

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR FROM APRIL 1, 1912, TO MARCH 31, 1913

*Submitted in accordance with the provisions of the Revised Statutes of Canada, 1906,
Chapter 35, Section 33.*

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OTTAWA

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EXCELLENT MAJESTY

1914

To Field Marshal, His Royal Highness Prince ARTHUR WILLIAM PATRICK ALBERT, Duke of Connaught and of Strathearn, and Earl of Sussex, in the Peerage of the United Kingdom, Prince of the United Kingdom of Great Britain and Ireland, Duke of Saxony, Prince of Saxe-Coburg and Gotha; Knight of the Most Noble Order of the Garter; Knight of the Most Ancient and Most Noble Order of the Thistle; Knight of the Most Illustrious Order of St. Patrick; one of His Majesty's Most Honourable Privy Council; First and Principal Knight Grand Cross and Great Master of the Most Honourable Order of the Bath; Knight Grand Commander of the Most Exalted Order of the Star of India; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George; Knight Grand Commander of the Most Eminent Order of the Indian Empire; Knight Grand Cross of the Royal Victorian Order; Personal Aide-de-Camp to His Majesty the King; Governor General and Commander-in-Chief of the Dominion of Canada.

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to Your Royal Highness the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year from April 1, 1912, to March 31, 1913.

F. COCHRANE,

Minister of Railways and Canals.

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REPORT
OF THE
DEPUTY MINISTER OF RAILWAYS AND CANALS
FOR THE YEAR ENDING MARCH 31, 1913

To the Honourable F. COCHRANE,
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 period of twelve months ended March 31, 1913.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers in the department are given in appendices. These include the report of the Government Railways' Managing Board; the report of the Government Chief Engineer of the western division of the Transcontinental Railway; the report of the Chairman of the Quebec Bridge Engineers' Board; and the report of the Chief Engineer of the Department.

In Part I, will be found statements of the accountant of the department, showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, and on each of the government railways; also a statement showing payments made, year by year, to subsidized railways, with the aggregates of such payments.

In Part II are the statements of the Departmental Solicitor of the contracts and agreements entered into during the year.

GENERAL SUMMARY.

During the twelve months of the past fiscal year 1912-13, the expenditures made by or through the department on its several works of operation, maintenance and construction, both railway and canal, and in furtherance by subsidy, under specific votes granted by Parliament, of railway enterprises in various parts of Canada other than the Government roads, also the revenue derived from the Government works, aggregate as follows:—

The total railway expenditure amounted to \$36,689,539.55, of which \$18,888,794.06 was charged to capital, \$12,504,425.65 to revenue, and \$5,296,319.84 to income.

The railway expenditure on capital account included \$2,391,987.53 for the Intercolonial Railway, \$103,001.03 for the Prince Edward Island Railway, \$13,766,916.39 for the eastern division (from Moncton to Winnipeg) of the National Transcontinental Railway, which is in course of construction by a board of commissioners, \$1,099,063.15 for the Hudson Bay Railway, and \$1,512,825.96 for the Quebec bridge.

The railway expenditure on income included a total of \$4,935,507.35 paid as subsidies to railways other than the Government roads, and \$224,472.19 for the Board of Railway Commissioners for Canada.

The expenditure on the Intercolonial Railway amounted to \$14,371,970.22, namely, \$2,391,987.53 on capital account, and on revenue account (working expenses) \$11,979,982.69. On the maintenance of the Windsor Branch the expenditure was \$29,970.62 charged to revenue account.

On the Prince Edward Island Railway, the total expenditure was \$592,973.37, of which \$103,001.03 was charged to capital, and \$489,972.34 to revenue.

The expenditure on canals aggregated \$3,852,999.35; of which \$2,259,257.45 was chargeable to capital account, \$331,987.21 to income, \$703,285.32 for staff, and \$558,469.37 for repairs, the last two amounts being charged to revenue.

Adding to the above for miscellaneous expenditures common to both branches, the sum of \$9,338.17, the total expenditure for the year on railways and canals was \$40,551,877.07.

The total revenue derived from the government railway and canal works was \$12,749,771.12, of which the railways produced \$12,442,203.46, and the canals \$307,567.66,* the sum of \$228,227.28 being derived from hydraulic rents.

The total government expenditure on railways prior to and since Confederation (July 1, 1867) up to March 31, 1913, amounts, on capital account, to \$304,015,587.52, including expenditure on the Quebec bridge, and also the sum of \$25,000,000 granted to the Canadian Pacific Railway Company for its main line; also the amount, \$660,683.09, expended on the Annapolis and Digby Railway. In addition, there has been expended from the consolidated fund a total of \$244,071,325.68, covering the operating expenses of the government roads, and \$48,529,915.92 subsidies other than the main line of the Canadian Pacific Railway, making a total expenditure of \$548,086,913.20. Of this amount, the sum of \$13,881,460.65 was expended prior to Confederation, namely, on the construction of portions of what is now the Intercolonial Railway system, \$10,766,725.54, and on the construction of the Prince Edward Island Railway, \$3,114,735.11.

* Under the authority of an order in council, dated June 22, 1905, the system of charging tolls for the passage of vessels and goods was abolished on all the canals of the Dominion. Records, however, are kept for statistical purposes, and the compilation of the resultant figures is given in a separate report issued by the department.

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The total government expenditure on canals prior to and since July 1, 1867, to March 31, 1913, amounts on capital account to \$104,152,119.42, of which \$20,593,866.13 was expended prior to Confederation, and from the consolidated fund, for operation, maintenance and repairs, to \$34,155,960.09, making a total of \$138,308,079.51.

