split posts and fence rails, in vessels														
" " in rafts.														
Timber, square, in vessels		9,512						39,186		48,698	48,698		7,301 35	7,301 35
" " in rafts														
Traverses														
Woodenware and wood partly manufactured	7				10				17		17	6 80		6 80
Total freight paying tolls	1,541	93,417	732	20,053	210,516	277,023	986	512,026	213,775	902,519	1,116,294	39,925 62	104,906 66	144,832 28

Articles having paid full tolls on the St. Lawrence canals, free:—											
Bricks	34		36					70		70	
Cement and water lime	413		583					996		996	
Clay, lime and sand	130		14					144		144	
Crockery and earthenware	15		18					33		33	
Fish			9					9		9	
Glass	58		92					150		150	
Horses	1							1		1	
Iron, all other	142		557					699		699	
Lard and lard oil	2							2		2	
Nails	60		169					229		229	
Oils	3		12					15		15	
Paint	6		29					35		35	
Pitch and tar	7		30					37		37	
Salt	5		30					35		35	
Seeds, all other	29		27					56		56	
Soda ash	24		64					88		88	
Steel	3		16					19		19	
Stone wrought	31							31		31	
Sugar	109		457					566		566	
Tin	3		234					237		237	
Whiting	48		45					93		93	
Whisky, &c	50		48					98		98	
Merchandise	282		511					793		793	
Grand total through freight	2,996	93,417	3,713	20,053	210,516	277,023	986	512,026	218,211	902,519	1,120,730

Total through tolls on vessels	10,352 62	11,321 60	21,674 22
" " passengers	103 05	113 65	216 70
" " free goods $ 665 40			
Total through tolls	50,381 29	116,341 91	166,723 20

RICHARD DEVLIN,
Compiler Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

No. (A) 3.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the Welland Canal, and the Amount of Tolls collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl														
Apples		239								239	239		5 99	5 99
Agricultural products not enumerated, vegetable				400						400	400		20 00	20 00
Agricultural products not enumerated, animals														
Agricultural implements														
Barley														
Bricks	13								13		13	0 36		0 36
Bones														
Brimstone														
Buckwheat														
Cement and water lime	53								53		53	1 24		1 24
Clay, lime and sand	105	50						386	105	436	541	1 98	10 90	12 88
Coal														
Corn	7	36							7	36	43	0 39	0 91	1 30
Cattle														
Cotton (raw)														
Crockery and earthenware														
Dye wood and dye stuffs														
Fish														
Flax and hemp														
Flour		713								713	713		17 84	17 84
Furniture	4	1							4	1	5	0 08	0 03	0 11
Gypsum														
Glass (all kinds)	9								9		9	0 17		0 17
Hay (pressed)														
Hogs														
Horses	2								2		2	0 04		0 04

Hides and skins, horns and hoofs												
Ice												
Iron, railway												
" pig	74	74					74	71	148	1 38	1 85	3 23
" all other	7	18					7	18	25	0 14	0 45	0 59
" ore												
Kryolite chemical ore and other ore, except iron												
Lard and lard oil												
Meal, all kinds												
Meats, other than pork	2						2		2	0 04		0 04
Marble												
Manilla												
Molasses												
Nails	43						43		43	0 84		0 84
Oats	8	162					8	162	170	0 45	16 20	16 65
Oil (in barrels)	12						12		12	0 24		0 24
Oil cake												
Pease	1						1		1	0 02		0 02
Potatoes												
Pork												
Paint	21						21		21	0 42		0 42
Pitch and tar	3						3		3	0 06		0 06
Rags												
Rye												
Flax seed												
Rosin												
Salt	7						7		7	0 14		0 14
Stone intended for cutting												
" wrought												
" not suitable for cutting, unwrought	361	60					361	60	421	19 86	3 00	22 86
Seeds, all kinds	17						17		17	0 34		0 34
Sheep												
Soda ash	10						10		10	0 20		0 20
Steel												
Sugar	92						92		92	1 77		1 77
Spirits, beer, &c	23	9					23	9	32	0 46	0 23	0 69
Tobacco (raw)												
Tallow												
Tin	6						6		6	0 12		0 12
Turpentine												
Wheat	391	1,300	931				1,322	1,300	2,622	96 22	111 63	207 85
White lead												
Whiting	1						1		1	0 02		0 02
Wool												
All other goods and merchandise not enumerated	1,498	1,310					1,498	1,310	2,808	31 98	33 05	65 03
Bark												

No. (A) 3.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the Welland Canal, &c.—*Concl'd.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels empty		1								1	1		0 18	0 18
Boat knees														
Floats														
Fire wood, in vessels	6	5,503							6	5,503	5,509	0 30	296 36	296 66
" in rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels		1,232								1,232	1,232		138 48	138 48
" in rafts														
Masts, spars and telegraph poles, in vessels														
Masts, spars and telegraph poles, in rafts														
Railway ties, in vessels														
" in rafts														
Saw logs	341	1,913	917	504					1,258	2,417	3,675	19 13	134 41	153 54
Staves and headings, barrel				40						40	40		3 20	3 20
" " pipe														
" " West India														
Staves, salt barrel														
Shingles		1								1	1		0 38	0 38
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels	200	200							200	200	400	3 75	3 75	7 50
" in rafts	30								30		30	0 85		0 85
Traverses														

Woodenware and wood partly manufactured.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total day freight paying tolls	3,347	12,822	1,848	944	.....	.....	.....	386	5,195	14,152	19,347	182 99	798 84	981 83
											Total way tolls on vessels.....	228 03	326 54	554 57
											" passengers	170 90	167 57	338 47
											Total way tolls.....	581 92	1,292 95	1,874 87

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 4.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals and the Amount of Revenue collected during the Season of navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total, Tons.	Amount of Tolls, Up.	Amount of Tolls Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl		22								22	22		4 40	4 40
Apples	4	1,762							4	1,762	1,766	0 28	251 39	251 67
Agricultural products not enumerated, vegetables	444	2,105							444	2,105	2,549	52 27	224 96	277 23
Agricultural products not enumerated, animal	1,008	1,832		479			18	956	1,026	3,267	4,293	51 59	440 64	492 23
Agricultural implements	71	1							71	1	72	10 61	0 10	10 71
Barley		2,536								2,536	2,536		213 59	213 59
Bricks	7,882	185	36				133		8,051	185	8,236	418 54	6 95	425 49
Bones		18								18	18		1 32	1 32
Brimstone	770								770		770	78 23		78 23
Buckwheat	103	2,948							103	2,948	3,051	2 58	190 25	192 83
Cement and water lime	15,790	224	668						16,458	224	16,682	1,542 40	10 60	1,553 00
Clay, lime and sand	12,347	8,418	14	31			3,033	200	15,394	8,649	24,043	607 98	420 00	1,027 98
Coal		38,891				275		149,796		188,962	188,962		27,253 65	27,253 65
Corn	729	182,643				28		3,488	729	186,159	186,888	18 68	8,801 56	8,820 24
Cattle	18	316							18	316	334	1 18	24 12	25 30
Cotton (raw)	10								10		10	0 98		0 98
Crockery and earthenware	110	7	22						132	7	139	24 24	1 10	25 34
Dye wood and dye stuffs	14	8		4			4		18	12	30	3 00	0 75	3 75
Fish	43	16	8						51	16	67	5 41	0 61	6 02
Flax and hemp	4	35							4	35	39	0 15	2 63	2 78
Flour	1,486	23,955							1,486	23,955	25,441	74 09	1,850 10	1,924 19
Furniture	279	916	33					173	312	1,089	1,401	54 63	153 40	208 03
Gypsum	1,236								1,236		1,236	16 05		16 05
Glass (all kinds)	478	49	89						567	49	616	109 81	5 65	115 46
Hay (pressed)	168	554							168	554	722	6 77	38 05	44 82
Hogs														
Horses	226	469							226	469	695	11 52	32 53	44 05

Hides and skins, horns and hoofs		10								10	10			1 36	1 36	
Ice																
Iron, railway	82	306						420	82	726	808	3	65	63 69	67	34
" pig	10	1,449					322		332	1,449	1,781	13	32	191 45	404	77
" all other	4,224	1,283	564		125		1,227	80	6,140	1,363	7,503	520	50	81 44	601	94
Iron ore																
Kryolite chemical ore and other ore, except iron																
Lard and lard oil	74	1,500							74	1,500	1,574	7	35	117 22	124	57
Meal, all kinds	196	2,721							196	2,721	2,917	10	90	192 64	203	54
Meats, other than pork	6	340							6	340	346	0	60	25 48	26	48
Marble	3								3		3	0	39		0	39
Manilla	9	2							9	2	11	0	90	0 10	1	00
Molasses	1,042	260							1,042	260	1,302	86	72	13 00	99	72
Nails	2,265	687	127						2,392	687	3,079	330	07	35 65	365	72
Oats	874	48,199							874	48,199	49,073	22	00	2,142 22	2,164	22
Oil (in barrels)	473	700	23				34		530	700	1,230	89	00	88 75	177	75
Oil cake	6	4,001							6	4,001	4,007	0	35	300 14	300	49
Pease	450	19,506							450	19,506	19,956	11	28	1,687 76	1,699	04
Potatoes	120	17							120	17	137	11	27	2 04	13	31
Pork	186	1,816							186	1,816	2,002	18	08	133 63	151	71
Paint	293	156	69				3	10	365	166	531	66	12	13 25	79	37
Pitch and tar	257	122	30				210		497	122	619	53	01	18 60	71	61
Rags	160	104							160	104	264	21	80	19 85	41	65
Rye		9,928						560		10,488	10,488			815 47	815	47
Flax seed		13,081								13,081	13,081			654 05	654	05
Rosin	17	10					1,721		1,738	10	1,748	104	15	0 50	104	65
Salt	2,591	43	33						2,624	43	2,667	292	77	1 65	294	42
Stone, intended for cutting	242	1,908	1,908						242	1,908	2,150	5	84	129 99	135	83
" wrought	537	100							537	100	637	58	64	10 00	68	64
" not suitable for cutting, unwrought		468								468	468			12 00	12	00
Seeds, all kinds	5,239	276	16						5,255	276	5,531	236	36	19 36	255	72
Sheep	1	72							1	72	73	0	06	5 45	5	51
Soda ash	971	340	54						1,025	340	1,365	203	39	66 50	269	89
Steel	904	6	14					815	918	821	1,739	127	20	61 37	188	57
Sugar	6,150	4,059	466						6,616	4,059	10,675	1,291	17	402 40	1,693	57
Spirits, beer, &c	328	139	54						382	139	521	68	89	24 20	93	09
Tobacco (raw)	9	8							9	8	17	0	88	0 30	1	18
Tallow		294								294	294			22 06	22	06
Tin	1,509	44	461						1,970	44	2,014	385	29	5 20	390	49
Turpentine	4	23					208		211	23	234	11	00	1 15	12	15
Wheat	1,804	88,377							1,804	88,377	90,181	47	37	4,757 58	4,804	95
White lead	65	39	1				26		92	39	131	14	22	1 95	16	17
Whiting	488	17	44						532	17	549	103	72	0 85	104	59
Wool	24	14							24	14	38	3	49	2 10	5	57
All other goods and merchandise not enumerated	7,460	7,444	548	81	266	554	623	107	8,897	8,186	17,083	1,275	93	1,033 99	2,309	92
Bark																

No. (A) 4.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels, empty	177	103				15			177	118	295	18 33	7 99	26 32
Boat knees														
Floats	52	1,246							52	1,246	1,298	1 23	21 81	23 04
Firewood, in vessels	2,316	6,198						174	2,316	6,372	8,688	38 60	113 80	152 40
" rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels	12,297	4,023		25	7	90		151	12,304	4,289	16,593	349 00	119 92	468 92
" " rafts	51	1,892							51	1,892	1,943	2 25	85 46	87 71
Masts, spars and telegraph poles, in vessels	66								66		66	2 48		2 48
Masts, spars and telegraph poles, in rafts		16,107								16,107	16,107		402 05	402 05
Railway ties, in vessels	57								57		57	1 14		1 14
" " rafts														
Saw-logs	262	7,706							262	7,706	7,968	6 00	175 72	181 72
Staves and headings, barrel		48								48	48		0 96	0 96
" " pipe														
" " West India														
Staves, salt barrel														
Shingles	3	18							3	18	21	0 80	2 93	3 73
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels	264	109							264	109	373	9 90	1 92	11 82
" " rafts	80	3,455							80	3,455	3,535	2 00	86 50	88 50
Traverses		1,200								1,200	1,200		7 42	7 42
Woodenware and wood, partly manufactured	64	5							64	5	69	18 00	1 00	19 00
Total freight paying tolls	97,981	519,889	3,374	620	398	962	7,562	156,930	109,315	678,401	787,716	9,038 40	54,112 22	63,150 62

Free articles having paid full tolls on the Welland Canal:											
Ashes		48					25		73	73	
Barley		3,960							3,960	3,960	
Clay, lime and sand		37					15		52	52	
Corn		281,578					33,370		314,948	314,948	
Flax seed		5,687							5,687	5,687	
Flour		293					360		653	653	
Glass		25					50		75	75	
Horses		3					1		4	4	
Iron, all other		1,410					4,807		6,217	6,217	
Merchandise		476					390		866	866	
Molasses		39					17		56	56	
Oats		3,975							3,975	3,975	
Oils		370					771		1,141	1,141	
Pease		260							260	260	
Rye		15,152					336		15,488	15,488	
Salt		144							144	144	
Steel		49					852		1,351	1,351	
Vegetables, all other		56							56	56	
Wheat		179,881					4,273		184,154	184,154	
Whisky, &c							4		4	4	
Lumber, sawn, in vessels		2,802					263		3,065	3,065	
Timber, square, in rafts		329							329	329	
Coal, free, per Order in Council	74,197						20,619	94,816		94,816	
Free articles for canal construction, O.C., 1884:											
Stone, wrought		10,341							10,341	10,341	
Merchandise		20							20	20	
Lumber, sawn, in vessels		143							143	143	
Railway ties, in vessels		68							68	68	
Coal		1,100					2,372		3,472	3,472	
Grand total, freight	172,178	1,028,585	3,374	620	398	962	28,181	204,836	204,131	1,235,003	1,439,134

Total tolls on vessels		13,392 48	11,356 74	24,749 22
" passengers		855 51	2,099 58	2,955 09
" free goods	$61,427.47			
Total tolls		23,286 39	67,568 54	90,854 93
Fines				197 00
*Damages				
Wharfage and storage				2,300 15
Other receipts				13,689 33
Total revenue, exclusive of hydraulic rents				107,041 41

*Amount of damages not included in above, $382.51.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the St. Lawrence Canals, and the Amount of Tolls collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl		22								22	22		4 40	4 40
Apples		1,622								1,622	1,622		243 30	243 30
Agricultural products not enumerated, vegetable	255	1,152							255	1,152	1,407	38 25	172 80	211 05
Agricultural products not enumerated, animal		1,503						956		2,459	2,459		368 85	368 85
Agricultural implements														
Barley		2,001								2,001	2,001		200 10	200 10
Bricks	441		36						477		477	71 55		71 55
Bones														
Brimstone	60								60		60	9 00		9 00
Buckwheat		1,537								1,537	1,537		153 70	153 70
Cement and water lime	6,183	19	628						6,811	19	6,830	1,021 65	2 85	1,024 50
Clay, lime and sand	52	522	14						66	522	588	9 90	78 30	88 20
Coal		37,193						138,416		175,609	175,609		26,341 05	26,341 05
Corn		1,736						3,488		5,224	5,224		522 40	522 40
Cattle		9								9	9		1 35	1 35
Cotton, raw														
Crockery and earthenware	47	4	22						69	4	73	13 80	0 80	14 60
Dye wood and dye stuffs	14	1							14	1	15	2 80	0 20	3 00
Fish	9		8						17		17	2 55		2 55
Flax and hemp														
Flour	1	1,230							1	1,230	1,231	0 15	184 50	184 65
Furniture	174	470	28					153	202	623	825	40 60	124 60	165 20
Gypsum	2								2		2	0 30		0 30
Glass, all kinds	405	16	89						494	16	510	98 80	3 20	102 00
Hay, pressed														
Hogs														
Horses	2	100							2	100	102	0 30	15 00	15 30

Hides and skins, horns and hoofs		8								8	8		1 20	1 20
Ice														
Iron, railway	3	184							3	184	187	0 45	27 60	28 05
" pig	5	1,448							5	1,448	1,453	0 75	191 41	192 16
" all other	1,622	234	564						2,186	234	2,420	327 90	35 10	363 00
Iron ore														
Kryolite chemical ore and other ore, except iron														
Lard and lard oil	2	126							2	126	128	0 30	18 90	19 20
Meal, all kinds		47								47	47		7 05	7 05
Meats, other than pork														
Marble														
Manilla														
Molasses	33								33		33	6 60		6 60
Nails	621	4	127						748	4	752	149 60	0 80	150 40
Oats		11,033								11,033	11,033		1,103 40	1,103 40
Oil, in barrels	263	246	23						286	246	532	57 20	49 20	106 40
Oil cake														
Pease		15,960								15,960	15,960		1,596 10	1,596 10
Potatoes	43	10							43	10	53	6 45	1 50	7 95
Pork														
Paint	186	23	69					10	255	33	288	51 00	6 60	57 60
Pitch and tar	132	82	30						162	82	244	32 40	16 40	48 80
Rags	46	95							46	95	141	9 20	19 00	28 20
Rye		6,205						560		6,765	6,765		676 50	676 50
Flax seed														
Rosin	10								10		10	2 00		2 00
Salt	1,003		33						1,036		1,036	155 40		155 40
Stone, intended for cutting														
" wrought	211								211		211	42 20		42 20
" not suitable for cutting, unwrought		45								45	45		3 60	3 60
Seeds, all kinds	325	8	16						341	8	349	51 15	1 20	52 35
Sheep														
Soda ash	951	330	54						1,005	330	1,335	201 00	66 00	267 00
Steel	798		14						812		812	121 80		121 80
Sugar	5,346	21	466						5,812	21	5,833	1,162 40	4 20	1,166 60
Spirits, beer, &c	177	115	54						231	115	346	46 20	23 00	69 20
Tobacco, raw														
Tallow														
Tin	1,335	20	461						1,796	20	1,816	359 20	4 00	363 20
Turpentine	3								3		3	0 60		0 60
Wheat		14,242								14,242	14,242		1,424 20	1,424 20
White lead	46		1						47		47	9 40		9 40
Whiting	444		44						488		488	97 60		97 60
Wool	23	14							23	14	37	3 45	2 10	5 55
All other goods and merchandise not enumerated	3,831	2,595	544					15	4,375	2,610	6,985	875 00	522 00	1,397 00
Bark														

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the St. Lawrence Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels, empty	55								55		55	9 56		9 56
Boat knees														
Floats														
Fire wood, in vessels														
" rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels	814	20							814	20	834	72 75	1 80	74 55
" " rafts														
Masts, spars and telegraph poles, in vessels														
Masts, spars and telegraph poles, in rafts														
Railway ties, in vessels														
" rafts														
Saw logs														
Staves and headings, barrel														
" " pipe														
" " W. India														
Staves, salt barrel														
Shingles														
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts		18								18	18		0 54	0 54
Timber, square, in vessels														
" " rafts														
Traverses														
Woodenware and wood partly manufactured	30								30		30	12 00		12 00
Total freight paying tolls	26,003	102,270	3,325					143,598	29,328	245,868	275,196	5,173 21	34,220 80	39,394 01

10—v—82

Free articles having paid full tolls on the Welland Canal:														
Ashes		48					25		73	73				
Barley		3,960							3,960	3,960				
Clay, lime and sand		37					15		52	52				
Corn		278,930					31,568		310,498	310,498				
Flax seed		5,687							5,687	5,687				
Flour		293					360		653	653				
Glass		25					50		75	75				
Horses		3					1		4	4				
Iron, all other		1,410					4,807		6,217	6,217				
Merchandise		476					390		866	866				
Molasses		39					17		56	56				
Oats		3,975							3,975	3,975				
Oils		370					771		1,141	1,141				
Pease		260							260	260				
Rye		15,152					336		15,488	15,488				
Salt		144							144	144				
Steel		499					852		1,351	1,351				
Vegetables, all other		56							56	56				
Wheat		179,881					4,273		184,154	184,154				
Whisky							4		4	4				
Lumber, sawn, in vessels		2,602					263		3,065	3,065				
Timber, square, in rafts		329							329	329				
Coal, free per Order in Council	400							400		400				
Grand total, freight	26,403	596,646	3,325				187,330	29,728	783.976	813,704				
Total through tolls on vessels											8,302 03	8,868 15	17,170 18	
" " passengers											414 00	1,332 80	1,746 80	
" " free goods										$54,546 99				
Total through tolls											13,889 24	44,421 75	58,310 99	

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight, transported on the St. Lawrence Canals and the amount of Tolls collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Ashes, pot and pearl														
Apples	4	140							4	140	144	0 28	8 09	8 37
Agricultural products not enumerated, vegetable	189	953							198	953	1,142	14 02	52 16	66 18
Agricultural products not enumerated, animal	1,008	329		479			18		1,026	808	1,834	51 59	71 79	123 38
Agricultural implements	71	1							71	1	72	10 61	0 10	10 71
Barley		535								535	535		13 49	11 49
Bricks	7,441	185					133		7,574	185	7,759	346 99	6 95	353 94
Bones		18								18	18		1 32	1 32
Brimstone	710								710		710	69 23		69 23
Buckwheat	103	1,411							103	1,411	1,514	2 58	36 55	39 13
Cement and water lime	9,607	205	40						9,647	205	9,852	520 75	7 75	528 50
Clay, lime and sand	12,295	7,896		31			3,033	200	15,328	8,127	23,455	598 08	341 70	939 78
Coal		1,698				275		11,380		13,353	13,353		912 60	912 60
Corn	729	180,907				28			729	180,935	181,664	18 68	8,279 16	8,297 84
Cattle	18	307							18	307	325	1 18	22 77	23 95
Cotton (raw)	10								10		10	0 98		0 98
Crockery and earthenware	63	3							63	3	66	10 44	0 30	10 74
Dye wood and dye stuffs		7		4			4		4	11	15	0 20	0 55	0 75
Fish	34	16							34	16	50	2 86	0 61	3 47
Flax and hemp	4	35							4	35	39	0 15	2 63	2 78
Flour	1,485	22,725							1,485	22,725	24,210	73 94	1,665 60	1,739 54
Furniture	105	446	5					20	110	466	576	14 03	28 80	42 83
Gypsum	1,234								1,234		1,234	15 75		15 75
Glass (all kinds)	73	33							73	33	106	11 01	2 45	13 46
Hay (pressed)	168	554							168	554	722	6 77	38 05	44 82
Hogs														
Horses	224	369							224	369	593	11 22	17 53	28 75

Hides and skins, horns and hoofs		2									2	2			0 16	0 16
Ice																
Iron railway	79	122						420	79	542	621	3 20		36 09		39 29
" pig	5	1					322		327	1	328	12 57		0 04		12 61
" all other	2,602	1,049			125		1,227	80	3,954	1,129	5,083	192 60		46 34		238 94
Iron ore																
Kryolite chemical ore and other ore, except iron																
Lard and lard oil	72	1,374							72	1,374	1,446	7 05		98 32		105 37
Meal, all kinds	196	2,674							196	2,674	2,870	10 90		185 59		196 49
Meats, other than pork	6	340							6	340	346	0 60		25 48		26 08
Marble	3								3		3	0 39				0 39
Manilla	6	2							9	2	11	0 90		0 10		1 00
Molasses	1,009	260							1,009	260	1,269	80 12		13 00		93 12
Nails	1,644	683							1,644	683	2,327	180 47		34 85		215 32
Oats	874	37,166							874	37,166	38,040	22 00		1,038 82		1,060 82
Oil (in barrels)	210	454					34		244	454	698	31 80		39 55		71 35
Oil cake	6	4,001							6	4,001	4,007	0 35		300 14		300 49
Pease	450	3,546							450	3,546	3,996	11 28		91 66		102 94
Potatoes	77	7							77	7	84	4 82		0 54		5 36
Pork	186	1,816							186	1,816	2,002	18 08		133 63		151 71
Paint	107	133					3		110	133	243	15 12		6 65		21 77
Pitch and tar	125	40					210		335	40	375	20 61		2 20		22 81
Rags	114	9							114	9	123	12 60		0 85		13 45
Rye		3,723								3,723	3,723			138 97		138 97
Flax seed		13,081								13,081	13,081			654 05		654 05
Rosin	7	10					1,721		1,728	10	1,738	102 15		0 50		102 65
Salt	1,588	43							1,588	43	1,631	137 37		1 65		139 02
Stone intended for cutting	242	1,908							242	1,908	2,150	5 84		129 99		135 83
" wrought	326	100							326	100	426	16 44		10 00		26 44
" not suitable for cutting, unwrought		423								423	423			8 40		8 40
Seees, (all kinds)	4,914	268							4,914	268	5,182	185 21		18 16		203 37
Sheep	1	72							1	72	73	0 06		5 45		5 51
Soda ash	20	10							20	10	30	2 39		0 50		2 89
Steel	106	6						815	106	821	927	5 40		61 37		[illegible]
Sugar	804	4,038							804	4,038	4,842	128 77		398 20		526 97
Spirits, beer, &c	151	24							151	24	175	22 69		1 20		23 89
Tobacco (raw)	9	8							9	8	17	0 88		0 30		1 18
Tallow		294								294	294			22 06		22 06
Tin	174	24							174	24	198	26 09		1 20		27 29
Turpentine		23					208		208	23	231	10 40		1 15		11 55
Wheat	1,804	74,135							1,804	74,135	75,939	47 37		3,333 38		3,380 75
White lead	19	39					26		45	39	84	4 82		1 95		6 77
Whiting	44	17							44	17	61	6 12		0 85		6 97
Wool	1								1		1	0 04				0 04
All other goods and merchandise not enumerated	3,629	4,849	4	81	266	554	623	92	4,522	5,576	10,098	400 93		511 99		912 92
Bark																

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												$ cts.	$ cts.	$ cts.
Barrels, empty	122	103				15			122	118	240	8 77	7 99	16 76
Boat knees														
Floats	52	1,246							52	1,246	1,298	1 23	21 81	23 04
Fire wood, in vessels	2,316	6,198						174	2,316	6,372	8,688	38 60	113 80	152 40
" in rafts														
Hoops														
Hop poles														
Lumber, sawn, in vessels	11,483	4,003		25	7	90		151	11,490	4,269	15,759	276 25	118 12	394 37
" " rafts	51	1,892							51	1,892	1,943	2 25	85 46	87 71
Masts, spars, and telegraph poles, in vessels	66								66		66	2 48		2 48
Masts, spars, and telegraph poles, in rafts		16,107								16,107	16,107		402 05	402 05
Railway ties, in vessels	57								57		57	1 14		1 14
" " rafts														
Saw logs	262	7,706							262	7,706	7,968	6 00	175 72	181 72
Staves and headings, barrel		48								48	48		0 96	0 96
" " pipe														
" " W. India														
Staves, salt barrel														
Shingles	3	18							3	18	21	0 80	2 93	3 73
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels	264	91							264	91	355	9 90	1 38	11 28
" " rafts	80	3,455							80	3,455	3,535	2 00	86 50	88 50
Traverses		1,200								1,200	1,200		7 42	7 42
Woodenware and wood partly manufactured	34	5							34	5	39	6 00	1 00	7 00
Total freight paying tolls	71,978	417,619	49	620	398	962	7,562	13,332	79,987	432,533	512,520	3,865 19	19,891 42	23,756 61

Free articles having paid full tolls on the Welland Canal:													
Corn	.....	2,648	.....	.....	.....	.....	.....	1,802	.....	4,450	4,450		
Coal, free, per Order in Council.	73,797	.....	.....	.....	.....	.....	20,619	.....	94,416	.....	94,416		
Free articles for canal construction, O. C., 1884:													
Stone, wrought	.....	10,341	.....	.....	.....	.....	.....	.....	.....	10,341	10,341		
Merchandise	.....	20	.....	.....	.....	.....	.....	.....	.....	20	20		
Lumber, sawn, in vessels	.....	143	.....	.....	.....	.....	.....	.....	.....	143	143		
Railway ties "	.....	68	.....	.....	.....	.....	.....	.....	.....	68	68		
Coal	.....	1,100	.....	.....	.....	.....	.....	2,372	.....	3,472	3,472		
Grand total, freight...	145,775	431,939	49	620	398	962	28,181	17,506	174,403	451,027	625,430		
Total way tolls on vessels												5,090 45	2,488 59	7,579 04
" " passengers												441 15	766 78	1,208 29
" " free goods											$6,880 48	.....	.....	.....
Total way tolls												9,397 15	23,146 79	32,543 94

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

APPENDIX A—*Continued.*

No. (A) 7.—GENERAL STATEMENT showing the Quantity of each Article transported on the Ottawa Canals, and the Amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples		72								72	72	4 30
Agricultural products not enumerated, vegetable		25								25	25	1 58
" " " animal		2,743								2,743	2,743	248 36
Agricultural implements	1	5							1	5	6	1 00
Barley		40								40	40	3 75
Bricks	206	150							206	150	356	13 12
Bones		6								6	6	0 48
Brimstone												
Buckwheat		59								59	59	5 42
Cement and water lime		180								180	180	3 60
Clay, lime and sand	135	2,505							135	2,505	2,640	60 17
Coal												
Corn												
Cattle	3	902							3	902	905	70 39
Cotton (raw)												
Crockery and earthenware												
Dye wood and dye stuffs												
Fish		3								3	3	0 22
Flax and hemp												
Flour		41								41	41	3 89
Furniture	5	23							5	23	28	3 68
Gypsum												
Glass (all kinds)												
Hay (pressed)	5	229							5	229	234	20 71
Hogs		116								116	116	8 75
Horses	23	259							23	259	282	12 34
Hides and skins, horns and hoofs		13								13	13	1 18
Ice												

Iron, railway																
" pig																
" all other	2	29											2	29	31	2 75
Iron ore																
Kryolite chemical ore and other ore, except iron																
Lard and lard oil		6												6	6	0 28
Meal, all kinds		9												9	9	0 66
Meats, other than pork		3												3	3	0 30
Marble																
Manilla																
Molasses																
Nails	1												1		1	0 14
Oats		2,158												2,158	2,158	182 06
Oil (in barrels)																
Oil cake		2												2	2	0 20
Pease		330												330	330	26 00
Potatoes		191												191	191	12 91
Pork		13												13	13	0 92
Paint	1												1		1	0 05
Pitch and tar		13												13	13	2 47
Rags		113												113	113	20 57
Rye		10												10	10	0 98
Flax seed																
Rosin																
Salt		1												1	1	0 10
Stone intended for cutting																
" wrought																
" not suitable for cutting, unwrought																
Seeds, all kinds	1	3											1	3	4	0 24
Sheep		381												381	381	32 47
Soda ash																
Steel																
Sugar	2												2		2	0 28
Spirits, beer, &c		1												1	1	0 19
Tobacco (raw)														5	5	0 30
Tallow		5														
Tin																
Turpentine																
Wheat		225												225	225	21 94
White lead																
Whiting																
Wool		16												16	16	1 60
All other goods and merchandise not enumerated	9	434											9	434	443	71 46
Bark																
Barrels, empty		28												28	28	3 29
Boat knees																
Floats	300	29,565											300	29,565	29,865	245 43
Firewood, in vessels	135	20,457		779									135	21,236	21,371	828 95
" rafts		3,598												3,598	3,598	30 20
Hoops		2												2	2	0 24

No. (A) 7.—GENERAL STATEMENT showing the Quantity of each Article transported on the Ottawa Canals, and the Amount of Revenue collected, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Hop poles												
Lumber, sawn, in vessels	59	386,874		54,525					59	441,399	441,458	30,864 91
" " rafts		829								829	829	7 21
Masts, spars, and telegraph poles, in vessels												
" " " rafts		20								20	20	0 25
Railway ties, in vessels		2,547		569						3,116	3,116	464 26
" " rafts												
Saw logs	513	7,825							513	7,825	8,338	175 84
Staves and headings, barrel												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles		86								86	86	17 59
Split posts and fence rails, in vessels												
" " rafts												
Timber, square, in vessels		1,160								1,160	1,160	12 18
" " rafts		3,060								3,060	3,060	38 75
Traverses												
Woodenware and wood partly manufactured												
Total freight paying tolls	1,401	467,365		55,873					1,401	523,238	524,639	33,530 91
Free per Order in Council, 27th June, 1890.												
Floats		17,200								17,200	17,200	
Firewood, in rafts		150								150	150	
Lumber, sawn, in rafts		95								95	95	
Timber, square, in rafts		4,540								4,540	4,540	
Saw logs		3,362								3,362	3,362	
Freight, grand total	1,401	492,712		55,873					1,401	548,585	549,986	

Total tolls on vessels		3,214 82
" passengers		175 43
" free goods	$280 07	
Other receipts		8 00
Total revenue, exclusive of hydraulic rents		36,928 62

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

APPENDIX A—*Continued.*

No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the Chambly Canal, and the Amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total tons.	Amount of Tolls.
	Up	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples		812						81		893	893	87 64
Agricultural products not enumerated, vegetable												
" " " animal												
Agricultural implements												
Barley												
Bricks										680	680	68 00
Bones			298					680	298		298	29 80
Brimstone			7,029					923	7,029	923	7,952	795 20
Buckwheat												
Cement and water lime	4							143	4	143	147	9 70
Clay, lime and sand	590	64						4,175	590	4,239	4,829	548 59
Coal	24							79,355	24	79,355	79,379	7,847 93
Corn												
Cattle	4	126							4	126	130	4 59
Cotton (raw)												
Crockery and earthenware		1						4		5	5	0 50
Dye woods and dye stuffs								10		10	10	1 00
Fish												
Flax and hemp												
Flour	460								460		460	15 56
Furniture												
Gypsum												
Glass (all kinds)												
Hay (pressed)	23	3,491							23	3,491	3,514	127 64
Hogs												
Horses	9	41							9	41	50	2 20
Hides and skins, horns and hoofs												
Ice												
Iron, railway												

" pig								160		160	160	16	00
" all other	70	1						2,054	70	2,055	2,125	232	09
Iron ore													
Kyrolite chemical ore and other ore, except iron													
Lard and lard oil		4								4	4	0	40
Meal, all kinds													
Meats, other than pork													
Marble													
Manilla													
Molasses	8								8		8	0	27
Nails													
Oats	4	3,890							4	3,890	3,894	132	52
Oil (in barrels)		2						46		48	48	4	77
Oil cake													
Pease	1	375							1	375	376	12	67
Potatoes	9	10	4						13	10	23	1	48
Pork													
Paint								6		6	6	0	60
Pitch and tar		3						287		290	290	44	80
Rags													
Rye													
Flax seed													
Rosin								2,384		2,384	2,384	265	57
Salt	160							487	160	487	647	54	08
Stone intended for cutting													
" wrought													
" not suitable for cutting, unwrought													
Seeds, all kinds	9								9		9	0	34
Sheep		54								54	54	2	06
Soda ash		29								29	29	2	90
Steel													
Sugar													
Spirits, beer, &c		2								2	2	0	20
Tobacco (raw)													
Tallow													
Tin													
Turpentine		21						238		259	259	25	90
Wheat	1								1		1	0	04
White lead													
Whiting													
Wool													
All other goods and merchandise not enumerated	923	340	3,003					2,456	3,926	2,796	6,722	539	70
Bark													
Barrels, empty		6						3		9	9	1	34
Boat knees													
Floats													
Firewood, in vessels	258	930	127,004						127,262	930	128,192	4,256	31
" rafts													
Hoops													
Hop poles													

No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the Chambly Canal, and the Amount of Revenue collected, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total.		Total tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Lumber, sawn, in vessels	3,811	70	22,725						26,536	70	26,606	1,568 08
" " rafts												
Masts, spars and telegraph poles, in vessels												
" " rafts												
Railway ties, in vessels			1,120						1,120		1,120	89 47
" rafts												
Saw logs												
Staves and headings, barrel												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles	17								17		17	5 34
Split posts and fence rails, in vessels	4								4		4	0 60
" " rafts												
Timber, square, in vessels												
" rafts												
Traverses												
Woodenware and wood partly manufactured												
Total freight paying tolls	6,389	10,272	161,183				93,492		167,572	103,764	271,336	16,795 88
Total tolls on vessels												2,477 99
" passengers												52 19
Total revenue exclusive of hydraulic rents												19,326 06