The total expenditure on the two branches, railways and canals, up to March 31, 1913, is as above, \$686,394,992.71; adding to which for general expenditures embracing both, the further sum of \$824,988.07, the grand total expenditure amounts to \$687,219,980.78.†

The total revenue collected since July 1, 1867, to March 31, 1913, amounts, from the government railways, to \$180,882,956.52, and from the canals to \$14,949,174.77, making a total of \$195,832,131.29.

Details in tabulated form showing the general classes and directions of the above expenditures and revenues will be found in the statements of the accountant of the department, printed in the appendices, Part I herewith.

GOVERNMENT RAILWAYS IN OPERATION.

The government railways are the Intercolonial, the Windsor branch (maintained only and leased for operation), and the Prince Edward Island Railway. They are controlled by a board, 'The Government Railways Managing Board,' appointed under authority of an Order in Council, dated April 20, 1909.

Details respecting these railways and their operation will be found in the appendices, Part III, containing reports from the Government Railways Managing Board, and the officials of these roads.

The Intercolonial Railway operations resulted in a profit of \$777,863.74, but this sum at the close of the year was transferred to the Equipment Renewal Account, and was expended as part of the working expense, making their total \$11,979,982.69, to which is to be added \$4,500 paid under special votes, as compassionate allowances, making the total \$11,984,482.69. The total earnings amounted to \$11,984,482.69.

The Windsor branch maintenance expenditure amounted to \$29,970.62; the government share of the earnings credited to the branch amounted to \$68,246.70, leaving a profit of \$38,276.08.

The Prince Edward Island Railway working expenses amounted to \$489,972.34, its earnings amounted to \$389,474.07, the deficit being \$100,498.27.

† This amount does not include 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 up to 1905, granted by 47 Victoria, ch. 8 (1884), nor the annual payment of \$107,730, being interest at the rate of 4½ per cent since and including 1905, on the said sum of \$2,394,000, for the line between Ottawa and Quebec, which sum was transferred to the public debt as a liability, and is dealt with by the Finance Department. (See Public Accounts, 1893-4, page 10, and 1906, page 79.)

INTERCOLONIAL RAILWAY.

This railway extends from the Atlantic ocean ports of Halifax, St. John, Sydney and North Sydney, to Montreal.

On March 1, 1898, the operations of the Intercolonial, the westerly limit of which previously was Lévis, opposite Quebec, 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.

The leasing agreement for an undivided half share or interest, made with the Grand Trunk Railway Company, and dated February 1, 1898, was confirmed, with modification, by the Act 62-63 Vic., chap. 5 (1899). It covers the distance between Ste. Rosalie station, and the City of Montreal, with termini in that city, also the Jacques Cartier junction, the Chaudiere bridge and its approaches, and the use of the Victoria bridge over the River St. Lawrence above Montreal. Its term extends for a period of ninety-nine years from March 1, 1898, renewable, in like terms of ninety-nine years each, forever; the annual rental being fixed at \$140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899), the Drummond County railway from Chaudiere to Ste. Rosalie, together with the branch from St. Leonard to Nicolet, was acquired by the Dominion; conveyance being made by a deed dated November 7, 1899.

On October 1, 1904, the Canada Eastern railway from Gibson to Loggieville, 123.67 miles, was purchased, and on April 19, 1905, the mortgaged Fredericton and St. Mary's bridge, with connected property, 1.33 mile, was surrendered to the government.

In September, 1911, the branch line, 12.52 miles long, from Ferrona junction to Sunny Brae, was acquired and operated, increasing the length of the railway to 1,468.15 miles. 26.09 miles are double-tracked. There are of spur lines 35.8 miles, and of sidings and tracks in yards, 391.43 miles.

FINANCIAL STATEMENTS.

SUSPENSE ACCOUNTS.

The usual financial statements of the comptroller of the railway, which will be found in the appendices, have, this year, been supplemented by certain additional information regarding the 'Suspense Accounts,' authority for which was given by the Act of 1911, chapter 8, in order to make provision for renewals of equipment and rails, and for loss and damage by fire to railway property. There are also added a statement of receipts and expenses, and a cash statement.

These additional statements show the following in regard of the respective accounts.

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The 'Renewal of Equipment' account opened the year with a credit of \$765,950.44, and, during the year, received increments, including \$777,863.74, the profits of the year's operations, bringing its total up to \$2,012,955.31. The expenditures made from it amounted to \$2,011,615.54, leaving a balance at its credit on March 31, 1913, of \$1,339.77.

The 'Rail Renewal' account started the year with a credit of \$160,784.80. During the year this amount was increased to \$310,787.78, against which the charges aggregated \$81,861.26, leaving the amount at its credit on March 31, 1913, \$223,926.52.

The 'Fire Renewal' account shows a credit at the beginning of the year of \$56,269.40, increased during the year to \$116,269.40; against which there was charged \$13,506.23, leaving a credit balance on March 31, 1913, of \$102,763.17.

CAPITAL ACCOUNT EXPENDITURE.

The expenditure on capital account during the fiscal year ended March 31, 1913, amounted to \$2,493,707.53, against which there are credits, including \$100,000 in connection with the ballast wharf at St. John, amounting to \$101,720, making the expenditure of the year, \$2,391,987.53, and bringing the total capital expenditure on the whole railway as amalgamated under the Acts 54-55 Vic., Chap. 50, (1891), and 62-63 Vic., Chaps. 5 and 6 (1899), together with the acquired Canada Eastern Railway, \$97,137,807.17.

The principal items charged to capital during the year were as follows (omitting cents): for straightening bridges, \$50,299; for increased accommodation at Halifax, \$123,245; for locomotive and car shops with equipment and new freight yard and cut-off line at Moncton, \$18,764; for Sydney Mines diversion, \$128,197; for diversion at Chatham and branch to wharf, \$114,927; for increased accommodation at Campbellton, \$126,290; for office buildings at Moncton, \$36,424; for increased accommodation at Truro, \$146,721; for increased accommodation along the line, \$68,700; for rolling stock, \$400,000; for improvements at Point Tupper, \$93,000; for increased accommodation at Ste. Flavie, \$26,386; for surveys and inspections, \$32,997; for increased accommodation at St. John, \$34,774; for docks and wharfs at Halifax, \$351,385; to the Halifax and Eastern Railway Company for plans, surveys, &c., taken over by the government, \$85,000; towards the construction of the Dartmouth to Deans railway, \$539,791; to pay claim of E. A. Wallberg, for work done under contracts, \$45,578.

REVENUE ACCOUNT EXPENDITURE.

The expenditure on revenue account—working expenses—are grouped, as usual, under five main heads, each divided into a number of sub-heads.

These expenditures for the fiscal year ended March 31, 1913, were as follows: maintenance of way and structures, \$2,066,664.22, against which is a credit of \$8,206.14, for maintaining joint tracks, yards and other facilities, leaving the net

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amount, \$2,058,458.08; maintenance of equipment, \$3,041,672.80; traffic expenses, \$230,481.05; transportation expenses, \$6,438,297.89; against which is a credit of \$59,403.22, for operating joint yards and terminals, leaving the net amount, \$6,378,894.67; general expenses, \$270,476.09. The aggregate of the expenditures under these five heads for the year was \$11,979,982.69; adding to which \$4,500 paid as 'compassionate allowances,' under special votes, the total is \$11,984,482.69.

In the above expenditures, there were included the following items, (omitting cents): maintenance of way and structures:—for ties, \$243,239; for rails, \$180,056; roadway and track, \$738,407; removal of snow and ice and sand, \$95,873; and buildings, fixtures and grounds, \$327,751; maintenance of equipment:—for repairs to locomotives, \$788,952; renewals of locomotives, \$479,050; for repairs to passenger cars, \$296,939; renewals to passenger cars, \$239,525; for repairs to freight cars, \$655,273; for renewals of freight cars, \$359,237. The traffic expenses included, for advertising, \$39,780; and for outside agencies, \$85,494. The transportation expenses included: for station employees, \$775,314; yard conductors and brakemen, \$191,297; for yard engineers, \$145,710; for fuel for yard engines, \$25,947; for road engineers, \$641,478; for road trainmen, \$875,657; and for fuel for road engines, \$1,994,892. The general expenses included salaries and expenses of clerks and attendants, \$106,711; and pensions, \$80,506.

Details of expenditure will be found in the report of the Comptroller, Part III, of the appendices.

GENERAL NOTES.

The gross earnings of the railway for the year amounted to \$11,984,482.69, derived as follows:—

The passenger earnings were \$3,438,447.32; the freight earnings, \$8,028,760.13; the mail and express earnings, \$470,866.13, and miscellaneous, \$46,409.11. The revenue from transportation was 99.16 per cent of the whole.

The total engine mileage was 10,279,369, the total train mileage was 8,147,819, and the total car mileage 115,787,023.

The gross earnings per mile of railway (1,468.15 miles) were \$8,162.98, per engine mile \$1.17, per train mile \$1.47, and per car mile 10.35 cents.

The expenses per mile of railway were as follows: maintenance of way and structures, \$1,402.07; maintenance of equipment, \$2,071.77; traffic expenses, \$156.99; transportation expenses, \$4,344.85; general expenses, \$184.23.

The expenses per train mile were: maintenance of way and structures, 25.26 cents; maintenance of equipment, 37.33 cents; traffic expenses, 2.83 cents; transportation expenses, 78.29 cents; general expenses, 3.32 cents.

The ratio of expenses to gross earnings was as follows: maintenance of way and structures, 17.17 per cent; maintenance of equipment, 25.38 per cent; traffic expenses,

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1.92 per cent; transportation expenses, 53.23 per cent; and general expenses, 2.26 per cent.

Comparing the earnings for the twelve months ended on March 31, 1912, with the corresponding period ended March 31, 1913, the gross earnings for the latter year show an increase of \$1,390,696.85. The passenger traffic produced an increase of \$466,142.69; the freight traffic an increase of \$1,020,459.64; the mails, express traffic and miscellaneous, a decrease of \$50,905.48. The increase per mile of railway was \$947.24, and per train mile 4 cents.

The number of passengers carried was 3,763,115, an increase compared with the previous year of 346,562. There was an increase in the number of local passengers of 321,489, and of 25,073 in the number of through passengers.

Of revenue producing freight 5,203,468 tons were carried, an increase, compared with the previous year, of 666,870 tons. The local freight increased 460,884 tons, and the through freight increased 205,986 tons.

Details of the principal items of this freight will be found in the statements of the Comptroller, Appendix III, classified as follows: products of agriculture, 599,112 tons; animals and their products, also poultry, game and fish, 83,836 tons; products of mines, 1,664,485 tons; products of forest, 1,249,860 tons; manufactures, immigrants' effects, and miscellaneous, 1,606,176 tons.

The rolling stock equipment will be found specifically described in the report of the mechanical accountant in Appendix, Part III. Included in the purchases of the year were 23 locomotives (19 freight and 4 switching) all bought on renewals account, from revenue. Nine of these freight engines, which are of modern type, replaced 25 old small condemned engines. The nine have a tractive power of 343,680 lbs., or 32,860 lbs. in excess of the 25 condemned. The number of locomotives on March 31, 1913, was 390, two less than at the corresponding date of the previous year; their tractive power, however, is greater.