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal and the Amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples	1	115							1	115	116	2 83
Agricultural products not enumerated, vegetable	1	1							1	1	2	0 06
" animal	126	499							126	499	625	17 74
Agricultural implements	23	54							23	54	77	8 46
Barley	4								4		4	0 10
Bricks	103	61							103	61	164	4 07
Bones	3								3		3	0 08
Brimstone												
Buckwheat	5	105							5	105	110	3 20
Cement and water lime	643	20							643	20	663	16 68
Clay, lime and sand	5,563	18							5,563	18	5,581	130 79
Coal		1,665						9,144		10,809	10,809	400 04
Corn	3	90							3	90	93	2 34
Cattle		2								2	2	0 06
Cotton (raw)												
Crockery and earthenware	10	24							10	24	34	3 31
Dye wood and dye stuffs												
Fish	12								12		12	0 40
Flax and hemp												
Flour	101	234							101	234	335	8 71
Furniture	7	21							7	21	28	2 52
Gypsum												
Glass (all kinds)	41	6							41	6	47	4 26
Hay (pressed)	86								86		86	2 05
Hogs												
Horses	8	9							8	9	17	0 51
Hides and skins, horns and hoofs	5	1							5	1	6	0 16
Ice		40								40	40	0 67
Iron, railway												
" pig	6								6		6	0 28

No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Iron, all other	388	26							388	26	414	11 73
Iron ore												
Kyrolite chemical ore and other ore, except iron		20								20	20	1 00
Lard and lard oil	45	7							45	7	52	1 26
Meal, all kinds		28								28	28	0 67
Meats, other than pork												
Marble												
Manilla	7	1							7	1	8	0 70
Molasses	112								112		112	9 80
Nails	93	1							93	1	94	10 04
Oats	244	1,149							244	1,149	1,393	71 90
Oil (in barrels)	84	42							83	42	125	12 18
Oil cake		1								1	1	0 03
Pease		3								3	3	0 07
Potatoes	21	36							21	36	57	1 65
Pork	75	21							75	21	96	2 61
Paint	23								23		23	2 67
Pitch and tar	18	1							18	1	19	1 70
Rags	3	13							3	13	16	1 42
Rye		8								8	8	0 38
Flax seed												
Rosin	2								2		2	0 18
Salt	931	328							931	328	1,259	33 77
Stone intended for cutting	2								2		2	0 05
" wrought												
" not suitable for cutting, unwrought	23								23		23	0 28
Seeds, all kinds	10	2							10	2	12	0 30
Sheep												
Soda ash	3								3		3	0 26
Steel	12								12		12	0 29
Sugar	436	36							436	36	472	42 54
Spirits, beer, &c.	41	20							41	20	61	5 45
Tobacco (raw)	4								4		4	0 10
Tallow												

Tin	6							6		6	0	54
Turpentine												
Wheat	3	261						3	261	264	6	16
White lead	10	1						10	1	11	0	99
Whiting	4							4		4	0	36
Wool												
All other goods and merchandise not enumerated	723	394	5				5	728	399	1,127	115	67
Bark	4							4		4	0	10
Barrels, empty	7	10						7	10	17	1	12
Boat knees												
Floats	380	40						380	40	420	17	85
Firewood, in vessels	4,980	528						4,980	528	5,508	101	05
" rafts	12							12		12	0	26
Hoops												
Hop poles	42							42		42	6	00
Lumber, sawn, in vessels	1,811	3,437	6,734	9,106				8,545	12,543	21,088	1,880	93
" rafts	468							468		468	44	00
Masts, spars and telegraph poles, in vessels												
" " rafts												
Railway ties, in vessels	1,427		544					1,971		1,971	220	28
" rafts	343							343		343	36	50
Saw logs		75							75	75	1	70
Staves and headings, barrel												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles	119	42						119	42	161	28	00
Split posts and fence rails, in vessels	4	2						4	2	6	0	13
" " rafts												
Timber, square, in vessels												
" rafts	60							60		60	1	12
Traverses	80							80		80	0	51
Woodenware and wood partly manufactured												
Total freight paying tolls	19,810	9,498	7,283	9,106			9,149	27,093	27,753	54,846	3,286	42
Coal, free, per Order in Council	100							100		100		
Grand total freight	19,910	9,498	7,283	9,106			9,149	27,193	27,753	54,946		

Total tolls on vessels		1,396 49
" passengers		111 10
" free coal	$2.68	
Wharfage and storage		8 44
Other receipts		120 32
Total revenue, exclusive of hydraulic rents		4,922 77

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 10.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal, and the amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples	18	1							18	1	19	0 19
Agricultural products, not enumerated, vegetable	133								133		133	1 33
" " animals	9								9		9	0 09
Agricultural implements	4								4		4	0 04
Barley												
Bricks												
Bones												
Brimstone												
Buckwheat												
Cement and water lime	50	967							50	967	1,017	10 17
Clay, lime and sand		894								894	894	8 94
Coal	308	37,233							308	37,233	37,541	375 41
Corn												
Cattle	38								38		38	0 38
Cotton (raw)												
Crockery and earthenware	2								2		2	0 02
Dye wood and dye stuffs												
Fish	64	1,607							64	1,607	1,671	16 71
Flax and hemp												
Flour	1,827	61					289		2,116	61	2,177	21 77
Furniture												
Gypsum		1,119								1,119	1,119	11 19
Glass (all kinds)												
Hay (pressed)	1,319	5							1,319	5	1,324	13 24
Hogs												
Horses												
Hides and skins, horns and hoofs												
Ice												
Iron, railway	1						20		21		21	0 21

" pig													
" all other													
" ore													
Kryolite chemical ore and other ore, except iron													
Lard and lard oil													
Meal, all kinds	423	4					101		524	4	528	5	28
Meats, other than pork	4								4		4	0	04
Marble													
Manilla													
Molasses	142	6							142	6	148	1	48
Nails	4								4		4	0	04
Oats	878	16							878	16	894	8	94
Oil (in barrels)	73	29					14		87	29	116	1	16
Oil cake													
Pease													
Potatoes	1,317	24							1,317	24	1,341	13	41
Pork	15	4							15	4	19	0	19
Paint	1								1		1	0	01
Pitch and tar													
Rags													
Rye													
Flax seed													
Rosin													
Salt	423	48							423	48	471	4	71
Stone intended for cutting		75					4		4	75	79	0	79
" wrought		3,250								3,250	3,250	32	50
" not suitable for cutting, unwrought		3,390								3,390	3,390	33	90
Seeds, all kinds													
Sheep													
Soda ash	2								2		2	0	02
Steel													
Sugar	51								51		51	0	51
Spirits, beer, &c	22								22		22	0	22
Tobacco (raw)													
Tallow	9								9		9	0	09
Tin	28								28		28	0	28
Turpentine	3								3		3	0	03
Wheat													
White lead	3								3		3	0	03
Whiting													
Wool													
All other goods and merchandise not enumeratad	1,895	42					314		2,209	42	2,251	22	51
Bark													
Barrels, empty		14								14	14	0	14
Boat knees	7								7		7	0	07
Floats													
Fire wood, in vessels	203	421							203	421	624	6	24
" rafts													
Hoops													
Hop poles													

10—4½

No. (A) 10.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts
Lumber, sawn, in vessels	4,907	47							4,907	47	4,954	49 54
" " rafts	1								1		1	0 01
Masts, spars, and telegraph poles, in vessels	20	23							20	23	43	0 43
" " " rafts												
Railway ties, in vessels												
" rafts												
Saw logs												
Staves and headings, barrels												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles												
Split posts and fence rails, in vessels	30	6							30	6	36	0 36
" " rafts												
Timber, square in vessels	178	35							178	35	213	2 13
" rafts												
Traverses												
Woodenware and wood partly manufactured	15								15		15	0 15
Total freight paying tolls	14,427	49,321					742		15,169	49,321	64,490	644 90
Total tolls on vessels												2,231 42
Other receipts												8 00
Total receipts												2,884 32

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported on the Trent Valley Canals, and the Amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples												
Agricultural products not enumerated, vegetable												
" " " animal												
Agricultural implements		1								1	1	0 03
Barley												
Bricks	10	237							10	237	247	2 77
Bones												
Brimstone												
Buckwheat												
Cement and water lime												
Clay, lime and sand												
Coal												
Corn												
Cattle	104	2							104	2	106	1 06
Cotton (raw)												
Crockery and earthenware												
Dye wood and dye stuffs												
Fish												
Flax and hemp												
Flour												
Furniture												
Gypsum												
Glass (all kinds)												
Hay (pressed)												
Hogs	136								136		136	1 36
Horses	2	4							2	4	6	0 06
Hides and skins, horns and hoofs												
I												
Iron railway												

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported on the Trent Valley Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Iron, pig												
" all other												
" ore												
Kryolite chemical ore and other ore, except iron												
Lard and lard oil												
Meal, all kinds												
Meats, other than pork												
Marble												
Manilla												
Molasses												
Nails												
Oats	3								3		3	0 03
Oil (in barrels)												
Oil cake												
Pease												
Potatoes	2								2		2	0 02
Pork												
Paint												
Pitch and tar												
Rags												
Rye												
Flax seed												
Rosin												
Salt												
Stone intended for cutting												
" wrought												
" not suitable for cutting, unwrought												
Seeds, all kinds												
Sheep	1								1		1	0 01
Soda ash												
Steel												
Sugar												
Spirits, beer, &c.												
Tobacco (raw)												

Tallow												
Tin												
Turpentine												
Wheat	417								417		417	4 17
White lead												
Whiting												
Wool												
All other goods and merchandise not enumerated	31	120							31	120	151	4 53
Bark	36								36		36	1 40
Barrels, empty												
Boat knees												
Floats	1,304	3,418							1,304	3,418	4,722	27 50
Firewood, in vessels	13,985	1,806							13,985	1,806	15,791	166 75
" rafts												
Hoops												
Hop poles												
Lumber, sawn, in vessels	1,161	398							1,161	398	1,559	27 58
" " rafts	37	66							37	66	103	6 00
Masts, spars and telegraph poles, in vessels												
" " rafts												
Railway ties, in vessels	13								13		13	0 50
" rafts	291								291		291	11 50
Saw logs	3,383	448							3383	448	3,831	33 57
Staves and headings, barrel												
" " pipe												
" " West India												
Staves, salt barrel												
Shingles	251	9							251	9	260	22 63
Split posts and fence rails, in vessels												
" " rafts												
Timber, square, in vessels												
" rafts												
Traverses												
Woodenware and wood partly manufactured												
Total freight paying tolls	21,167	6,509							21,167	6,509	27,676	311 47

Total tolls on vessels	589 76
" passengers	193 40
Other receipts	82 00
Total revenue, exclusive of hydraulic rents	1,176 63

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

APPENDIX A—*Continued.*

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported on the Murray Canal, and the Amount of Revenue collected during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Ashes, pot and pearl												
Apples	204	82							204	82	286	5 49
Agricultural products not enumerated, vegetable	18	102							48	102	150	3 19
" " " animal		1								1	1	0 02
Agricultural implements		1								1	1	0 03
Barley	300	344							300	344	644	12 10
Bricks	147								147		147	2 79
Bones												
Brimstone												
Buckwheat	36	118							36	118	154	2 90
Cement and water lime	268	14	27						295	14	309	5 86
Clay, lime and sand												
Coal	80	660						549	80	1,209	1,289	24 21
Corn	12								12		12	0 23
Cattle												
Cotton (raw)												
Crockery and earthenware	12	24							12	24	36	0 92
Dye wood and dye stuffs												
Fish	1								1		1	0 02
Flax and hemp	6								6		6	0 12
Flour		9						20		29	29	0 55
Furniture	161	18	5					1	166	19	185	4 88
Gypsum												
Glass (all kinds)	41								41		41	1 03
Hay (pressed)												
Hogs												
Horses	6								6		6	0 12
Hides and skins, horns and hoofs												
Ice												
Iron, railway	1								1		1	0 02

" pig		253							253	253	4 75		
" all other	92	302	36				280	128	582	710	13 37		
Iron ore													
Kryolite chemical ore and other ore, except iron													
Lard and lard oil		21							21	21	0 40		
Meal, all kinds													
Meats, other than pork													
Marble													
Manilla													
Molasses	4							4		4	0 10		
Nails	7	2	14					21	2	23	0 59		
Oats	60	102						60	102	162	3 05		
Oil (in barrels)	34	128	10					44	128	172	4 32		
Oil cake													
Pease	72	943						72	943	1,015	19 10		
Potatoes	69							69		69	1 32		
Pork													
Paint	17		8					25		25	0 65		
Pitch and tar	10							10		10	0 25		
Rags	32	8						32	8	40	1 00		
Rye	28	187						28	187	215	4 07		
Flax seed	1							1		1	0 02		
Rosin													
Salt	58						15	58	15	73	1 39		
Stone intended for cutting													
" wrought	16							16		16	0 40		
" not suitable for cutting, unwrought	300	15				53		353	15	368	3 68		
Seeds, all kinds	100	6	3					103	6	109	2 07		
Sheep													
Soda ash	309		5					314		314	7 86		
Steel	29							29		29	0 55		
Sugar	752	18	10					762	18	780	19 54		
Spirits, beer, &c	12	38	7					19	38	57	1 43		
Tobacco (raw)													
Tallow													
Tin	7							7		7	0 18		
Turpentine													
Wheat	48	272						48	272	320	6 06		
White lead	9							9		9	0 23		
Whiting	113							113		113	2 83		
Wool	4							4		4	0 08		
All other goods and merchandise not enumerated	1,660	1,599	5				16	1,665	1,615	3,280	82 25		
Bark													
Barrels, empty	9							9		9	23		
Boat knees													
Floats													
Firewood, in vessels	255		195					450		450	3 76		
" rafts													
Hoops													
Hop poles													

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported on the Murray Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
												$ cts.
Lumber, sawn, in vessels	241		188						429		429	4 82
" " raft												
Masts, spars, and telegraph poles, in vessels												
" " " " rafts												
Railway ties, in vessels												
" " rafts												
Saw logs												
Staves and headings, barrel												
" " pipe												
" " West India												
" salt barrel												
Shingles			18						18		18	1 50
Split posts and fence rails, in vessels												
" " " " rafts												
Timber, square, in vessels												
" " rafts		3,140								3,140	3,140	39 25
Traverses												
Woodenware and wood partly manufactured												
Total freight paying tolls	5,671	8,407	531				53	881	6,255	9,288	15,543	295 58
Total tolls on vessels												230 21
" passengers												158 22
Total revenue exclusive of hydraulic rents												684 01

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 13.—GENERAL STATEMENT showing the Quantity of each Article transported on the (Canadian) Sault Ste. Marie Canal during the Season of Navigation in 1898.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Ashes, pot and pearl											
Apples	15		809						824		824
Agricultural products not enumerated, vegetable	2								2		2
" " animal											
Agricultural implements											
Barley						6,305				6,305	6,305
Bricks	11		46		228				285		285
Bones											
Brimstone											
Buckwheat											
Cement and water lime	363	8	62						425	8	433
Clay, lime and sand		1,284		3						1,287	1,287
Coal, soft	1,902				526,869	680	42,666	950	571,437	1,630	573,067
" hard					57,513	3,000	6,932		64,445	3,000	67,445
Corn						17,548		3,976		21,524	21,524
Cattle	18		5	3					23	3	26
Cotton (raw)											
Crockery and earthenware	36		14						50		50
Dye wood and dye stuffs											
Fish		30		484		188		16		718	718
Flax and hemp								93		93	93
Flour	41	10,436			5	54,648		28,969	46	94,053	94,099
Furniture	9	3	75			2	1	4	85	9	94
Gypsum											
Glass (all kinds)	12		63						75		75
Hay (pressed)	174	2	220		204	26	55		653	28	681
Hogs	2		2						4		4
Horses	51		15	2		6		1	66	9	75
Hides and skins, horns and hoofs					110	82		3	110	85	195
Ice											

No. (A) 13.—GENERAL STATEMENT showing the Quantity of each Article transported on the (Canadian) Sault Ste. Marie Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Iron, railway	217				6,626		1,905		8,748		8,748
" pig						1,676				1,676	1,676
" all other	508		79		2,644				3,231		3,231
Iron ore						1,831,731				1,831,731	1,831,731
Copper ore						3,489		26		3,515	3,515
Kryolite chemical ore and other ore, except iron											
Lard and lard oil	2		25						27		27
Meal, all kinds	1					14,259		152	1	14,411	14,412
Meats, other than pork	1								1		1
Marble	16								16		16
Manilla											
Molasses	2								2		2
Nails	81		581		1,025				1,687		1,687
Oats	130		42			12,422		1,275	172	13,697	13,869
Oil (in barrels)	17	1	574		3		30	89	624	90	714
Oil cake											
Pease											
Potatoes		26				23	3		3	49	52
Pork	11								11		11
Paint			22						22		22
Pitch and tar											
Rags											
Rye						14,406		1,408		15,814	15,814
Flax seed						18,987		418		19,405	19,405
Rosin											
Salt	656		522		3,448				4,626		4,626
Stone intended for cutting	282		12		2,199				2,493		2,493
" wrought			1						1		1
" not suitable for cutting, unwrought	2				2,280				2,282		2,282
Seeds, all kinds	4								4		4
Sheep			6						6		6
Soda ash											

Steel	1								1		1
Sugar	65		145		380				590		590
Spirits, beer, &c	319		136						455		455
Tobacco (raw)											
Tallow								2		2	2
Tin	25								25		25
Turpentine											
Wheat		94,053		9,655		137,284		51,406		292,398	292,398
White lead	11		3						14		14
Whiting	38								38		38
Wool						700		30		730	730
All other goods and merchandise not enumerated	9,215	196	5,692	24	13,526	4,013	25	340	28,458	4,573	33,031
Bark											
Barrels empty								3		3	3
Boat, knees											
Floats											
Firewood, in vessels		381		2,200		2,212	12	789	12	5,582	5,594
" rafts		81								81	81
Hoops	12								12		12
Hop poles											
Lumber, sawn, in vessels	2,133	599	9			19,950	10		2,152	20,549	22,701
" rafts											
Masts, spars and telegraph poles, in vessels											
" " rafts											
Railway ties, in vessels											
" rafts											
Saw logs	72	1,244	47		1,134	1,053	14		1,267	2,297	3,564
Staves and headings, barrels											
" pipe											
" West India											
Staves, salt barrel											
Shingles	1					2,310		215	1	2,525	2,526
Split posts and fence rails, in vessels											
" " rafts											
Timber, square, in vessels					400	136		1,200	400	1,336	1,736
" rafts	43								43		43
Traverses											
Woodenware and wood partly manufactured	2		114						116		116
Total freight	16,503	108,344	9,321	12,371	618,594	2,147,136	51,653	91,365	696,071	2,359,216	3,055,287