The value of stores on hand at the close of the year was \$1,465,157.78, comprising fuel, \$140,045.69; roadway and bridge material, \$732,902.78, and miscellaneous, \$592,209.31.

COMPARATIVE STATISTICS YEARS 1911-12 AND 1912-13.

In 1911-12 the average tons of freight carried per train, producing revenue, was 256.69 and the number of passengers 62.36; in 1912-13, the average freight tonnage was 272.08, and passengers 65.03.

In 1911-12, the average tons per loaded car, producing revenue, was 17.21, and the number of passengers, 9.46; in 1912-13, the number of tons was 18.00, and of passengers 9.69.

The number of tons per train, all freight, in 1911-12, was 260.66, and in 1912-13, 276.27.

The number of tons per car, all freight, in 1911-12, was 17.47, and in 1912-13, 18.27.

The average distance each ton of freight was carried in 1911-12 was 266.23 miles, and in 1912-13 the average distance was 269.53 miles. The average distances passengers were carried in those years were 49.20 miles and 51.72 miles respectively.

The average number of loaded cars per train in 1911-12, was 14.92 cars of freight, and 6.59 cars of passengers; in 1912-13 the number of freight cars per train was 15.12, and of passengers, 6.71.

The average number of empty cars per train in 1911-12, was 2.48, and in 1912-13, 2.52.

In 1911-12 the average of train miles per mile of road was, for freight trains, 3,204.83, and for passenger, 1,836.19; in 1912-13 these figures were, respectively, 3,510.99 and 2,038.73.

In 1911-12 the average per mile of road of revenue producing freight carried one mile was 822,661.67 tons, and passengers, 114,504.66; in 1912-13 the figures were,—freight, 955,261.74 tons, and passengers, 132,569.36.

The number of tons all freight, per mile of road carried one mile in 1911-12, was 835,387.31, and in 1912-13, 969,998.91.

The train mileage in 1911-12 was: passenger, 2,695,802 miles; freight, 4,705,173 miles; in 1912-13, passenger, 2,993,156 miles; freight, 5,154,663 miles.

The loaded car mileage in 1911-12 was, 70,193,524 miles, and in 1912-13, 77,932,195 miles.

The empty car mileage in 1911-12, was 11,667,392 miles, and in 1912-13, 12,978,505 miles.

The caboose car mileage in 1911-12, was 4,379,112 miles, and in 1912-13, 4,792,595 miles.

The total car mileage of 1911-12, was: passenger, 17,761,983 miles, and freight, 86,240,028 miles; in 1912-13, the figures were, passenger, 20,083,733, and freight, 95,703,295.

The total freight moved in 1911-12, was: 4,689,655 tons; of this quantity 4,536,599 tons were revenue producing. In 1912-13 the total freight moved was 5,372,933 tons, of which 5,203,442 tons were revenue producing.

Repairs to passenger cars cost, per car, in 1911-12, \$642.63, or per car mile, 1.66 cents; and in 1912-13, \$623.93, or per car mile, 1.48 cents.

Repairs to freight cars cost, per car, in 1911-12, \$51.22, or per car mile, .74 of a cent; and in 1912-13, \$32.85, or per car mile, .68 of a cent.

Repairs to locomotives cost, per locomotive, in 1911-12, \$1,799.20, or per locomotive mile, 7.56 cents; and in 1912-13, \$2,062.62, or per locomotive mile, 7.68 cents.

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WINDSOR BRANCH.

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

The 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 government taking the remaining one-third, and assuming all cost 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 twenty-one years, arrangements similar to those made in 1871.

This agreement will expire on December 31, 1913.

All charges for superintendence and supervision of maintenance of work are borne by the government; the duty of supervision is performed by the chief officers of the Intercolonial railway.

The gross government receipts for the twelve months ended on March 31, 1913, amounted to \$68,246.70, a decrease compared with the previous year of \$4,929.90. The decrease was in freight traffic, the passenger traffic having increased. The cost of maintenance was \$29,970.62, leaving the net government earnings \$38,276.08.

PRINCE EDWARD ISLAND RAILWAY.

This is a narrow gauge railway, 3 feet 6 inches. It extends from Tignish to Georgetown, 158.60 miles, and from Charlottetown to Murray Harbour, 52.30 miles, with branches to Souris and Cape Traverse. The length of the road operated was the same as in the previous year, 267.5 miles, together with another branch from Harmony to Elmira, 9.9 miles, completed and opened to traffic in November, 1912. By the addition of this branch the length of the railway was increased to 277.4 miles.

CAPITAL ACCOUNT.

There was an addition of \$103,001.03 to the expenditure on capital account during the year ended on March 31, 1913, making the total capital expenditure \$8,790,728.41. The principal item was for the branch line from Harmony to Elmira, \$66,146.15.

REVENUE ACCOUNT.

The gross earnings amounted to \$389,474.07 and the working expenses to \$489,972.34, leaving a deficiency of \$100,498.27. Compared with the previous year there was an increase of \$22,270.68 in the gross earnings and an increase of \$40,009.43 in the working expenses.

The expenditure on revenue account (working expenses) is classified, as on the Intercolonial, under five heads, with their several sub-heads. It is comprised in the following:—Maintenance of way and structures, \$135,434.58; maintenance of equip-

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ment, \$86,656.33; traffic expenses, \$1,113.36; transportation expenses, \$251,186.09; and general expenses, \$15,581.98.