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

APPENDIX

(No. (A) 14.—STATEMENT of Traffic on the undermentiond Canals, and

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Class No. 1.		$ cts.		$ cts.		$ cts.
Canadian vessels, steam	382,698	4,521 40	702,438	4,608 39	74,075	227 49
United States vessels, steam	705,765	10,585 21	56,180	368 60	222	3 02
Canadian vessels, sail	135,880	2,868 34	1,628,762	18,147 99	23,638	251 09
United States vessels, sail	188,544	4,253 84	127,554	1,624 24	154,771	1,996 39
Total, Class No. 1	1,412,887	22,228 79	2,514,934	24,749 22	252,706	2,477 99
Class No. 2.	No.		No.		No.	
Passengers	33,267	555 17	61,656	2,955 09	3,260	52 19
Class No. 3.	Tons.		Tons.		Tons.	
Bricks	43	4 86	8,236	425 49	680	68 00
Brimstone			770	78 23	7,952	795 20
Cement and water lime	353	61 24	16,682	1,553 00	147	9 70
Clay, lime and sand	594	23 48	24,043	1,027 98	4,829	548 59
Fish	88	13 20	67	6 02		
Gypsum			1,236	16 05		
Iron, railway	1,444	288 80	808	67 34		
" pig	4,335	840 63	1,781	204 77	160	16 00
" all other	7,387	1,444 79	7,503	601 94	2,125	232 09
Steel	7,607	1,512 25	1,739	188 57		
Salt	799	158 34	2,667	294 42	647	54 08
Stone, for cutting	554	110 80	2,150	135 83		
Apples	250	7 64	1,776	251 67	893	87 64
Barley	12,286	1,228 60	2,536	213 59		
Buckwheat			3,051	192 83		
Corn	437,861	43,783 35	186,888	8,820 24		
Cotton, raw			10	0 98		
Flax and hemp	135	20 25	39	2 78		
Flour	5,578	990 84	25,441	1,924 19	460	15 56
Hay, pressed			722	44 82	3,514	127 64
Meals, all kinds	22,626	4,525 20	2,917	203 54		
Oil cake			4,007	300 49		
Oats	17,502	1,750 00	49,073	2,164 22	3,894	132 52
Pease	306	30 52	19,956	1,699 04	376	12 67
Potatoes			137	13 31	23	1 48
Rye	16,127	1,612 70	10,488	815 47		
Flax seed	5,696	569 60	13,081	645 05		
Seeds, all kinds	118	17 69	5,531	255 72	9	0 34
Tobacco, raw			17	1 18		
Wheat	207,647	20,710 95	90,181	4,804 95	1	0 04
All other agricultural products, vegetable	461	31 95	2,549	277 23		
Bones			18	1 32	298	29 80
Cattle			334	25 30	130	4 59
Hogs						
Hides and skins, horns and hoofs	93	13 95	10	1 36		
Horses	8	1 14	695	44 05	50	2 20
Lard and lard oil	3,679	735 40	1,574	124 57	4	0 40
Meats, other than pork	23	3 19	346	26 08		
Pork	1,282	255 85	2,002	151 71		
Sheep			73	5 51	54	2 06
Tallow	534	98 05	294	22 06		
Wool	89	17 80	38	5 59		
All other agricultural products, animal			4,293	492 23		
Total, Class No. 4	755,505	80,863 06	495,749	28,139 72	26,246	2,140 60

SESSIONAL PAPER No. 10

A—*Continued.*

the Amount of Tolls collected during the Season of Navigation in 1898.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.
177,944	184 33	148,262	660 89	114,429	776 32	31,856	638 70	76,662	426 51
608	3 03	5	0 25	692	10 38	342	6 84	.....	.....
10,848	39 60	143,405	1,957 66	29,657	440 35	76,662	1,533 88	40,769	163 25
207	3 25	24,966	595 48	8,308	169 44	2,600	52 00	.....	.....
189,607	230 21	316,638	3,214 28	153,086	1,396 49	111,460	2,231 42	117,431	589 76
No.		No.		No.		No.		No.	
13,873	158 22	13,076	175 43	4,830	111 10	.....	.....	31,436	193 40
Tons.		Tons.		Tons.		Tons.		Tons.	
147	2 79	356	13 12	164	4 07	.....	.....	247	2 77
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
309	586	180	3 60	663	16 68	1,017	10 17	.....	.....
.....	.....	2,640	60 17	5,581	130 79	894	8 94	.....	.....
1	0 02	3	0 22	12	0 40	16 71	16 71	.....	.....
.....	.....	.....	.....	.....	.....	1,119	11 19	.....	.....
1	0 02	.....	.....	.....	.....	21	0 21	.....	.....
253	4 75	.....	.....	6	0 28	.....	.....	.....	.....
710	13 37	31	2 75	414	11 73	.....	.....	.....	.....
29	0 55	.....	.....	12	0 29	.....	.....	.....	.....
73	1 39	1	0 10	1,259	33 77	471	4 71	.....	.....
.....	.....	.....	.....	2	0 05	79	0 79	.....	.....
286	5 49	72	4 30	116	2 83	19	0 19	.....	.....
644	12 10	40	3 75	4	0 10	.....	.....	.....	.....
154	2 90	59	5 42	110	3 20	.....	.....	.....	.....
12	0 23	.....	.....	93	2 34	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	0 12	.....	.....	.....	.....	.....	.....	.....	.....
29	0 55	41	3 89	335	8 71	2,177	21 77	.....	.....
.....	.....	234	20 71	86	2 05	1,324	13 24	.....	.....
.....	.....	9	0 66	28	0 67	.....	.....	.....	.....
.....	.....	2	0 20	1	0 03	528	5 28	.....	.....
162	3 05	2,158	182 06	1,393	71 90	894	8 94	3	0 03
1,015	19 10	330	26 00	3	0 07	.....	.....	.....	.....
69	1 32	191	12 91	57	1 65	1,341	13 41	2	0 02
215	4 07	10	0 98	8	0 38	.....	.....	.....	.....
1	0 02	.....	.....	.....	.....	.....	.....	.....	.....
109	2 07	4	0 24	12	0 30	.....	.....	.....	.....
.....	.....	.....	.....	4	0 10	.....	.....	.....	.....
320	6 06	225	21 94	264	6 16	.....	.....	417	4 17
150	3 19	25	1 58	2	0 06	133	1 33	.....	.....
.....	.....	6	0 48	3	0 08	.....	.....	.....	.....
.....	.....	905	70 39	2	0 06	38	0 38	106	1 06
.....	.....	116	8 75	.....	.....	.....	.....	136	136
.....	.....	13	1 18	6	16	.....	.....	.....	.....
6	0 12	282	12 34	17	0 51	.....	.....	6	0 06
21	0 40	6	0 28	52	1 26	.....	.....	.....	.....
.....	.....	3	0 30	.....	.....	4	0 04	.....	.....
.....	.....	13	0 92	96	2 61	19	0 19	.....	.....
.....	.....	321	32 47	.....	.....	2	0 02	1	0 01
.....	.....	5	30	.....	.....	9	0 09	.....	.....
4	0 08	16	160	.....	.....	.....	.....	.....	.....
1	0 02	2,743	248 36	625	17 74	9	0 09	.....	.....
4,727	89 64	11,100	741 97	11,430	321 03	11,769	117 69	918	9 48

No. (A) 14.—STATEMENT of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls	Tons.	Tolls.
Class No. 4.		$ cts.		$ cts.		$ cts.
Ashes, pot and pearl	96	18 05	22	4 40		
Agricultural implements			72	10 71		
Crockery and earthenware	20	3 00	139	25 34	5	0 50
Dye woods and dye stuffs			30	3 75	10	1 00
Furniture	14	1 56	1,401	208 03		
Glass, all kinds	109	18 92	616	115 46		
Marble	205	30 75	3	0 39		
Manilla	119	17 85	11	1 00		
Molasses	95	17 05	1,302	99 72	8	0 27
Nails	127	13 44	3,079	365 72		
Oil, in barrels	1,296	256 59	1,230	177 75	48	4 77
Paint	25	1 17	531	79 37	6	0 60
Pitch and tar	11	1 26	619	71 61	290	44 80
Rags			264	41 65		
Rosin			1,748	104 65	2,384	265 57
Soda ash	10	0 20	1,365	269 89	29	2 90
Sugar	5,421	801 12	10,675	1,693 57		
Stone, wrought			637	68 64		
Tin	40	5 22	2,014	390 49		
Turpentine	1	0 15	234	12 15	259	25 90
White lead			131	16 17		
Whiting	1	0 02	549	104 57		
Whisky and all other spirits	365	52 54	521	93 09	2	0 20
Merchandise, not enumerated	55,922	8,268 08	17,083	2,309 92	6,722	539 70
Total, Class No. 4	63,877	9,506 97	44,276	6,268 04	9,763	886 21
Class. No. 2.						
Bark						
Barrels, empty	21	3 20	295	26 32	9	1 34
Boat knees						
Floats			1,298	23 04		
Fire wood, in vessels	6,412	356 86	8,868	152 40	128,192	4,256 31
" rafts						
Lumber, sawn, in vessels	80,574	14,411 75	16,593	468 92	26,606	1,568 08
" rafts			1,943	87 71		
Hoops						
Railway ties, in vessels	190	30 04	57	1 14	1,120	89 47
" rafts						
Masts, spars and telegraph poles, in vessels			66	2 48		
Masts, spars and telegraph poles, in rafts			16,107	402 05		
Square timber, in vessels	49,098	7,308 85	373	11 82		
" rafts	30	0 85	3,535	88 50		
Woodenware and wood, partly manufactured	17	6 80	69	19 00		
Shingles	12	7 28	21	3 73	17	5 34
Split posts and fence rails, in vessels					4	0 60
" " rafts						
Saw-logs	3,675	153 54	7,968	181 72		
Staves and headings, barrel	40	3 20				
" " pipe						
" " West India						
" " salt barrel			48	0 96		
Traverses			1,500	7 42		
Hop poles						
Total, Class No. 5	140,069	22,282 37	58 61	1,477 21	155,948	5,921 14

Canals, and the Amount of Tolls collected, &c.—*Continued.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.
								1	0 03
1	0 03	6	1 00	77	8 46	4	0 04		
36	0 92			34	3 31	2	0 02		
185	4 88	28	3 68	28	2 52				
41	1 03			47	4 26				
				8	0 70				
4	0 10			112	9 80	148	1 48		
23	0 59	1	0 14	94	10 04	4	0 04		
172	4 32			125	12 18	116	1 16		
25	0 65	1	0 05	23	2 67	1	0 01		
10	0 25	13	2 47	19	1 70				
40	1 00	113	20 57	16	1 42				
				2	0 18				
314	7 86			3	0 26				
780	19 54	2	0 28	472	42 54	51	0 51		
16	0 40					3,250	32 50		
7	0 18			6	0 54	28	0 28		
						3	0 03		
9	0 23			11	0 99	3	0 03		
113	2 83			4	0 36				
57	1 43	1	0 19	61	5 45	22	0 22		
3,280	82 25	443	71 46	1,127	115 67	2,251	22 51	151	4 53
5,113	128 49	608	99 84	2,269	223 05	5,883	58 83	152	4 56
				4	0 10			36	1 40
9	0 23	28	3 29	17	1 12	14	0 14		
						7	0 07		
		29,865	245 43	420	17 85			4,722	27 50
450	3 76	21,371	828 95	5,508	101 05	624	6 24	15,791	166 75
		3,598	30 20	12	0 26				
429	4 82	441,458	30,864 91	21,088	1,880 93	4,954	49 54	1,559	27 58
		829	7 21	468	44 00	1	0 01	103	6 00
		2	0 24						
		3,116	464 26	1,971	220 28			13	0 50
				343	36 50			291	11 50
						43	0 43		
		20	0 25						
		1,160	12 18			213	2 13		
3,140	39 25	3,060	38 75	60	1 12				
						15	0 15		
18	1 50	86	17 59	161	28 00			260	22 63
				6	0 93	36	0 36		
		8,338	175 84	75	1 70			3,831	33 57
				80	0 51				
				42	6 00				
4,046	49 56	512,931	32,689 10	30,255	2,340 35	5,907	59 07	26,606	297 43

No. (A) 14.—STATEMENT of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Special Class.		$ cts.		$ cts.		$ cts.
Coal	162,336	32,467 20	188,962	27,253 65	79,379	7,847 93
Kryolite or chemical ore	.....	.....	.....	.....	.....	.....
Iron ore	13,433	671 65	.....	.....	.....	.....
Stone, unwrought, not suitable for cutting	421	22 86	468	12 00	.....	.....
Ice	.....	.....	.....	.....	.....	.....
Total, Special Class	176,190	33,161 71	189,430	27,265 65	79,379	7,847 93
Total freight and tolls	1,135,641	168,598 07	787,716	90,854 93	271,336	19,326 06
Timber and other wood, free	.....	.....	3,605	341 32	.....	.....
Wheat, corn, flour, iron, salt, coal, &c., &c., free	4,436	665 40	647,813	61,086 15	.....	.....
Grand Totals (passengers and tonnage of vessels not included)	1,140,077	169,263 47	1,439,134	152,282 40	271,336	19,326 06

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

SESSIONAL PAPER No. 10

Canals, and the Amount of Tolls collected, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.
1,289	24 21	.....	.....	10,809	400 04	37,541	375 41	.....	.....
.....	.....	.....	.....	20	1 00	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
368	3 68	.....	.....	23	0 28	3,390	33 90	.....	.....
.....	.....	.....	.....	40	0 67	.....	.....	.....	.....
1,657	27 89	.....	.....	10,892	401 99	40,931	409 31		
15,543	684 01	524,639	36,920 62	54,846	4,794 01	.....	.....	27,676	1,094 63
.....	.....	25,347	280 07	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	100	2 68	.....	.....	.....	.....
15,543	684 01	549,986	37,200 69	54,946	4,796 69	64,490	2,876 32	27,676	1,094 63

RICHARD DEVLIN.
Compiler of Canal Statistics.

APPENDIX

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned Canals during of each description of property passed through,

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		$ cts.		$ cts.		$ cts.
Vessels of all kinds	1,412,887	22,228 79	2,514,934	24,749 22	252,706	2,477 99
	No.		No.		No.	
Passengers	33,267	555 17	61,656	2,955 09	3,260	52 19
Forest, Produce of Wood.	Tons.		Tons.		Tons.	
Bark						
Boat knees						
Floats			1,298	23 04		
" Free						
Firewood	6,412	356 86	8,688	152 40	128,192	4,256 31
" Free						
Hop and hop poles						
Lumber, sawed	80,574	14,411 75	18,536	556 63	26,606	1,568 08
" Free			3,208			
Masts spars, &c.			16,173	404 53		
Railway ties	190	30 04	57	1 14	1,120	89 47
" Free			68			
Saw logs	3,675	153 54	7,968	181 72		
" Free						
Staves, all kinds	40	3 20	48	0 96		
Shingles	12	7 28	21	3 73	17	5 34
Split posts and rails					4	60
Timber, square	49,128	7,309 70	3,908	100 32		
" Free			329			
Traverses			1,200	7 42		
Total	140,031	22,272 37	61,502	1,431 89	155,939	5,919 80
Farm Stock.						
Cattle			334	25 30	130	4 59
Hogs						
Horses	8	1 14	695	44 05	50	2 20
" Free	1		4			
Sheep			73	5 51	54	2 06
Total	9	1 14	1,106	74 86	234	8 85
Produce of Animals.						
Bones			18	1 32	298	29 80
Horns and hoofs, hides and skins (raw)	93	13 95	10	1 36		
Lard and lard oil	3,679	735 40	1,574	124 57	4	40
" Free	2					
Meats other than pork	23	3 19	346	26 08		
Pork	1,282	255 85	2,002	151 71		
Tallow	534	98 05	294	22 06		
Wool	89	17 80	38	5 59		
Agricultural products not enumerated (animal)			4,293	492 23		
Total	5,702	1,124 24	8,575	824 92	302	30 20

A.—*Continued.*

the Season of Navigation ended December 31, 1898, showing the Total Quantity and the Amount of Tolls collected thereon.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.
189,607	230 21	316,638	3,214 28	153,086	1,396 49	111,460	2,231 42	117,431	589 76
No. 13,873	158 22	No. 13,076	175 43	No. 4,830	111 10	No.	.....	No. 31,436	193 40
Tons.		Tons.		Tons.		Tons.		Tons.	
.....	.....	.....	.....	4	0 10	.....	.....	36	1 40
.....	.....	.....	.....	.....	.....	7	0 07	.....	.....
.....	.....	28,865	245 43	420	17 85	.....	.....	4,722	27 50
.....	.....	17,200	.....	.....	.....	.....	.....	.....	.....
450	3 76	24,969	859 15	5,520	101 31	624	6 24	15,791	166 75
.....	.....	150	.....	.....	.....	.....	.....	.....	.....
.....	.....	2	0 24	42	6 00	.....	.....	.....	.....
429	4 82	442,287	30,872 12	21,556	1,924 93	4,955	49 55	1,662	33 58
.....	.....	95	.....	.....	.....	.....	.....	.....	.....
.....	.....	20	0 25	.....	.....	43	0 43	.....	.....
.....	.....	3,116	464 26	2,314	256 78	.....	.....	304	12 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8,338	175 84	75	1 70	.....	.....	3,831	33 57
.....	.....	3,362	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	1 50	86	17 59	161	28 00	.....	.....	260	22 63
.....	.....	.....	.....	6	0 93	36	0 36	.....	.....
3,140	39 25	4,220	50 93	60	1 12	213	2 13	.....	.....
.....	.....	4,540	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	80	0 51	.....	.....	.....	.....
4,037	49 33	538,250	32,685 81	30,238	2,339 23	5,878	58 78	26,606	297 43
.....	.....	905	70 39	2	0 06	38	0 38	106	1 06
.....	.....	116	8 75	.....	.....	.....	.....	136	1 36
6	0 12	282	12 34	17	0 51	.....	.....	6	0 06
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	381	32 47	.....	.....	2	0 02	1	0 01
6	0 12	1,684	123 95	19	0 57	40	0 40	249	2 49
.....	.....	6	48	3	0 08	.....	.....	.....	.....
.....	.....	13	1 18	6	0 16	.....	.....	.....	.....
21	0 40	6	0 28	52	1 26	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	3	0 30	.....	.....	4	0 04	.....	.....
.....	.....	13	0 92	96	2 61	19	0 19	.....	.....
.....	.....	5	0 30	.....	.....	9	0 09	.....	.....
4	0 08	16	1 60	.....	.....	.....	.....	.....	.....
1	0 02	2,743	248 36	625	17 74	9	0 09	.....	.....
26	0 50	2,805	253 42	782	21 85	41	0 41	.....	.....

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned Canals

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Agricultural Products.		$ cts.		$ cts.		$ cts.
Agricultural products not enumerated, vegetable	461	31 95	2,549	277 23		
" " Free			56			
Apples	250	7 64	1,766	251 67	893	87 64
Barley	12,286	1,228 60	2,536	213 59		
" Free			3,960			
Buckwheat			3,051	192 83		
Cotton			19	0 98		
Corn	437,861	43,783 35	186,888	8,820 24		
" Free			314,948			
Flax and hemp	135	20 25	39	2 78		
" Free			1,841			
Flour	5,578	990 84	25,441	1,924 19	460	15 56
" Free			653			
Hay, pressed			722	44 82	3,514	127 64
Meals, all kinds	22,626	4,525 20	2,917	203 54		
Manilla	119	17 85	11	1 00		
Oats	17,502	1,750 00	49,073	2,164 22	3,894	132 52
" Free			3,975			
Pease	306	30 52	19,956	1,699 04	376	12 67
" Free			260			
Potatoes			137	13 31	23	1 48
Rye	16,127	1,612 70	10,488	815 47		
" Free			15,488			
Seed, flax, clover and grass	5,814	587 29	18,612	909 77	9	34
" " Free	56		3,846			
Tobacco, raw			18	1 18		
Wheat	207,647	20,710 95	90,181	4,804 95	1	0 04
" Free			184,154			
Total	726,768	75,297 14	943,575	22,340 81	9,170	377 89
Manufactures.						
Ashes, pot and pearl	96	18 05	22	4 40		
" " Free			73			
Agricultural implements			72	10 71		
Barrels, empty	21	3 20	295	26 32	9	1 34
Bricks	43	4 86	8,236	425 49	680	68 00
" Free	70					
Cement and water lime	353	61 24	16,682	1,553 00	147	9 70
" " Free	996					
Crockery and earthenware	20	3 00	139	25 34	5	0 50
" " Free	33					
Furniture	14	1 56	1,401	208 03		
Glass of all kinds	109	18 92	616	115 46		
" Free	150		75			
Iron, railway	1,444	288 80	808	67 34		
" pig	4,335	840 63	1,781	204 77	160	16 00
" all other	7,387	1,144 79	7,503	601 94	2,125	232 09
" " Free	699		6,217			
Molasses	95	17 05	1,302	99 72	8	0 27
" Free			55			
Nails	127	13 44	3,079	365 72		
" Free	229					
Oil	1,296	256 59	1,230	177 75	48	4 77
" Free	15		1,141			
Oil cake			4,007	300 49		
Paint	25	1 17	531	79 37	6	0 60

during the Season of Navigation ended December 31, 1898, &c.—*Continued.*

Murray Canal		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.
150	3 19	25	1 58	2	0 06	133	1 33	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
286	5 49	72	4 30	116	2 83	19	0 19	.....	.....
644	12 10	40	3 75	4	0 10	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
154	2 90	59	5 42	110	3 20	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	0 23	.....	.....	93	2 34	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	0 12	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	0 55	41	3 89	335	8 71	2,177	21 77	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	234	20 71	86	2 05	1,324	13 24	.....	.....
.....	.....	9	0 66	28	0 67	528	5 28	.....	.....
.....	.....	.....	.....	8	0 70	.....	.....	.....	.....
162	3 05	2,158	182 06	1,393	71 90	894	8 94	3	0 03
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1,015	19 10	330	26 00	3	0 07	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
69	1 32	191	12 91	57	1 65	1,341	13 41	2	0 02
215	4 07	10	0 98	8	0 38	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
110	2 09	4	0 24	12	0 30	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	4	0 10	.....	.....	.....	.....
320	6 06	225	21 94	264	6 16	.....	.....	417	4 17
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3,172	60 27	3,398	284 44	2,523	101 22	6,416	64 16	422	4 22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	0 03	6	1 00	77	8 46	4	0 04	1	0 03
9	0 23	28	3 29	17	1 12	14	0 14	.....	.....
147	2 79	356	13 12	164	4 07	.....	.....	247	2 77
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
309	5 86	180	3 60	663	16 68	1,017	10 17	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	0 92	.....	.....	34	3 31	2	0 02	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
185	4 88	28	3 68	28	2 52	.....	.....	.....	.....
41	1 03	.....	.....	47	4 26	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	0 02	.....	.....	.....	.....	21	0 21	.....	.....
253	4 75	.....	.....	6	0 28	.....	.....	.....	.....
710	13 37	31	2 75	414	11 73	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	0 10	.....	.....	112	9 80	148	1 48	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	0 59	1	0 14	94	10 04	4	0 04	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
172	4 32	.....	.....	125	12 18	116	1 16	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	2	0 20	1	0 03	.....	.....	.....	.....
25	0 65	1	0 05	23	2 67	1	0 01	.....	.....

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned Canals

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
Manufactures– Concluded.		$ cts.		$ cts.		$ cts.
Paint.....Free	35					
Pitch and tar.	11	1 26	619	71 61	290	44 80
"	37					
Rosin			1,748	104 65	2,384	265 57
Soda ash	10	0 20	1,365	269 89	29	2 90
"Free	88					
Spirits, whiskey, &c.	365	52 54	521	93 09	2	0 20
"Free	98		4			
Steel	7,607	1,512 25	1,739	188 57		
"Free	19		1,351			
Sugar	5,421	801 12	10,675	1,693 57		
"Free	566					
Tin	40	5 22	2,014	390 49		
"Free	237					
White lead			131	16 17		
Turpentine	1	0 15	234	12 15	259	25 90
Whiting	1	0 02	549	104 57		
"Free	93					
Woodenware	17	6 80	69	19 00		
Total	32,203	5,352 86	76,285	7,229 61	6,152	672 64
Merchandise.						
Brimstone, crude			770	78 23	7,952	795 20
Clay, lime and sand	594	23 48	24,043	1,027 98	4,829	548 59
"Free	144		52			
Coal	162,336	32,467 20	188,962	27,253 65	79,379	7,847 93
"Free			98,288			
Dye woods and dye stuffs			30	3 75	10	1 00
Fish	88	13 20	67	6 02		
"Free	9					
Gypsum			1,236	16 05		
Ores, all kinds	13,433	671 65				
Marble	205	30 75	3	0 39		
Rags			264	41 65		
Salt	799	158 34	2,667	294 42	647	54 08
"Free	35		144			
Stone, all kinds	975	133 66	3,255	216 47		
"Free	31		10,341			
All other goods and merchandise, not enumerated	55,922	8,268 08	17,083	2,309 92	6,722	539 70
" " Free	793		886			
Total	235,364	41,766 36	348,091	31,248 53	99,539	9,786 50
Grand totals, passengers and tonnage of vessels not included	1,140,077	168,593 07	1,439,134	90,854 93	271,336	19,326 06

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

during the Season of Navigation ended December 31, 1898, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	$ cts.		$ cts.		$ cts.		$ cts.		$ cts.
10	0 25	13	2 47	19	1 70				
				2	0 18				
314	7 86			3	0 26				
57	1 43	1	0 19	61	5 45	22	0 22		
29	0 55			12	0 29				
780	19 54	2	0 28	472	42 54	51	0 51		
7	0 18			6	0 54	28	0 28		
9	0 23			11	0 99	3	0 03		
						3	0 03		
113	2 83			4	0 36				
						15	0 15		
3,235	72 41	649	30 77	2,395	139 46	1,449	14 49	248	2 80
		2,640	60 17	5,581	130 79	894	8 94		
1,289	24 21			10,809	400 04	37,541	375 41		
				100					
1	0 02	3	0 22	12	0 40	1,671	16 71		
						1,119	11 19		
				20	1 00				
40	1 00	113	20 57	16	1 42				
73	1 39	1	0 10	1,259	33 77	471	4 71		
384	4 08			25	0 33	6,719	67 19		
3,280	82 25	443	71 46	1,167	116 34	2,251	22 51	151	4 53
5,067	112 95	3,200	152 52	18,989	684 09	50,666	506 66	151	4 53
15,543	684 01	549,986	36,920 62	54,946	4,794 01	64,490	2,876 32	27,676	1,094 63

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 16.—STATEMENT showing the Amount of Tolls accrued each month during the Season of Navigation ended December 31, 1898.

Canals and Offices.	January	March.	April.	May.	June.	July.	August.	September	October.	November	December	Total.
WELLAND CANAL.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts	$ cts.
Chippawa			0 25	2 20	4 40	9 01	3 00	0 50		2 50		21 86
Colborne			11,620 63	22,501 10	15,020 32	14,683 17	15,568 51	13,312 52	14,057 25	7,583 25	2,423 06	116,769 81
Dalhousie			3,033 90	7,480 15	7,224 77	6,010 04	8,598 99	6,259 88	6,615 81	4,962 00	594 70	50,780 24
Dunnville			9 21	122 44	112 86	82 79	0 50	2 33	47 28	58 80		436 21
Maitland												
St. Catharines		0 47	37 19	135 77	51 82	74 52	115 30	71 17	48 01	55 70		589 95
Total Welland Canal		0 47	14,701 18	30,241 66	22,414 17	20,859 53	24,286 30	19,646 40	20,768 35	12,662 25	3,017 76	168,598 07
ST. LAWRENCE CANALS.												
Beauharnois			5 38	516 89	1,335 59	2,865 12	2,961 92	3,659 73	3,390 54	1,599 24		16,334 41
Cardinal			2 52	77 46	37 46	45 55	48 66	41 44	59 07	52 55	8 97	373 68
Cornwall			1,248 00	4,853 57	4,146 30	3,986 78	4,665 28	3,422 59	4,205 82	3,322 50	40 76	29,891 60
Kingston			635 89	2,291 01	1,309 66	2,128 83	1,755 55	1,605 60	2,349 62	1,455 49		13,531 65
Lachine			30 83	230 60	250 92	333 01	444 47	434 18	312 74	302 99		2,339 77
Montreal			793 01	4,662 33	4,024 61	4,610 34	4,783 18	3,505 24	3,167 05	2,821 95	16 11	28,383 82
Total St. Lawrence Canals			2,715 63	12,631 86	11,104 54	13,969 66	14,659 06	12,668 78	13,484 84	9,554 72	65 84	90,854 93
CHAMBLY CANAL.												
Chambly				711 98	1,767 33	1,376 12	1,617 40	1,294 59	808 03	295 72		7,871 17
St. Johns				2,364 29	1,642 21	2,032 73	1,117 28	1,579 45	1,529 67	566 02		10,831 65
St. Ours			30 84	48 80	66 99	80 18	76 15	107 05	130 36	82 87		623 24
Total Chambly Canal			30 84	3,125 07	3,476 53	3,489 03	2,810 83	2,981 09	2,468 06	944 61		19,326 06

Ottawa Canals.												
Ottawa			1 75	5,393 20	4,942 17	5,158 80	5,619 78	3,660 68	3,025 95	2,530 40		30,272 73
Carillon				4 98	4 95	10 73	5 95	8 61	3 10	2 29		40 61
Grenville			14 76	402 66	804 80	970 88	602 84	825 10	1,038 29	886 59		5,545 92
St. Anne's			10 62	87 61	159 08	143 12	243 33	190 21	150 26	77 13		1,061 36
Total Ottawa Canals			27 13	5,888 45	5,911 00	6,283 53	6,471 90	4,624 60	4,217 60	3,496 41		36,920 62
Bideau Canal.												
Kingston Mills				73 82	155 58	123 83	155 08	157 25	121 05	38 55		825 16
Ottawa			1 16	374 29	537 31	469 81	604 60	423 06	387 81	598 18		3,396 22
Smith's Falls				67 14	66 85	103 50	131 85	80 01	84 45	38 83		572 63
Total Rideau Canal			1 16	515 25	759 74	697 14	891 53	660 32	593 31	675 56		4,794 01
St. Peter's Canal.												
St. Peter's	3 32	1 98	88 78	311 29	352 47	348 71	440 86	457 35	358 66	326 28	186 62	2,876 32
Trent Valley Canals.												
Bobcaygeon		0 25	9 55	47 00	82 88	68 69	50 83	29 25	37 65	9 14		335 24
Buckhorn			2 47	6 95	27 60	23 27	16 93	15 15	19 50	1 00		112 87
Burleigh			2 64	2 19	8 30	17 05	21 95	4 85	3 69	6 15		66 82
Fenelon Falls			1 40	18 79	34 82	27 69	26 44	22 10	2 60	8 50		142 34
Hastings			0 75	10 65	6 70	3 75	5 50	4 75	7 77	2 95		42 82
Peterborough		0 90	17 42	27 72	64 37	91 77	90 87	57 06	23 10	21 33		394 54
Total Trent Valley Canals		1 15	34 25	113 30	224 67	232 22	212 52	133 16	94 31	49 07		1,094 63
Murray Canal.												
Brighton			38 40	77 39	68 61	100 42	148 42	88 67	97 69	64 41		684 01
Grand Total	3 32	3 60	17,637 35	52,904 27	44,311 73	45,980 24	49,921 42	41,260 37	42,082 82	27,773 31	3,270 22	325,148 65

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

APPENDIX A—*Continued.*

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals during the Season of Navigation ended December 31, 1898, and the amount of Tolls collected thereon.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
WELLAND CANAL.													$ cts.
Canadian vessels, steam	968	101,433	99,905	86,711	2,387	.....	.....	4,082	88,180	192,226	190,472	382,698	4,521 40
" sail	357	26,501	27,993	41,156	148	.....	.....	.....	40,082	67,657	68,223	135,880	2,868 34
Total Canadian	1,325	127,934	127,898	127,867	2,535	.....	.....	4,082	128,262	259,883	258,695	518,578	7,389 74
United States vessels, steam	733	171	.....	78,625	1,810	269,208	220,808	1,078	134,065	349,082	356,683	705,765	10,585 21
" sail	326	3	5	43,113	4,839	32,770	49,148	3,406	55,260	79,292	109,252	188,544	4,253 84
Total United States	1,059	174	5	121,738	6,649	301,978	269,956	4,484	189,325	428,374	465,935	894,309	14,839 05
Grand Total, Welland Canal	2,384	128,108	127,903	249,605	9,184	301,978	269,956	8,566	317,587	688,257	724,630	1,412,887	22,228 79
ST. LAWRENCE CANALS.													
Canadian vessels, steam	3,740	364,611	296,914	18,174	98	.....	.....	.....	22,641	382,785	319,653	702,438	4,608 39
" sail	6,642	839,023	663,407	45,147	180	.....	19	.....	80,986	884,170	744,592	1,628,762	18,147 99
Total Canadian	10,382	1,203,634	960,321	63,321	278	.....	19	.....	103,627	1,266,955	1,064,245	2,331,200	22,756 38
United States vessels, steam	652	182	468	17,190	250	5,899	10,668	741	20,782	24,012	32,168	56,180	368 60
" sail	514	3,782	5,992	29,928	1,194	941	24,688	25,564	35,465	60,215	67,339	127,554	1,624 24
Total United States	1,166	3,964	6,460	47,118	1,444	6,840	35,356	26,305	56,247	84,227	99,507	183,734	1,992 84
Grand Total, St. Lawrence Canals	11,548	1,207,598	966,781	110,439	1,722	6,840	35,375	26,305	159,874	1,351,182	1,163,752	2,514,934	24,749 22
CHAMBLY CANAL.													
Canadian vessels, steam	368	35,264	38,481	141	.....	.....	.....	.....	189	35,405	38,670	74,075	227 49
" sail	385	7,865	8,285	3,168	.....	.....	.....	.....	4,320	11,033	12,605	23,638	251 09
Total Canadian	753	43,129	46,766	3,309	.....	.....	.....	.....	4,509	46,438	51,275	97,713	478 58

United States vessels, steam	10			130					92	130	92	222	3 02
" sail	1,578	182	1,565	63,860					89,164	64,042	90,729	154,771	1,996 39
Total United States.	1,588	182	1,565	63,990					89,256	64,172	90,821	154,993	1,999 41
Grand Total, Chambly Canal	2,341	43,311	48,331	67,299					93,765	110,610	142,096	252,706	2,477 99
OTTAWA CANALS.													
Canadian vessels, steam	987	42,946	105,260		56					42,946	105,316	148,262	660 89
" sail	1,160	3,650	138,221		1,534					3,650	139,755	143,405	1,957 66
Total Canadian	2,147	46,596	243,481		1,590					46,596	245,071	291,667	2,618 55
United States vessels, steam	1		5								5	5	0 25
" sail	253	3,479	310		21,177					3,479	21,487	24,966	595 48
Total United States	254	3,479	315		21,177					3,479	21,492	24,971	595 73
Grand Total, Ottawa Canals	2,401	50,075	243,796		22,767					50,075	266,563	316,638	3,214 28
RIDEAU CANAL.													
Canadian vessels, steam	1,488	54,590	55,056	1,846					2,937	56,436	57,993	114,429	776 32
" sail	719	11,980	12,123	2,777					2,777	14,757	14,900	29,657	440 35
Total Canadian	2,207	66,570	67,179	4,623					5,714	71,193	72,893	144,086	1,216 67
United States vessels, steam	41	84	38	230					340	314	378	692	10 38
" sail	119	3,279	712	379	3,457				481	3,658	4,650	8,308	169 44
Total United States	160	3,363	750	609	3,457				821	3,972	5,028	9,000	179 82
Grand Total, Rideau Canal	2,367	69,933	67,929	5,232	3,457				6,535	75,165	77,921	153,086	1,396 49
ST. PETER'S CANAL.													
Canadian vessels, steam	236	16,802	12,984	338				1,732		18,872	12,984	31,856	638 70
" sail	1,443	38,026	38,179					457		38,483	38,179	76,662	1,533 88
Total Canadian	1,679	54,828	51,163	338				2,189		57,355	51,163	108,518	2,172 58
United States vessels, steam	2	171	171							171	171	342	6 84
" sail	11	762	166		153			1,519		2,281	319	2,600	52 00
Total United States	13	933	337		153			1,519		2,452	490	2,942	58 84
Grand Total, St. Peter's Canal	1,692	55,761	51,500	338	153			3,708		59,807	51,653	111,460	2,231 42