The number of passengers carried was 433,388, an increase compared with the previous year of 45,812, and this traffic produced \$171,348.57, an increase of \$18,004.15. Of freight, 122,784 tons were carried, an increase of 2,566 tons. The freight earnings amounted to \$180,347.31, an increase of \$3,485.63. The earnings from mails and sundries amounted to \$37,778.19, an increase of \$720.90.

The freight carried was: agricultural products, 33,489 tons; animals, poultry, fish, and their products, 13,538 tons; products of mines, 16,359 tons; products of forests, 14,562 tons; manufactures, household goods and furniture, 14,562 tons; miscellaneous, 30,613 tons.

The engine mileage was 442,497 miles; the train mileage 361,714 miles; and the car mileage 2,334,635 miles.

The gross earnings per mile of railway amounted to \$1,442.50; per engine mile, to 88.02 cents; per train mile, to 107.67 cents; and per car mile, to 16.68 cents.

The working expenses per mile of railway aggregated \$1,814.71, and per train mile, 135.46 cents.

The value of stores on hand on March 31, 1913, was \$71,846.54, comprised in fuel, \$19,046.59; roadway and bridge material, \$16,573.34; and miscellaneous, \$36,226.61.

The road, buildings, and rolling stock are all in a satisfactory condition.

Details will be found in the report of the superintendent of the railway and in the reports of other officers therewith, in the appendices, Part III.

GOVERNMENT RAILWAYS PROVIDENT FUND.

The Act of 1907, chap. 22, establishing a fund to be known as 'The Intercolonial and Prince Edward Island Railway Employees' Provident Fund,' came into effect on April 1, 1907. The main feature is that a contribution of 1½ per cent of each month's salary and wages is made by each employee to the fund, to which a like amount is added by the railway to the limit of \$100,000 a year. Interest at 3 per cent per annum is allowed on the employee's contribution. On retirement, after a certain length of service, the employee will receive for the rest of his life a monthly allowance for each year of his service, equal to 1½ per cent of his average monthly salary or wages for the preceding eight years; the minimum allowance to be \$20 a month, and the maximum two-thirds of his said average monthly pay. In the event of the death of a contributor to the fund while still in the service, his widow, children or relatives may be paid a sum equal to ninety per cent of his total contributions. The fund is administered by a board of five persons, three of whom are officers of the railway, the remaining two being elected annually by the contributing employees. The Act was amended by the Act of 1908, chap. 37, and again by the Act of 1909, chap. 20. Under

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this last, the Government Railways Managing Board nominates one of its members as chairman of the Provident Board.

The sixth annual report of the board, which is printed in Appendix III hereto, shows that at the beginning of the fiscal year, April 1, 1912, there was a balance to the credit of the fund of \$304,234.71, and that during the past fiscal year the contributions of the railway employees amounted to \$85,365.23. Adding to this a like contribution from the government railways, and the sum of \$2,146 for refunds, etc., together with interest accrued, \$9,350.20, the total of the fund for the year aggregated \$491,461.37. The total expenditure during the year was \$145,432.80, of which \$133,539.69 was paid out in retiring allowances, and for contributions refunded, a total of \$3,361.59, leaving at the credit of the fund on March 31, 1913, the sum of \$346,028.57.

In the course of the year 63 employees were retired and pensioned, and 36 pensioners died.

During the six years that the system has been in operation the total contributions by employees amount to \$465,745.31, and a like sum being added by the railways, makes the total \$931,490.62. During this period, 541 employees have been pensioned, of whom 127 have died, leaving 414 in enjoyment of their allowances at the close of the fiscal year 1913. The total paid out for retiring allowances is \$571,294.22.

HUDSON BAY RAILWAY.

During the past fiscal year, closed on March 31, 1913, the location of the railway to Port Nelson, at the mouth of the River Nelson, Hudson Bay, was completed. The line will recross to the left bank of the river at Kettle rapids; the bridge at this point will be about 1,000 feet in length, with a span of about 650 feet over the main channel.

The work of construction for the first 185 miles, from The Pas to Thicket Portage, was placed under contract in August, 1911. Grading has been practically completed up to mile 70, and supplies for the balance of the work have been brought in, and it is expected that the whole 185 miles will be ready for the track by the spring of 1914. The substructure for the bridge over the River Saskatchewan at The Pas was completed in March, 1912, and the superstructure was nearly completed at the close of the year. This bridge consists of four fixed spans, and one swing span.

A contract for a further distance of 68 miles, from Thicket Portage to Split Lake Junction, was let on September 20, 1912, and a third contract covering the distance, 165 miles, from Split Lake Junction to Port Nelson, on December 17, 1912. The total distance is 418 miles.

NATIONAL TRANSCONTINENTAL RAILWAY.

Under an agreement, dated July 29, 1903, ratified by the Dominion Act of that year, chap. 71, and under a modifying agreement dated February 18, 1904, ratified by the Act of that year, chap. 24, the Grand Trunk Pacific Railway Company, a com-

pany incorporated by the Act of 1903, chap. 122, have undertaken certain obligations in respect of the construction and operation of a line of railway, wholly upon Canadian territory, between the city of Moncton, in the province of New Brunswick, and the navigable waters of the Pacific ocean. The railway is composed of two divisions, namely, the eastern division, between Moncton and Quebec, thence westerly through the northern part of the provinces of Quebec and Ontario, and, in the province of Manitoba, to the city of Winnipeg, and the western division, between Winnipeg and the Pacific ocean. The eastern division is being constructed by the government under commissioners appointed by the Governor in Council, and on completion is to be leased to and maintained and operated by the company, who undertake to construct, at their own cost and to maintain and operate, the western division. The lease of the eastern division is to be for a period of 50 years, at a rental of three per cent per annum upon the cost of its construction; the first seven years of the term to be free of rent; both divisions are to be equipped by the company, the first equipment to be of a value not less than \$20,000,000.