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—*Continued.*

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
TRENT VALLEY CANALS.													$ cts.
Canadian vessels, steam	1,617	39,058	37,604							39,058	37,604	76,662	426 51
" sail	746	19,506	21,263							19,506	21,263	40,769	163 25
Total Canadian	2,363	58,564	58,867							58,564	58,867	117,431	589 76
United States vessels, steam													
" sail													
Total United States													
Grand Total, Trent Valley Canals	2,363	58,564	58,867							58,564	58,867	117,431	589 76
MURRAY CANAL.													
Canadian vessels, steam	490	99,139	47,951	15,556	499	499	499	499	13,302	115,693	62,251	117,944	184 33
" sail	163	4,267	5,629	379	25			35	513	4,681	6,167	10,848	39 60
Total Canadian	653	103,406	53,580	15,935	524	499	499	534	13,815	120,374	68,418	188,792	223 93
United States vessels, steam	11	47	109	19			98	23	312	89	519	608	3 03
" sail	13			50		60	54		43	110	97	207	3 25
Total United States	24	47	109	69		60	152	23	355	199	616	815	6 28
Grand Total, Murray Canal	677	103,453	53,689	16,004	524	559	651	557	14,170	120,573	69,034	189,607	230 21

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—*Concluded.*

RECAPITULATION.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States. Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
CANADIAN VESSELS. *Steam and Sail.*													$ cts.
Welland	1,325	127,934	127,898	127,867	2,535			4,082	128,262	259,883	258,695	518,578	7,389 74
St. Lawrence	10,382	1,203,634	960,321	63,321	278		19		103,627	1,266,955	1,064,245	2,331,200	22,756 38
Chambly	753	43,129	46,766	3,309					4,509	46,438	51,275	97,713	478 58
Ottawa	2,147	46,596	243,481		1,590					46,596	245,071	291,667	2,618 57
Rideau	2,207	66,570	67,179	4,623					5,714	71,193	72,893	144,086	1,216 67
St. Peter's	1,679	54,828	51,163	338				2,189		57,355	51,163	108,518	2,172 58
Trent Valley	2,363	58,564	58,867							58,564	58,867	117,431	589 76
Murray	653	103,406	53,580	15,935	524	499	499	534	13,815	120,374	8,418	188,792	223 93
Total Canadian	21,509	1,704,661	1,609,255	215,393	4,927	499	518	6,805	255,927	1,927,358	1,870,627	3,797,985	37,446 19
UNITED STATES VESSELS. *Steam and Sail.*													
Welland	1,059	174	5	121,738	6,649	301,978	269,956	4,484	189,325	428,374	465,935	894,309	14,839 05
St. Lawrence	1,166	3,964	6,460	47,118	1,444	6,840	35,356	26,305	56,247	84,227	99,507	183,734	1,992 84
Chambly	1,588	182	1,565	63,990					89,256	64,172	90,821	154,993	1,999 41
Ottawa	254	3,479	315		21,177					3,479	21,492	24,971	595 73
Rideau	160	3,363	750	609	3,457				821	3,972	5,028	9,000	179 82
St. Peter's	13	933	337		153			1,519		2,452	490	2,942	58 84
Trent Valley													
Murray	24	47	109	69		60	152	23	355	199	616	815	6 28
Total United States	4,264	12,142	9,541	233,524	32,880	308,878	305,464	32,331	336,004	586,875	683,889	1,270,764	19,671 97
Grand total, Canadian and United States	25,773	1,716,803	1,618,796	448,917	37,807	309,377	305,982	39,136	591,931	2,514,233	2,554,516	5,068,749	57,118 16

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—*Continued.*

No. (A) 18.—COMPARATIVE STATEMENT of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation of 1897 and 1898, and the Amount of Tolls collected on the same, including Tolls on Vessels and Passengers.

——	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1897.												$ cts.
Welland	6,478	175,480	5,613	4,518	210,831	353,863	1,277	516,232	224,199	1,050,093	1,274,292	188,432 17
St. Lawrence	150,563	757,205	4,491	1,809	128	759	32,979	283,431	188,161	1,043,204	1,231,365	70,718 09
Chambly	8,106	7,747	241,906	174				94,203	250,012	102,124	352,136	23,308 53
Ottawa	81	511,262		51,027					81	562,289	562,370	34,032 28
Rideau	34,244	13,177	9,679	8,393			283	11,500	44,206	33,070	77,276	6,131 35
St. Peter's	18,317	48,770							18,317	48,776	67,093	2,844 70
Trent Valley	29,586	6,555							29,586	6,555	36,141	1,095 55
Murray	5,897	6,525	586					223	6,483	6,748	13,231	655 01
Sault Ste. Marie	22,315	186,547	6,425	122,039	458,183	4,014,692	74,248	62,614	561,171	4,385,892	4,947,063	
Grand total	275,587	1,713,274	268,700	187,960	669,142	4,369,314	108,787	968,203	1,322,216	7,238,751	8,560,967	327,217 78
1898.												
Welland	6,343	106,239	5,561	20,997	210,516	277,023	986	512,412	223,406	916,671	1,140,077	168,598 07
St. Lawrence	172,178	1,028,585	3,374	620	398	962	28,181	204,836	204,131	1,235,003	1,439,134	90,854 93
Chambly	6,389	10,272	161,183					93,492	167,572	103,764	271,336	19,326 06
Ottawa	1,401	492,712		55,873					1,401	548,585	549,986	36,920 62
Rideau	19,910	9,498	7,283	9,106				9,149	27,193	27,753	54,946	4,794 01
St. Peter's	14,427	49,321					742		15,169	49,321	64,490	2,876 32
Trent Valley	21,167	6,509							21,167	6,509	27,676	1,094 63
Murray	5,671	8,407	531				53	881	6,255	9,288	15,543	684 01
Sault Ste. Marie	16,503	108,344	9,321	12,371	618,594	2,147,136	51,653	91,365	696,071	2,359,216	3,055,287	
Grand total	263,989	1,819,887	187,253	98,967	829,508	2,425,121	81,615	912,135	1,362,365	5,256,110	6,618,475	325,148 65

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

APPENDIX A—*Continued.*

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1898.

WELLAND CANAL.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	3	24	2	16	2	16		
10	2	20	1	10	1	10		
15	1	15			2	30		
20	3	60			3	60	2	40
25	2	50						
30	4	120						
35	6	210						
40			6	240	1	40	1	40
45			3	135				
50	3	150	1	50	1	50		
55			1	55				
60	2	120	1	60	1	60	2	120
70					1	70		
75			3	225	1	75		
80					1	80		
85	1	85						
95					1	95		
100			1	100				
110			1	110			2	220
130					1	130		
135	1	135						
140					1	140		
150			1	150			2	300
155			1	155				
160	1	160						
165	1	165						
175					1	175		
180			2	360				
190	1	190	2	380				
195					1	195		
200			1	200	1	200		
220	3	660						
230			1	230				
245			1	245				
260					1	260	1	260
265	1	265			1	265	2	530
270			1	270				
275							1	275
280					3	840	1	280
285					1	285		
290	1	290	1	290			1	290
295	1	295	1	295				
300					2	600	3	900
305	1	305					1	305
310	1	310			1	310	2	620
315			1	315	1	315	3	945
320			2	640	1	320		
325			1	325				
330			2	660				
335			3	1,005				
355							1	355
360	1	360			1	360		
380			1	380				
385					1	385		
400					1	400		
405	1	405					1	405
415	1	415			1	415		

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels, &c.—*Continued.*

WELLAND CANAL—*Continued.*

	CANADIAN.				UNITED STATES.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
435							1	435
440	1	440						
455	1	455	2	910	1	455	1	455
460			1	460				
470							1	470
475							2	950
480	1	480						
485	1	485	2	970	1	490	1	485
490					1	495	2	980
495								
500	2	1,000						
510					1	510		
515							2	1,030
520							1	520
525					1	525		525
530	1	530						
540					2	1,080	2	1,080
545	1	545	2	1,090			1	545
555					1	555	1	555
560	1	560						
575	1	575						
580							2	1,160
585					1	585	4	2,340
590	1	590	1	590	1	590	1	590
595					1	595	1	595
600	1	600	1	600			2	1,200
605					1	605		
615					1	615		
620					1	620	2	1,240
625					2	1,250	1	625
640							3	1,920
645					1	645	1	645
650					2	1,300		
655					1	655		
660					1	660	1	660
665							1	665
675					1	675		
685			1	685			2	1,370
690							1	690
695					1	695	1	695
700					1	700	2	1,400
707							1	707
709					1	709		
710							2	1,420
712							1	712
719			1	719				
722	1	722						
723							1	723
739							1	739
740			1	740			3	2,220
742	1	742						
753							1	753
760					1	760		
769	1	769					1	769
771	1	771						
775					1	775		
784					1	784	1	784
787					1	787	1	787
793							1	793

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels, &c.—*Continued.*

WELLAND CANAL—*Continued.*

CANADIAN.					UNITED STATES.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
796					1	796	1	796
800							1	800
802			1	802			1	802
806							1	806
811					1	811		
819							1	819
837					1	839		
838							1	838
841							1	841
849							1	849
870							1	870
873							1	873
882					1	882		
891							1	891
892					1	892		
900					1	900		
904					1	904		
908			1	908				
911					2	1,844		
917					1	917	1	917
918					1	918		
929					1	929		
931							1	931
940					2	1,880		
944					1	944		
950					1	950		
957							1	957
960							1	960
962					1	962		
963					1	963		
966					1	966		
977	1	977						
978					1	978		
989	1	989						
992							1	992
994							1	994
995							1	995
1,013					1	1,013		
1,023							1	1,023
1,024					1	1,024		
1,029					1	1,029		
1,030					1	1,030		
1,034							1	1,034
1,035	1	1,035			1	1,035		
1,041			1	1,041				
1,053					1	1,053		
1,054					1	1,054		
1,068					1	1,068		
1,072					1	1,072		
1,078							1	1,078
1,079					1	1,079		
1,083					1	1,083		
1,085							2	1,270
1,086							1	1,086
1,103					2	2,206		
1,111					3	3,333		
1,118					1	1,118		
1,123					2	2,246		
1,160					1	1,160		

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels, &c.—*Concluded.*

WELLAND CANAL—*Concluded.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
1,172	1	1,172						
1,180							1	1,180
1,203					1	1,203		
1,207					1	1,207	1	1,207
1,212								
1,213							1	1,213
1,330					1	1,330		
1,402							1	1,402
1,425					1	1,425		
1,441					1	1,441		
1,547					1	1,547		
1,548					1	1,548		
1,550					1	1,550		
1,553					2	3,106		
1,565					1	1,565		
Total...	62	18,246	57	16,416	115	80,096	108	66 541

APPENDIX A—*Continued.*

No. (A) 20.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1898.

ST. LAWRENCE CANALS.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	29	232	11	88	6	48		
10	9	90	7	70	2	20	1	10
15	10	150	2	30	2	30		
20	11	220	6	120	2	40		
25	13	325	6	150			1	25
30	12	360	10	300				
35	9	315	2	70	2	70		
40	8	320	18	720	3	120	6	240
45	4	180	2	90	1	45		
50	7	350	4	200	1	50		
55	6	330	2	110				
60	4	240	41	2,460	1	60		
65	2	130	1	65				
70	1	70	5	350			2	140
75	3	225	7	525	1	75		
80	2	160	12	960	1	80		
85	4	340	4	340			1	85
90	3	270	6	540			9	810
95			8	760	2	190	44	4,180
100	4	400	24	2,400			61	6,100
105	4	420	6	630			14	1,470
110	2	220	11	1,210			11	1,210
115	3	345	7	805	1	115	11	1,265
120	2	240	8	960	1	120	5	600
125	1	125	3	375			1	125
130	2	260	3	390				
135			8	1,080	1	135		
140	1	140	9	1,260			1	140
145	2	290	9	1,305				
150			20	300				
155	2	310	33	5,115				
160			14	2,240			2	320
165	1	165	13	2,145				
170			6	1,020				
175			5	875				
180			8	1,440				
185			3	555				
190	1	190	4	760				
195			4	780				
200	2	400	2	400				
215			1	215				
220			2	440				
225			1	225				
230	2	460	4	920				
245			1	245				
255			1	255				
260			2	320				
265	1	265	1	265	1	265		
270			2	540				
275			1	275	2	550		
290	1	290	4	1,160			2	580
300			3	900				
305			3	915	1	305		
310			4	1,240				
315			3	945			1	315
320			4	1,280				

No. (A) 20.—STATEMENT of the Number and Tonnage of all kinds of Vessels, &c.—*Continued.*

ST. LAWRENCE CANALS—*Continued.*

	CANADIAN.				UNITED STATES.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
325			6	1,950				
330			2	660				
335	2	670	4	1,340				
340	1	340	4	1,360				
345	1	345	3	1,035			1	345
350			1	350				
360			2	720				
365	1	365	4	1,460				
370			4	1,480				
375			2	750	1	375		
390			1	390				
395			2	790				
400							1	400
415			2	830	1	415		
420			1	420				
435			1	435			1	435
440			1	440			1	440
445			1	445				
450			1	450				
455	1	455						
460			1	460				
475	1	475	1	475			1	475
480			1	480				
485			1	485				
490			1	490			1	490
500	1	500	1	500				
508	1	508						
516			2	1,032				
518			1	518				
520			1	520				
541	1	541	1	541				
543			1	543			1	543
544	1	544						
567			1	567				
575	1	575						
577							1	577
578			1	578				
585			1	585			1	585
586	1	586	1	586				
590			1	590				
593	1	593						
597							1	597
599	1	599						
607			1	607				
616							1	616
617					1	617		
636							1	636
639							2	1,278
660							1	660
662							1	662
680			1	680				
681			1	681				
691	1	691					1	691
694					1	694		
696							1	696
700							1	700
712							1	712
715	1	715						
719			1	719				

No. (A) 20.—STATEMENT of the Number and Tonnage of all kinds of Vessels, &c.—*Concluded.*

ST. LAWRENCE CANALS—*Concluded.*

CANADIAN.					UNITED STATES.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
722							1	722
738							1	738
740			1	740				
753							1	753
768							1	768
769			1	769				
771			1	771				
777					1	777		
784					1	784	1	784
793							1	793
801							1	801
803			1	803				
805							1	805
819							1	819
838					1	838		
943							1	943
995							1	995
1,023							1	1,023
1,034							1	1,034
1,072	1	1,072						
1,086							1	1,086
1,103					1	1,103		
1,180							1	1,180
1,207							1	1,207
1,212							1	1,212
1,299	1	1,299						
1,402							1	1,402
Total...	187	19,700	458	74,158	39	7,921	211	46,218

APPENDIX A—*Continued.*

No. (A) 21.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1898.

RIDEAU, OTTAWA AND CHAMBLY CANALS.

	CANADIAN.				UNITED STATES.			
	Steam Vessels.		Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	40	320	193	1,544			13	104
10	11	110	12	120	1	10		
15	8	120	4	60	6	90		
20	5	100	8	160			2	40
25	8	200	4	100	1	25		
30	3	90	3	90	1	30		
35	1	35	1	35				
40	9	360	5	200	2	80		
45	1	45						
50	2	100	8	400			1	50
55	3	165	1	55				
60	3	180	2	120				
65	1	65	1	65				
70					1	70	2	140
75	4	300	7	525				
80	1	80	2	160			3	240
85	1	85	3	255			7	595
90	1	90	9	810			23	2,070
95			2	190			111	10,545
100	2	200	5	500			155	15,500
105	2	210	3	315			43	4,515
110			4	440			35	3,850
115			5	575			17	1,955
120	1	120	2	240			9	1,080
125	2	250	3	375			1	125
130	1	130	2	260			1	130
135			3	405				
140	1	140	8	1,120				
145	2	290	10	1,450				
150			15	2,250			1	150
155	1	155	29	4,495				
160			13	2,080				
165			10	1,650				
170			4	680			1	170
175			2	350				
180			1	180				
185			1	185				
190			2	380				
195			1	195				
200	1	200	2	400				
228	1	228						
256			1	156				
262	1	262						
324	1	324						
332	1	332						
397	1	397						
Total.....	120	5,683	391	23,670	12	305	425	41,259

APPENDIX A—*Concluded.*

No. (A) 22.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1898.

WELLAND CANAL.

	CANADIAN.						UNITED STATES.					
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	250 to 1,172 tons...	28	16,082	1	250 to 1,041 tons...	28	13,685	1	250 to 1,565 tons...	95	78,670	1	250 to 1,402 tons...	99	65,821
2	200 " 249 " ..	3	660	2	200 " 249 " ..	3	675	2	200 " 249 " ..	1	200	2	200 " 249 " ..	..	....
3	150 " 199 " ..	3	515	3	150 " 199 " ..	6	1,055	3	150 " 199 " ..	2	370	3	150 " 199 " ..	2	300
4	100 " 149 " ..	1	135	4	100 " 149 " ..	2	210	4	100 " 149 " ..	2	270	4	100 " 149 " ..	2	220
5	50 " 99 " ..	6	350	5	50 " 99 " ..	6	390	5	50 " 99 " ..	6	430	5	50 " 99 " ..	2	120
6	Under 50 " ..	21	499	6	Under 50 " ..	12	401	6	Under 50 " ..	9	156	6	Under 50 " ..	3	80
	Total.....	62	18,246		Total.....	57	16,416		Total	115	80,096		Total.....	108	66,541

ST. LAWRENCE CANALS.

1	250 to 1,299 tons...	21	11,428	1	250 to 803 tons....	95	38,120	1	250 to 1,103 tons...	12	6,723	1	250 to 1,402 tons...	41	29,498
2	200 " 249 " ..	4	860	2	200 " 249 "	11	2,445	2	200 " 249 " ..	...	.....	2	200 " 250 " ..	....	....
3	150 " 199 " ..	4	665	3	150 " 199 "	110	15,230	3	150 " 199 " ..	...	.....	3	150 " 199 " ..	2	320
4	100 " 149 " ..	21	2,440	4	100 " 149 "	88	10,415	4	100 " 149 " ..	3	370	4	100 " 149 " ..	104	10,910
5	50 " 99 " ..	32	2,115	5	50 " 99 "	90	6,310	5	50 " 99 " ..	6	455	5	50 " 99 " ..	56	5,215
6	Under 50 " ..	105	2,192	6	Under 50 "	64	1,638	6	Under 50 " ..	18	373	6	Under 50 " ..	8	275
	Total.....	187	19,700		Total.....	458	74,158		Total	39	7,921		Total.....	211	46,218

No. (A) 22.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1898—*Concluded.*

RIDEAU, OTTAWA AND CHAMBLY CANALS.

CANADIAN.								UNITED STATES.							
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	250 to 397 tons	4	1,315	1	250 to 256 tons	1	256	1	250 to — tons	..	.....	1	250 to — tons	.....	.....
2	200 " 249 "	2	428	2	200 " 249 "	2	400	2	200 " 249 "	.....	.....	2	200 " 249 "	.....	.....
3	150 " 199 "	1	155	3	150 " 199 "	78	12,445	3	150 " 199 "	..	.....	3	150 " 199 "	2	320
4	100 " 149 "	11	1,340	4	100 " 149 "	45	5,680	4	100 " 149 "	....	.....	4	100 " 149 "	261	27,155
5	50 " 99 "	16	1,065	5	50 " 99 "	35	2,580	5	50 " 99 "	1	70	5	50 " 99 "	147	13,640
6	Under 50 "	86	1,380	6	Under 50 "	230	2,309	6	Under 50 "	11	235	6	Under 50 "	15	144
	Total	120	5,683		Total	391	23,670		Total	12	305		Total	425	41,259

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, June 8, 1899.

RICHARD DEVLIN,
Compiler of Canal Statistics.

CONSOLIDATED TARIFF OF TOLLS

CANALS

CONSOLIDATED

Sec. 1.

No. 23.—RATES OF TOLLS ON THE CANALS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS.

(O. C., April 18, 1873.)

The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.	Welland, Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock.	Rideau Canal, each way.	Ottawa Canals, and St. Ann's Lock, each way.	Ottawa to St. Johns, each way.	Murray Canal, each way.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Class No. 1.									
Vessel, steam.....per ton	01½	0 01½	0 02½	0 00¾	0 00¾	0 01½	0 00⅝	0 01½	0 3/32
" sail and other.....	0 02¼	0 02¼	0 03¾	0 01½	0 01¼	0 02¼	0 01	0 02⅝	0 1/16
Class No. 2.									
Passengers, 21 years of age and upwards...	0 10	0 10	0 20	0 10	0 05	0 08	0 02½	0 09¾	0 1½
" under 21 years each.....	0 05	0 05	0 10	0 05	0 02	0 04	0 01¼	0 04½	0 0⅝
Class No. 3.									
Bricks, cement and water lime.....									
Clay, lime and sand.....									
Brimstone.....									
Corn.....									
Flour.....									
Iron, railway.....									
" pig.....									
" all other, including steel (O.C., Feb. 1, 1888).....	15	0 20	0 20	0 15	0 10	0 07	0 06	0 19¾	0 1⅞
Plaster, gypsum.....									
Salt.....									
Salt meats or fish, in barrels or otherwise..									
Agricultural products, vegetable, not enumerated.....									
Agricultural products, animal, not enumerated.....									
Stone, for cutting.....									
Wheat.....									
Class No. 4.									
All other articles not enumerated.....	0 15	0 20	0 20	0 20	0 10	0 26	0 14	0 29	0 2½

REVENUE

TARIFF OF TOLLS

OF THE DOMINION OF CANADA, 1898.

TRENT VALLEY CANALS.

(O. C., July 25, 1888.)

1st Section.	2nd Section.	3rd Section.	4th Section.	Through.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	Tolls Chargeable at Peterborough and Hastings.
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Bobcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
0 00 3/16 0 00 1/4	0 00 3/16 0 00 1/4	0 00 3/16 0 00 1/4	0 00 3/16 0 00 1/4	0 00 3/4 0 01	0 00 3/16 0 00 1/4
01 0 00 1/2	0 01 0 00 1/2	0 01 0 00 1/2	0 01 0 00 1/2	0 04 0 02	0 01 0 00 1/2
	0 01	0 01	0 01	0 04	01
	0 03	0 03	0 03	0 12	0 03

RATES OF TOLLS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS.

The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals and St. Ann's Lock, each way.	Ottawa to St. Johns, each way.	Murray Canal, each way.
Class No. 5.									
Bark	0 20	0 20	0 20	0 15	0 10	0 07	0 06	0 19½	0 01⅞
Barrels, empty, each	0 02	0 02	0 02	0 02	0 02	0 02	0 01	0 03½	0 00½
Boat knees, each	0 05	0 05	0 05	0 02	0 02	0 02	0 01	0 03½	0 00½
Floats, per 1,000 lineal feet	1 40	1 40	1 40	1 40	1 20	1 05	0 50	2 05	0 17½
Firewood, per cord, in vessels	0 20	0 20	0 20	0 20	0 10	0 15	0 08	0 23	0 02½
" " rafts	0 25	0 25	0 25	0 25	0 15	0 19	0 09	0 30¼	0 03⅛
Hoops	0 25	0 25	0 25	0 20	0 15	0 15	0 10	0 30	0 02½
Masts and spars, telegraph poles, per ton of 40 cubic feet, in vessels	0 15	0 15	0 15	0 05	0 05	0 08	0 07	0 13¼	0 00⅝
Masts and spars, telegraph poles, per ton of 40 cubic feet, in rafts	0 20	0 20	0 20	0 10	0 10	0 15	0 10	0 22½	0 01¼
Railway ties, in vessels, each	0 01	0 01	0 01	0 00⅓	0 00½	0 00¾	0 00⅝	0 01⅜	0 00⅛
" rafts, each	0 02	0 02	0 02	0 01	0 01	0 02	0 01	0 02¼	0 00⅛
Sawed stuff, boards, plank, scantling and sawed timber, per M feet, board measure, in vessels	0 30	0 30	0 30	0 15	0 10	0 11¼	0 06¾	0 20	0 01⅞
Sawed stuff, boards, plank, scantling and sawed timber, per M feet, board measure, in rafts	0 60	0 60	0 60	0 30	0 20	0 19	0 09	0 36½	0 03¾
Square timber, per M cubic feet, in vessels	3 00	3 00	3 00	1 00	1 00	0 56	0 44	1 69	0 12½
" " rafts	4 50	4 50	4 50	2 00	2 00	1 12	0 63	3 13	0 25
Wagon stuff, woodenware and wood, partly manufactured, per ton of 40 cubic feet	0 40	0 40	0 40	0 40	0 25	0 30	0 20	0 55	0 05
Shingles, per M	0 06	0 06	0 06	0 06	0 04	0 04½	0 02½	0 08	0 00¾
Split posts and fence rails, per M, in vessels	0 40	0 40	0 40	0 40	0 20	0 23	0 12	0 42	0 05
" " " rafts	0 80	0 80	0 80	0 80	0 40	0 38	0 17	0 77	0 10
Saw logs, each, standard log	0 08	0 08	0 08	0 08	0 05	0 06	0 06	0 13	0 01
Staves and headings, barrel, per M	0 40	0 40	0 40	0 20	0 15	0 15	0 10	0 30	0 02½
" " pipe, per M	1 50	1 50	1 50	1 00	1 00	0 75	0 50	1 75	0 12½
" " West India, per M	0 75	0 75	0 75	0 60	0 25	0 45	0 25	0 65	0 07½
" " salt barrel, sawn or cut, per M	0 08	0 08	0 08	0 04	0 03	0 03	0 02	0 06	0 00½
Traverses, per 100 pieces	0 50	0 50	0 50	0 50	0 40	0 38	0 15	0 67½	0 06¼
Hop poles, per 1,000 pieces	2 00	2 00	2 00	2 00	1 50	1 50	0 65	2 65	0 25
Special Class.									
Gypsum, crude (per O.C., 28th Oct., 1892)	0 15	0 05	...	0 05	West ward		...	...	...
Coal	0 20	0 20	0 20	0 15	0 10	0 08	0 05	0 17¾	0 01⅞
Stone, unwrought, corded, and not suitable for cutting, per cord	0 75	0 75	0 75	0 60	0 37½	0 28	0 24	0 77½	0 07½
Kryolite, iron ore or chemical ore	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05
Ice	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 11	0 05

ON THE CANALS—*Continued.*

TRENT VALLEY CANALS.

1st section.	2nd section.	3rd section.	4th section.	Through.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Bobcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Peterborough and Hastings.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
0 01	0 01	0 01	0 01	0 04	0 01
0 00¼	0 00¼	0 00¼	0 00¼	0 01	0 00¼
0 00¼	0 00¼	0 00¼	0 00¼	0 01	0 00¼
0 13	0 13	0 13	0 13	0 52	0 13
0 03	0 03	0 03	0 03	0 10	0 03
0 04	0 04	0 04	0 04	0 14	0 04
0 02	0 02	0 02	0 02	0 08	0 02
0 02	0 02	0 02	0 02	0 08	0 02
0 01	0 01	0 01	0 01	0 04	0 01
0 00⅛	0 00⅛	0 00⅛	0 00⅛	0 00½	0 00⅛
0 00¼	0 00¼	0 00¼	0 00¼	0 01	0 00¼
0 03	0 03	0 03	0 03	0 10	0 03
0 04	0 04	0 04	0 04	0 14	0 04
0 07	0 07	0 07	0 07	0 28	0 07
0 14	0 14	0 14	0 14	0 56	0 14
0 04	0 04	0 04	0 04	0 16	0 04
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
0 03	0 03	0 03	0 03	0 12	0 03
0 05	0 05	0 05	0 05	0 20	0 05
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
0 02	0 02	0 02	0 02	0 08	0 02
0 10	0 10	0 10	0 10	0 40	0 10
0 05½	0 05½	0 05½	0 05½	0 22	0 05½
0 00½	0 00½	0 00½	0 00½	0 02	0 00½
0 05	0 05	0 05	0 05	0 20	0 05
0 20	0 20	0 20	0 20	0 80	0 20
Free.	Free.	Free.	Free.	Free.	Free.
0 01	0 01	0 01	0 01	0 04	0 01
0 03½	0 03½	0 03½	0 03½	0 14	0 03½
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
Free.	Free.	Free.	Free.	Free.	Free.

St. Peter's Canal.

Sec. **2.** On each and every vessel passing through the said canal, two cents per ton on the vessel and one cent per ton on the freight, each way. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 109.

SPECIAL REGULATIONS RELATING TO TOLLS ON SOME OF THE CANALS.

Sec. **3.** Coal may pass up all canals, except the Welland Canal, free of toll. O. C. June 6, 1869. Con. O. C. Oct. 26, 1889, sec. 83.

Sec. **4.** Logs, lumber or other produce may pass free of toll down the Chippawa Creek, between the Aqueduct and Port Robinson. O. C. May 18, 1863. Con. O. C. Oct. 26, 1889, sec. 84.

Sec. **5.** (*a*) In view of the dam constructed across the Ottawa River at Carillon whereby the passage of the rapids at that point through the river is rendered difficult and at times impracticable, it appears necessary, owing to the continued difficulty attending passage through the slide built in the dam, that the canal should be used by rafts, and until otherwise ordered, free passage be given to rafts through the Carillon Canal, subject to such regulations as the Department of Railways and Canals may find necessary in the interest of the traffic of the canal to adopt. O. C. July 6, 1888.

Sec. **5.** (*b.*) "Save in cases for which special permission may be given the Grenville Canal is closed to the passage of rafts, or any portion of a raft of any kind whatever." O. C. June 27, 1890.

Sault Ste. Marie Canal

Sec. **6.** All vessels and freight shall be permitted to pass through the Sault Ste. Marie Canal free of toll upon such vessels and freight, until otherwise ordered.

Sec. **7.** (*a.*) All up bound goods on which full tolls have been paid for passage through the whole of the St Lawrence Canals, or for passage through the Lachine Canal, the Ottawa and Rideau Canals or for passage through the Ottawa and Rideau Canals shall be entitled to pass free through the Welland Canal, or any portion thereof, and tolls paid for passage through the Chambly Canal, or goods thereafter so becoming entitled to the above privilege, shall be refunded at Montreal. All down bound goods on which full tolls have been paid for passage through the Welland Canal shall be entitled to pass free through any or all of the above mentioned Canals, or through any portion thereof. O. C. May 17, 1897.

(*b.*) All articles, goods or merchandise, not enumerated above, shall be charged to class No. 4. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 86.

Sec. **8.** Goods shipped to any port west of the St. Lawrence Canals, tolls upon which have already been paid for passage through such canals, may be re-shipped from such port and be passed through the Welland Canal free of tolls, in the same way as if they had been shipped through direct in the first instance; and goods going eastward, having paid Welland Canal tolls, may be transhipped at any port on Lake Ontario, and thereafter pass free through the St. Lawrence Canals, as if they had been shipped through direct in the first instance. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 87.

Sec. **9.** Iron ore, kryolite or chemical ore, may pass through one section, or through all the canal sections aforesaid, for 5 cents per ton.

Sec. **10.** No let-passes shall be issued to steam tugs or other small vessels for less than 25 cents, as a minimum charge; but such vessels, not carrying freight or passengers, can obtain, on payment of $30 a season "Let-Pass," which will pass them up and down the canals as often as desired. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 86.

Sec. **11.** All vessels owned or chartered by persons having contracts for the enlargements or repair of any of the canals, and employed by them in removing earth or carrying materials necessary for the prosecution of such works, shall be entitled to pass through such canals free of toll upon such vessel and cargo. O. C. April 22, 1884. Con. O. C. Oct. 26, 1889, sec. 35.

Sec. **12.** Government dredges and scows shall be permitted to pass through the canals free of tolls, but that such dredges and scows shall not be so passed as to interfere with the passage of other vessels of any kind whatever. O. C. May 18, 1891.

HARBOUR DUES.

Sec. **13.** Vessels receiving or discharging freight at the premises of the Welland Railway, at Ports Colborne or Dalhousie, are to be free from harbour dues; but all other vessels discharging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of freight so received or discharged, two cents. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889.

WAY RATES.

Sec. 14. The following way rates are to be levied on vessels and property passing the several subdivisions of the Canals:—

Welland Canal.

	Rate.
1. From Port Maitland, Dunnville and Port Colborne to Port Robinson or Allanburg, not passing the lock, each way	½
2. From Chippawa Cut, or any part thereof, to Dunnville, Port Maitland or Port Colborne	⅝
3. From Dunnville to Port Colborne	½
4. From Thorold to St. Catharines or Port Dalhousie	½
5. From Maitland, Dunnville, Colborne or Port Robinson to Marshville and intermediate places	⅜
6. From Marshville or intermediate places to Port Maitland, Dunnville, Port Colborne and Port Robinson	⅜
7. From Port Robinson to Allanburg or Thorold	⅜
8. From Port Robinson to St. Catharines or Port Dalhousie	½
9. From St. Catharines to Port Dalhousie	⅛
10. From Dunnville to Maitland	¼
11. From Port Robinson through the Lock and Chippawa Cut	¼
12. Form Port Colborne to Port Maitland	½
13. From Chippawa Cut through Lock to Port Robinson	¼
14. From Colborne, Dunnville, Maitland and Marshville to Thorold	⅝
15. From Colborne, Dunnville, Maitland and Marshville to St. Catharines	⅞
16. Through the Chippawa Cut only	⅛
17. Through the Port Robinson Lock only	⅛

St. Lawrence Canals.

Sec. 15. The navigation is divided into four sections, viz., Cardinal, Cornwall, Beauharnois and Lachine. Tolls are to be levied on all vessels and property in proportion to the number of sections passed through.

Chambly Canal.

	Rate.
Sec. 16. Vessels and property passing from Sorel to Chambly, to pay	⅛
Vessels and property passing from Chambly to St. Johns, to pay	⅜

Ottawa Canals.

Sec. 17. The navigation is divided into three sections, viz., Grenville, Carillon and Ste. Anne's. Tolls are to be levied on all vessels and property in proportion to the number of sections passed through.

Rideau Canal.

Sec. 18. The navigation of this canal is divided into three sections, viz., Ottawa, Smith's Falls and Kingston Mills. Vessels and freight passing one section are to be charged one-third; two sections, two-thirds. O.C. April 18, 1873. Con. O.C. Oct. 26, 1889, secs. 77, 78, 79, 80 and 81.—

Tay Canal to be part of the Rideau Canal and the following rates of tolls to be levied upon the said Tay Branch of the Rideau Canal system, viz.:—

Perth to Smith's Falls, 1 section, or one-third of Rideau Canal rates, each way.

Perth to Kingston, 2 sections, or two-thirds Rideau Canal rates, each way.

Perth to Ottawa Basin, 2 sections, or two-thirds Rideau Canal rates, each way.

Perth to River Ottawa, 3 sections, full Rideau Canal rates, each way. O.C. Sept. 27, 1890.

General.

Sec. 19. (*a.*) Any fraction of a ton freight is to be charged one ton, and portions of sections are to be charged as a whole section on all the above canals.

(*b.*) The passing of saw-logs or other lumber through any of the canals, or sections thereof, shall be at all times governed by the regulations for their management. O.C. April 18, 1873. Con. O.C. Oct. 26, 1889, sec. 82.

Sec. 20.—STANDARD FOR ESTIMATING WEIGHTS, FOR CANAL TOLLS.

—	Tons.	—	Tons.
2,000 lbs. avoirdupois	1	Stone, 12 cubic feet	1
Per M. is per thousand feet	.....	Stone, 1 cord	7½
Per mille is per thousand pieces	.....	Whisky, 4 barrels or 215 gallons	1
Green fruit, 9 barrels are	1	Empty barrels, 10	1
Ashes, 3 barrels are	1	Barrel hoops, 10 mille	1
Bark, 4 cords	1	Board and other sawed lumber, 600 feet board measure	1
Beef, 7 barrels	1	Boat knees, 4	1
Biscuit and crackers, 9 barrels	1	Firewood, 1 cord	3
Bricks, common, 1,000	2	Hop poles, 60 or cubic feet	1
Butter, 22 kegs or 7 barrels	1	Shingles, 12 M. or bundles	1
Cattle, 3	1	Split posts and fence rails, 1 mille	1
Cement and water lime, 7 barrels	1	Staves and headings, pipe, 1 mille	8
Fire-bricks, 1,000	3	" " W. India, 1 mille	4
Fish, 7 barrels	1	" " barrel, 1 mille	2½
Flour, 9 barrels	1	" " salt barrel, 1 mille	0½
Gypsum and manganese, 6 barrels	1	Saw-logs, standard, 1	0⅝
Horses, 2	1	Square timber, 50 cubic feet	1
Lard and tallow, 7 barrels or 22 kegs	1	Telegraph poles, 10, or 40 cubic feet	1
Liquors and spirits, 215 gallons	1	Masts and spars, 40 cubic feet	1
Liquids, all others, 215 gallons	1	Railroad ties, 16, or 50 cubic feet	1
Nuts, 9 barrels	1	All other woodenware, or partly manufactured wood, 40 cubic feet as per tariff	1
Systers, 6 barrels	1	Traverses, 40 cubic feet, or 5 pieces	1
Pork, 7 barrels	1	Floats, 50 lineal feet	1
Salt, 7 barrels	1		
Seeds, 9 barrels	1		
Sheep, 20	1		

NOTE.—By the Weights and Measures Act, chapter 104 of the Revised Statutes of Canada, section 14, all the following named articles are to be estimated by the cental of 100 lbs.