By way of assistance to the company in the construction of the western division, it is provided that the government shall guarantee payment of the principal and interest of an issue of bonds to be made by the company for an amount sufficient to produce a sum equal to 75 per cent of the cost of its construction; this amount is not to exceed \$13,000 per mile in respect of the prairie section from Winnipeg to the eastern limit of the Rocky Mountains (such limit to be established by the Chief Engineer of the company and the Chief Engineer of the government, as the result of actual surveys). This limit has been established as the east bank of Wolf creek, a point 120 miles west from Edmonton.

By the Act of 1905, chapter 98, three deeds of trust by way of mortgage, set out in the said Act, were ratified and confirmed, namely, one dated June 10, 1905, between the Grand Trunk Pacific Railway Company, the Royal Trust Company, and His Majesty, to secure the issue of first mortgage bonds; the second dated March 15, 1905, between the Grand Trunk Pacific Railway Company, the National Trust Company, and the Grand Trunk Railway Company, to secure the issue of second mortgage bonds, and the third, also dated March 15, 1905, between the Grand Trunk Pacific Railway Company, the National Trust Company, and the Grand Trunk Railway Company, to secure the issue of first mortgage bonds in respect of the branch line designated as the 'Lake Superior Branch.'

Payments from the proceeds of the bonds of the company for work done, etc., on the western division, are made from time to time on certificates given by the government Chief Engineer of this division, showing approved expenditures.

By the Act of 1909, chap. 19, authority was given for aiding in the completion of the construction of the 'prairie' section by a loan to the company of \$10,000,000, to be secured, as collateral, subject to any prior lien, by a mortgage on the 'prairie' section of their road; such loan to bear interest at the rate of 4 per cent per annum, and to be repayable in ten years.

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This loan, which is dealt with by the Finance Department, was duly made; the mortgage deed being dated May 22, 1909.

The several government expenditures (on the eastern division) to be made under the above-mentioned Acts and agreements are to be so made from appropriations by parliament for the purpose, and on the recommendation of the Minister of Railways and Canals, to whom accounts of all receipts, expenditures and liabilities are to be furnished monthly.

The Board of Commissioners are required to furnish annually a report to the Governor in Council, through the Minister of Railways and Canals, showing the receipts and expenditures of the year, and other information as to the railway, which report is to be submitted to parliament.

The headquarters of the board are in the city of Ottawa.

Under authority of the Act of 1912, chap. 37, the time for the completion of the Prairie section was extended to December 1, 1912, and of the Mountain section to May 1, 1914. Under authority of the Act of 1913, chap. 34, the time for the completion of the Prairie section has been further extended to December 1, 1913.

By the Act of 1912, chap 39, the construction of the Eastern division, and its operation, until completed and leased to the Grand Trunk Pacific Railway Company, was placed under the charge and control of one commissioner (in place of four) to be appointed by the Governor in Council, and to hold office during pleasure. By an order in council, dated April 4, 1912, Mr. R. W. Leonard, C.E., the Chairman of the Commission as then existing, was appointed as such commissioner.

The report of the board for the fiscal year ended March 31, 1913, has been prepared, and will be laid before parliament in due course.

The following summary shows the position at the close of the year.

EASTERN DIVISION.

(Moncton to Winnipeg.)

The total mileage from Moncton, N.B., to the west side of Water street, Winnipeg, is, approximately, 1,804.2 miles.

Of this mileage, up to March, 1913, 1,739 miles were graded, and the track was laid in the main line for a distance of 1,720.36, together with 384.73 miles of sidings, yards and double-track, making a total of 2,105.09 miles. The bridges were completed to the extent of 89.5 per cent.

The total expenditures by the Commissioners during the fiscal year ended March 31, 1913, on the entire eastern division, amounted to \$13,729,461.44, making their

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total expenditure from the date of their organization in September, 1904, to that date, \$130,247,152.95.

Detail summaries of this expenditure are furnished by the Chief Accountant of the Commission. They show the total for the past fiscal year to be made up as follows:—Headquarters, \$190,983.55; construction, \$13,511,637.77; and transport, \$26,840.12.

The total expenditure from September, 1904, to March 31, 1913, was as follows:—Construction, \$124,120,798.61; location, \$2,943,323.85; transport, \$1,244,053.77; and headquarters, \$1,938,971.72.

The statement of the accountant of the department (Part I, of the appendices hereto) shows the expenditure on the eastern division for the year ended March 31, 1913, to be \$13,766,916.39, and the total expenditure on this division up to that date \$130,300,684.92, the expenditures yearly being as follows:—

1904.	\$	6,249 40
1905.		778,491 28
1906.		1,841,269 95
1907.		5,537,867 50
1908.		18,910,449 41
1909.		24,892,422 68
1910.		19,968,126 86
1911.		23,488,203 40
1912.		21,110,683 05
1913.		13,766,916 39
Total.		\$130,300,684 92

The section of the railway from Moncton to Edmundston, 230 miles, has been operated from November 20, 1912, to the close of the year, a tri-weekly service being afforded. The necessary rolling stock was leased, with the exception of a snow-plough purchased. The results of this operation are shown in a statement of the Chief Accountant of the Commission to have been as follows:—

Total expenditure, \$46,163.30; earnings, \$13,557.76; deficit, \$32,605.54. Against this deficit, however, there is the value of the equipment purchased, \$7,000 and stores, \$3,006.95, a total of \$10,016.33.