The weight equivalent to a bushel being as follows:—Wheat, 60 lbs.; Indian corn, 56 lbs.; rye, 56 lbs.; pease, 60 lbs.; barley, 48 lbs.; oats, 34 lbs.; beans, 60 lbs.; clover seed, 60 lbs.; timothy seed, 48 lbs.; buckwheat, 48 lbs.; flax seed, 50 lbs.; blue grass seed, 14 lbs.; hemp seed, 44 lbs.; malt, 36 lbs.; castor beans, 40 lbs.; potatoes, turnips, carrots, parsnips, beets and onions, 60 lbs.; bituminous coal, 70 lbs.

TOLLS AT SHEDS AT LACHINE CANAL BASIN.

Sec. 21. The following tolls shall be levied upon property stored at the sheds at the Lachine Canal Basin:—

			Cents.
Wheat and other grain,	per week,	per bushel	1
Meal	"	per barrel	4
Pork, beef, butter and lard	"	"	5
Muscovado sugar	"	per hhd., 10 cents; per brl	5
Liquors	"	per pipe, 15 cents; per pun	12
		per hhd., 10 cents; per qr. cask	7
Iron, bars	"	per ton	24
Iron, pig	"	"	12
Salt, except at the St. Gabriel sheds	"	per 100 minots	36
Salt at the St. Gabriel sheds, Montreal, after the first 48 hours	"	per bag	½
Bales, crates, cases, &c.	"	per ton weight or measurement	24
Coals	"	per chaldron	12

Sec. 22. (*a.*) No charge shall be made for property stored in the sheds of the Lachine Canal Basin for the first forty-eight hours, after which period, except in the case of flour, the foregoing rate of storage for the use of the sheds are to be raised, levied and collected.

(*b.*) Articles unenumerated are to be charged according to the above rates as nearly as the same can be computed.

(*c.*) All property stored in the sheds remaining after the first forty-eight hours will be liable to one week's storage, although it should only have been stored for a portion of the same, and so on for each succeeding week.

(*d.*) The labour of receiving property into the sheds and delivering the same shall be at the expense of and be furnished by the owners of the property or their agents.

(*e.*) All property stored in these sheds shall be at the risk of the proprietor from damage by fire or otherwise.

(*f.*) All dues for storage shall be paid before the removal of the property. O. C. August 21, 1846, October 28, 1846. Con. O. C. Oct. 26, 1889, secs. 90 and 91.

Flour.

Sec. 23. (*a.*) Flour shall be allowed to remain in the sheds for two whole days free of charge.

(*b.*) If kept there beyond two days or 48 hours, such flour shall be liable to a charge of one cent per day per barrel for the first four days after the expiration of the 48 hours of the exemption.

(*c.*) Should the flour be kept in the sheds beyond four days at one cent per day per barrel, it shall be liable to pay two cents per day per barrel for every day subsequent to the expiration of such four days.

(*d.*) Any part of a day shall be considered as one day. O. C. May 31, 1856. Con. O. C. Oct. 26, 1889, sec. 92.

WHARFAGE DUES ON COAL FOR LOCAL CONSUMPTION IN MONTREAL.

Sec. 24. Coal for local consumption in Montreal, landed on canal property between Montreal Harbour and Côte St. Paul, from vessels other than sea-going, and entering the Lachine Canal from Montreal Harbour, shall be charged wharfage dues at the rate of five cents a ton.

Coal screening shall be charged 3 cents a ton. Con. O. C. Oct. 26, 1889, sec. 93. O. C. May, 18, 1892.

CHARGES FOR WHARFAGE ON FIREWOOD ON WHARVES AND BANKS OF LACHINE CANAL.

Sec. 25. The following rates of tolls shall be collected as herein mentioned that is to say:—

(*a.*) Firewood landed on wharves or banks of the Lachine Canal, or in boats, barges or other craft occupying any of the basins between Wellington Street Bridge and Lock No. 3, four cents per cord, and for every day the wood is allowed to remain in either the canal or basin, or on the wharfs or banks after the first five days, an additional charge of four cents per cord. O. C. August 7, 1860. Con. O. C. Oct. 26, 1889, sec. 94.

(*b.*) The clause next preceding shall not only apply to the rates of toll to be collected on firewood on wharfs at Lachine and the Lachine Canal and basin, but are also extended and made applicable to the banks and grounds at Côte St. Paul and at Lachine. O. C. Jan. 27, 1862. Con. O. C. 1889, sec. 94.

CANAL BASINS IN MONTREAL PART OF MONTREAL HARBOUR.

Sec. 26. Whereas under existing regulations for the collection of canal tolls, eastern bound vessels having paid the charges one way in full through the Welland Canal are chargeable one Section Canal Toll if re-entering the Lachine Canal;

And whereas vessels loaded with grain destined for the Montreal Harbour frequently unload only part of their cargoes on board sea-going vessels in the harbour, and re-enter the Lachine Canal for the purpose of unloading the balance of their cargoes either in elevators or mills located along the canal basins;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, in so far only as regards the collection of tolls on the class of vessels above referred to, which re-enter that portion of the canal for the purpose of unloading the balance of their cargoes, but that the same shall not apply any further, as in the event of vessels returning to the harbour to take cargo, in which case the usual toll shall be charged against them on passing out of the canal a second time into the harbour. O. C. Aug. 8, 1878. Con. O. C. Oct. 26, 1889, sec. 95.

PHOSPHATES.

Sec. 27. Whereas vessels laden with grain for delivery in Montreal Harbour frequently carry also deck loads of phosphates, and being compelled to proceed at once to the harbour for the discharge of the grain, they pay tolls through to that point, subsequently re-entering the Lachine Canal for the storage of the phosphates, and in accordance with the existing regulations, paying canal dues a second time for such re-entry;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, for the purpose of the unloading of phosphates carried by vessels in addition to their grain cargoes as described in this section; it being, however, provided that in the event of their returning to the harbour to take cargo, the usual tolls shall be charged against such vessels on their passing out of the canal a second time. O. C. July 12, 1881. Con. O. C. Oct. 26, 1889, sec. 96.

WHARFAGE DUES IN ALL BASINS OF THE LACHINE CANAL ON SEA-GOING VESSELS.

Sec. 28. The Montreal Harbour Commissioners shall be allowed to retain the right of levying dues in respect of the old lower basin of the Lachine Canal, but the Government shall retain full control of the new works and basin of said canal and of the revenue that may be derived from their use.

All property delivered or received by sea-going vessels in the Lachine Canal basins at Montreal (except the old lower basin) shall be charged wharfage dues as follows:—

All goods, wares and merchandise not elsewhere specified	25	cents per ton.
Hay, straw, pig and scrap iron, pot and pearl ashes	20	"
Apples, crates and their contents, flour and meal, fish, meats, pitch, potatoes, tar, horses, neat cattle, sheep and swine	15	"
Ballast, clay, fire-bricks, gypsum, lime, marble, phosphate, sand, salt	10	"
Coal and coke, grain and seeds of all kinds	7½	"
Special—Bricks, 10 cents per 1,000; cordwood, 5 cents per cord; lumber, 10 cents per 1,000 feet, board measure.		
Bullion specie	Free.	
Coal screenings	3	"

Each entry shall pay not less than 5 cents.

All property landed on the canal wharfs for re-shipment, or transhipped in canal waters, shall pay one wharfage only.

Lumber upon which tolls have been paid for passage down the Lachine Canal, and which is reshipped from the wharfs or vessels into sea-going vessels, shall pay wharfage dues equal to one section of canal tolls, viz., 3¾ cents per 1,000 feet board measure. O.C. Jan. 26, 1883. Con. O.C. Oct. 26, 1889, secs. 98, 99, 100 and 101. O.C. May 18, 1892.

Sec. **29.**—*Standard for Estimating Weights.*

Ashes, pot or pearl	3 brls. to 1 ton.
Apples, flour, meal, potatoes	9 " 1 "
Fish, meat, pitch, tar	7 " 1 "
Horses	2 to 1 ton.
Neat cattle	3 to 1 "
Sheep	15 to 1 "
Swine	10 to 1 "

O.C. April 1, 1881. Con. O.C. Oct. 26, 1889, sec. 102.

TOLLS ON FLOATED TIMBER, ETC., ENTERING THE BASIN AT LACHINE.

Sec. **30.** The following rates of tolls shall be collected on floated timber, lumber and firewood entering the basin at Lachine and Lachine Canal :—

Kinds of Timber.	For receiving Timber, &c., to include use of Basin and Wharf for one Month.	For each succeeding month during the Season of Navigation.	For Wintering in Basin or on Wharf.
	Cents.	Cents.	Cents.
Timber, square or round, of all kinds, above 12 x 12, per M cubic feet	25	20	35
Timber, round or flatted, of all kinds, under 12 x 12, per M lineal feet	20	15	30
Planks and boards to include all kinds of sawed lumber in rafts, per M feet, board measure	3	2	3
Saw logs, 12 feet long, if longer in same proportion per log	1	½	2
Floats, per 100	10	5	10
Traverses, per 100	10	5	10
Fence posts and rails, per M	10	5	10
Staves, barrel, per M	8	4	8
" pipe "	8	4	8
" West India, per M	8	4	8
Firewood on bank of canal between Lock No. 3 and Lock No. 5, and also on wharves in canal basin at Lachine	3	3	3

Note.

Sec. **31.** (*a.*) No allowance shall be made for fractional parts of a month or winter season.

(*b.*) The firewood shall be corded across the bank while being delivered from the boat in such manner and at such points as the superintending engineer may direct.

(*c.*) The rates on timber to take effect upon the completion of the booms in Lachine Canal. O.C. June 8, 1860. Con. O.C. Oct. 26, 1889, secs. 103 and 104.

CHARGES ON VESSELS WINTERING IN LACHINE CANAL.

Sec. **32.** The following rates per ton shall be charged for wintering vessels in the Lachine Canal, viz. :—For each boat, barge, scow or other vessel of ten tons measurement or under, seventy cents per vessel for the entire winter, and every ten tons above the first ten, an additional rate of eight cents. O.C. Aug. 22, 1879. Con. O.C. Oct. 26, 1889, sec. 97.

CHARGES FOR WINTERING VESSELS IN RIDEAU CANAL.

Sec. **33.** The winterage dues for vessels wintering in the canal basin, at Ottawa, or other points along the line of the Rideau Canal, shall be as follows :—

In canal basin, Ottawa, steamers per season	$ 8 00
" " barges "	4 00
Inside locks " steamers "	50 00
" other stations " "	15 00

If the Minister of Railways and Canals deems it advisable, he is authorized to take security from parties wintering their vessels in locks against damage to Government property by fire. O.C. March 19, 1887. Con. O.C. Oct. 26, 1889, sec. 105.

CHARGES FOR WINTERING VESSELS IN THE OTTAWA RIVER CANALS AND LOCKS.

Sec. 34. The charge for vessels wintering on the Ottawa River canals and locks, and the same is hereby prescribed accordingly, namely :

In Carillon Canal, steamers per season	$ 8 00
" barges "	4 00
Grenville Canal, steamers "	8 00
" barges "	4 00
Inside Locks, Ste. Anne, Carillon and Grenville Canals, steamers per season	25 00
" Culbute Canal, per season	15 00

Such security against damage by fire to be taken by way of bond as, in the opinion of the Minister of Railways and Canals, may seem desirable. O.C. Oct. 14, 1892.

Sec. 35. No charges to be made for vessels wintering outside the locks of any government canal. O.C. Dec. 12, 1889.

CHARGES FOR REPAIRING VESSELS ON THE BANKS OF CANALS.

Sec. 36. (*a.*) Persons using the banks of the Lachine Canal as a site for the repair of their vessels shall be subject to a charge of four dollars, payable in advance, for each vessel; the period during which such site may be occupied under any one payment being limited to six months, and permission for repairing being first obtained from the proper officer, in conformity with the existing canal regulations.

(*b.*) In the event of failure to remove vessels so occupying the banks at the expiration of the period named, no fresh permits having been obtained, such vessels may be sold under the 16th section of the canal regulations. O.C. March 5, 1880. Con. O.C. Oct. 26, 1889, sec. 106.

Sec. 37. Rules with respect to the repairing of vessels on the banks of the Lachine Canal, the Beauharnois and the Chambly :—

(*a.*) Repairs shall only be executed at such points as may be indicated and approved by the superintending engineer.

(*b.*) For each vessel hauled up or beached for repairs, a charge of one dollar, over and above all other charges, shall be made, carrying the privilege of remaining one month, a further sum of one dollar being charged for each additional month, or fraction of a month, the vessel may remain.

(*c.*) In cases, however, where a vessel hauled up for repairs upon the canal bank remains there throughout the winter, a charge of four dollars only shall be made (in addition to the ordinary winterage dues), the period covered being from the 1st of November to the 1st of June, inclusive.

(*d.*) Any vessel remaining on the canal bank after having wintered thereon shall be charged at the rate of one dollar a month or fraction of a month of her subsequent stay.

(*e.*) Any vessel remaining more than one year on the bank of the canal shall for such time as she may remain in excess of that period pay at the rate of two dollars a month or fraction of a month throughout the whole year.

(*f.*) All charges shall be payable at the collector's office in advance on the first day of each month.

(*g.*) These rules shall be understood as applying to all cases where the canal bank is used in any manner for the repairs of vessels, whether such vessels are actually hauled up or not. O. C. August 6, 1881. Con. O. C. Oct. 26, 1889, sec. 107.

DRY DOCK CHARGES.

Trent Valley Canal.

Sec. 38. The following tolls and dues shall be charged for the use of the dry dock at Bobcaygeon, and of any of the locks on the Trent Valley Canal, during the winter or other shorter period :—

For Vessels	Wintering.	Per day.	Per week.
Over 15 tons	$30 00	$4 00	$12 00
15 tons and under	20 00	3 00	10 00

(O. C. Oct. 31, 1890.)

Rideau Canal.

Sec. 39. The following tariff of tolls and regulations shall be, and the same are hereby established for the use of the dry dock on the Rideau Canal at Ottawa :—

(1) Steamers entering dock	$ 8 00
Each day or portion of a day after day of entrance	2 50
(2) Barges entering dock	5 00
Each day or portion of a day after day of entrance	2 50
(3) Steam yachts or launches	5 00
Each day or portion of a day after day of entrance	2 50
(4) Boats wintering in the dry dock from the close to the opening of navigation	50 00
For every day such boat remains in the dock after the opening of navigation	8 00

(5) No vessel of any class shall be in the dock over six days after notice is given in writing by the lockmaster that the dock is required for another vessel unless a satisfactory agreement between all parties interested is arrived at.

(6) All entrances and discharge of vessels are covered by entrance fee.

(7) All drying off of vessels of all classes in the locks at Ottawa or Hartwell's during the season of navigation is prohibited unless for special reasons.

The owners of vessels of all classes to render the required assistance to open and close the gate under the supervision of the superintending engineer.

Vessel owners to supply all blocks, &c., to shove their boats up to make the necessary repairs and all refuse to be properly cleared out to the entire satisfaction of the lockmaster before leaving the dock.

(O. C. Dec. 28, 1893.)

Sec. **40.** The use of horses for towage purposes between the lower entrance of the Cornwall Canal and lock No. 20, be prohibited during the works of enlargement of that portion of the Cornwall Canal. (O.C. Aug. 20, 1890.)

Sec. **41.** As the prohibition of the use of horses for towing purposes, between the lower entrance of the Cornwall Canal and Lock No. 20 during the progress of the works of canal enlargement, has entailed the use of tugs and consequently expenses to the parties concerned, that all tugs, used solely for the purposes of towing on the section in question, be permitted to pass free of toll, up and down the canal between the lower entrance of the canal and lock No. 20, until the completion of the enlargement of the works on that section. (O. C. Sept. 27, 1890.)

SPECIAL RATES FOR 1898 ONLY.

Sec. **42.** For season of 1898 the Canal Tolls for the passage of the following food products:—wheat, Indian corn, peass, barley, rye, oats, flax seed and buckwheat, for through passage eastward through the Welland Canal, be ten cents per ton, and for through passage eastward through the St. Lawrence Canals only, ten cents per ton; payment of the said toll of ten cents per ton through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals, or any portion thereof; further, in the case of any of the above-mentioned products brought down from Parry Sound over the line of the Canada Atlantic Railway Company to their elevator at Coteau Landing, the through rate thereon from that point to Montreal to be five cents per ton. (O. C. June 1, 1898.)

Sec. **43.** *(a.)* That for the current season of navigation of 1898, there shall be allowed in the case of steamships specially chartered for the conveyance of excursion parties, going and coming the same day, a reduction of one-half of the usual passenger tolls for passage through the Government canals, it being distinctly understood that no freight is to be carried by the said steamers on such excursions. (O. C. June 20, 1898.)

Sec. **43.** *(b.)* Whereas the Canal Tolls payable for passage through the Welland and St. Lawrence Canals of barrel staves and headings, are 40 cents per 1,000 in the case of ordinary materials, such as those for sugar and flour barrels; while in the case of staves and headings for salt barrels the charge is 8 cents per 1,000 only.

And whereas application is made to have this distinction removed on the ground that sugar and flour cooperage is of the same weight as salt cooperage.

His Excellency in virtue of the provisions of chapter 38 of the Revised Statutes of Canada, intituled "An Act respecting the Department of Railways and Canals," and by and with the advice of the Queen's Privy Council for Canada, is pleased to order that Class 5 of the existing Tariff of tolls for passage through the Canals of the Dominion, established by the Order in Council of the 25th March, 1895, shall be and the same is hereby amended to the effect, and to that effect only, of removing the distinction between ordinary and salt barrel staves and headings, and making the tolls payable for these articles the same, namely, those at present charged on salt barrel staves and headings, on all the Canals of the Dominion. (O. C. May 28, 1897.)

SPECIAL RATES ON SAND AND STONE.

Sec. **43.** *(c.)* On the recommendation of the Acting Minister of Railways and Canals, the rate of tolls on sand and stone used in the construction of the bridge being built at Cornwall by the Ottawa and New York Railway was reduced from 15 and 20 cents to 7½ and 10 cents respectively. (O. C. August 27, 1898.)

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