WESTERN DIVISION.

The western division extends from the western boundary of the Winnipeg terminals on the east bank of the River Assiniboine, in the city of Winnipeg, to the newly founded city of Prince Rupert, on the Pacific coast, a distance of 1,745 miles.

It is divided into two sections, namely, the 'Prairie Section,' extending from Winnipeg to the east bank of Wolf Creek—a point 120 miles west of Edmonton, the

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capital of the province of Alberta—a distance of 915 miles, and the 'Mountain Section,' which extends from the east bank of Wolf Creek to Prince Rupert, a distance of 830 miles.

This division is in course of construction by the Grand Trunk Pacific Railway Company, under the government guarantee agreements above mentioned, and the Government Chief Engineer of the Division, on whose certificates payments are made to the company, is Mr. Collingwood Schreiber, C.M.G., whose report, showing the position of the work at the close of the fiscal year, March 31, 1913, will be found printed in the appendices hereto, Part IV.

Of this, the following is a brief summary:—

' PRAIRIE SECTION.'

Though not fully completed according to contract, the whole road from Winnipeg to Wolf Creek has been regularly operated for public traffic during the past, as during the previous year. The work done has been principally work of maintenance and repair.

On this section the maximum grade against eastbound traffic is four-tenths of one per cent, and against westbound traffic five-tenths of one per cent.

On this section there are 142 stations, 114 way-station houses, 5 divisional station houses, 132 grain elevators, and 44 stock yards, besides numerous other buildings directly connected with the operation of the road.

' MOUNTAIN SECTION.'

On this section the track is laid for a distance of 210 miles from Wolf Creek westerly to the crossing of the River Rau Shuswap, and the road for this distance is being operated by regular traffic trains. Twenty-two way stations, and two divisional stations, together with round-houses, machine shops and a number of other structures have been provided.

From mile 210 to mile 245—Goat River crossing—the grading and the wooden bridges are about 95 per cent completed. The steel bridges over the rivers Rau Shuswap and Goat were not completed at the close of the year.

From mile 245 to mile 275—the second crossing of the River Fraser—about 48 per cent of the grading is done, exclusive of a tunnel 2,200 feet long, in driving which difficulty is experienced owing to the character of the material; a temporary line has been constructed round it.

From mile 275 to mile 362—Fort George—the clearing of the right-of-way is far advanced, and a small amount of grading has been done.

From mile 362 to mile 500—Burns lake—the clearing has been practically completed, but no grading has been done.

From mile 500 to mile 570—Bulky Summit—the clearing has been completed and about 35 per cent of the grading done.

From mile 570 to mile 632—the crossing of Boulder creek—the grading is practically completed.

From mile 632 to mile 830—zero on the Grand Trunk Pacific Railway wharf at Prince Rupert—the grading, bridging and tracklaying are practically completed, 22 way stations and one divisional station, together with other buildings have been provided, and trains for public traffic are operated over the road from mile 649—New Hazelton to Prince Rupert, a distance of 181 miles. The progress made on this section has been retarded, owing to difficulty in procuring labour and to the unusually light fall of snow in the Rocky Mountains, which resulted in a rapid subsidence of the River Fraser waters, putting the steamers, built by the contractors for service between Tête Jaune Cache and Fort George, out of commission after three weeks, instead of being available for several months.

TOTAL EXPENDITURE.

The expenditure, up to March 31, 1913, amounted, on the 'Prairie Section,' to \$35,894,376.91, and, on the 'Mountain Section,' as certified, to \$50,232,556.34, making a total of \$86,126,933.25.

QUEBEC BRIDGE.

On August 29, 1907, the cantilever bridge in course of construction by the Quebec Bridge and Railway Company (originally commenced under a subsidy of \$1,000,000 authorized by the Act of 1899, chapter 7, and a subsidy agreement, dated November 12, 1900), collapsed.

Under the terms of an agreement with the company, dated October 19, 1903, ratified by the Act of 1903, chapter 54, the government had undertaken to guarantee the principal and interest of the bonds or other securities of the company to the limit of \$6,678,200, the company releasing claim to the balance remaining unpaid of the said subsidy, such guarantee to be secured by mortgage on the company's franchises, tolls and property. On February 1, 1904, a mortgage trust deed was executed, conveying to the Royal Trust Company (Montreal) as trustees, all the property and franchises of the company, and providing for the issue of bonds accordingly.

It was provided in this agreement that the government should have the right at any time, on one month's notice, to take over the company's undertaking, assets, property and franchises, on paying the shareholders the amount of their stock at par, not exceeding \$265,585.70, with simple interest at 5 per cent and a premium of 10 per cent on the par value of the paid-up shares.

Of the said subsidy of \$1,000,000, there had been paid to the company a total of \$374,353.33 prior to the execution of above agreement; and, subsequent to its execu-

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tion, payments were made from the proceeds of their bonds to the extent of \$5,016,453.66 (on certificates of the government engineer covering work done and materials delivered.*

After the collapse of the bridge, the right of the government to take over the company's undertaking was exercised under the authority of an order in council of August 17, 1908. The date of assumption was December 1, 1908. The total of the amounts paid by the government to the several shareholders for their shares was \$355,279.07, payment being made to the parties concerned in November, 1908. The deed of assignment and transfer from the company to the government was dated October 18, 1909.

Under authority of an order in council of August 17, 1908, a board of three engineers was constituted for preparation of a new design and specifications, and for the reconstruction of the bridge, with powers to call in expert engineers as advisers on points of difference that might arise.

Towards the close of the year, 1909, such progress had been made that newspaper notice was given in November of that year, inviting contractors to visit the office of the board in order to obtain information to enable them to prepare offers for the superstructure, on the board's plans and specifications; intending contractors being, however, invited to submit alternative designs.

In June, 1910, the formal call for tenders was made by newspaper advertisement. In response, 35 different propositions were submitted, which were duly considered by the board, who, finally, after calling in advisory engineers, recommended the acceptance of an alternative design sent in by the St. Lawrence Bridge Company (with whom are associated the Dominion Bridge Company and the Canadian Bridge Company). This design the board considered to possess certain features of strength, simplification of erection, economical distribution of material, and general appearance which, in their opinion, would produce a bridge that 'would compare most favourably with the highest type of long-span bridges in existence.' By an order in council of March 31, 1911, authority was given for entrance into contract with the conjoined companies named, and such contract was executed under date April 4, 1911. The contract price is 9.02 cents a ton, and will aggregate about \$8,650,000, a saving of about \$2,600,000, having been effected by the elimination of the highways for vehicular traffic contemplated in the original design; the contract date for completion is December 31, 1915.

The bridge when constructed will have a total length of 3,228 feet, or about three-fifths of a mile. The centre span will be 1,800 feet long; the length of the suspended portion of it will be 640 feet. This span will, for a length of 760 feet over the channel of the river, have a height of 150 feet between its lower members and the high water level of the river. The two cantilever arms will each be 580 feet long. The width of the bridge between trusses will be 88 feet. The bridge will comprise a double-track railway, and two sidewalks for foot passengers.

* The history of the government's connection with the bridge prior to its collapse is given in the Departmental Annual Report of 1907-8, p. XLVII.

Under date of January 10, 1910, a contract for the substructure was entered into with Messrs. M. P. and J. T. Davis, whose tender was the lowest of three obtained after newspaper advertisement calling for tenders; and supplementary agreements necessitated by changes in the caisson design and in the location of the north anchor pier, were made with them on May 23, 1910, and September 2, 1911.

The Board of Engineers for reconstruction, as originally constituted, has been modified by retirements and is at present composed as follows:—Charles N. Monsarrat, M. Can. Soc. C.E., chairman and chief engineer; Ralph Mojeski, Am. Soc. C.E., and C. C. Schneider, Can. Soc. C.E., and past president Am. Soc. C.E.

The headquarters of the board are in Montreal.

The report of the board for the year ended on March 31, 1913, will be found printed in the appendices hereto, Part V.

The expenditure during the past fiscal year up to March 31, 1913, was \$1,512,825.96, paid out of capital, and making the total capital expenditure \$2,343,682.43, adding to which, the expenditure from income, namely, for the year 1908-9, \$422,867.12 (in which is included the amount \$355,279.07, paid for acquiring the stock of the Quebec Bridge and Railway Company, and \$31,765.44, the expenses of the commission of inquiry into the causes of the collapse of the old structure), and for the year 1909-10, \$111,782.02, for the preparation of plans, etc., against which there is to be credited the sum of \$100,000 paid in 1910 to the government by the Phoenix Bridge Company, the contractors for the original superstructure, in the final adjustment of claims arising out of the collapse, the total net cost to the government up to March 31, 1913, is \$2,778,337.57. This is irrespective of the amount of subsidy, \$374,353.33 paid to the Quebec Bridge Company as above mentioned.

The report of the board shows that up to March 31, 1913, the caisson for the south main pier had been successfully sunk to bed rock, about 86 feet below the bed of the river, or 102 feet below extreme high water, and had been filled with concrete up to the point from which the granite shaft of the pier will start. Satisfactory foundations for the south anchor pier had been reached.

On the north side of the river, the north intermediate pier supporting the approach spans had been completed, and satisfactory foundations had been obtained for the north anchor pier, and before the close of the season eleven courses of masonry had been laid. The shaft of the north main pier had been carried up to a point two feet below extreme high water.

The Chairman and Chief Engineer states that all the difficult work necessitating caissons and the use of compressed air has been completed, and that the remainder is above high water, will present no problems, and will be carried on much more rapidly.

As to the superstructure, he states that the contractors have constructed a large plant at Rockfield for the fabrication of the requisite steel, and that actual manufacturing was started in February, 1913; it is expected that their shops will be able to turn

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out about 2,000 tons of finished steel per month. The removal, under contract, of the unused material of the old bridge has continued, and about one-third of the total quantity has been removed.

The result of tests made under the supervision of the board shows that the members of the bridge as designed are able to develop the strength called for by the specifications.

SUBSIDIZED RAILWAYS.

Information as to subsidized railways is given in the statements of the accountant and the law clerk of the department, respectively, which will be found in the appendices hereto. The accountant's statements show all payments made, year by year, since the beginning of the system of railway subsidies; the law clerk's statement shows the several subsidy agreements entered into during the past year, with certain details of the specification in each case.

The total payments made on subsidy account during the year ended March 31, 1913, amounted to \$4,935,507.35.

BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

By the Act 3 Edward VII, chap. 58 (1903), amending and consolidating the law respecting railways, the Railway Committee of the Privy Council was abolished, and in lieu thereof a Board of Commissioners, under the above title, was created, to consist of three members (increased to six by the Act of 1908, chap. 62), to be appointed by the Governor in Council; this Act was brought into force on February 1, 1904, by proclamation, on the authority of an order in council, dated January 18, 1904, which also appointed certain persons as commissioners. By the Act of 1908, chap 61, the jurisdiction of the board was extended to cover the operation of telegraph and telephone lines, and by the Act of 1908, chap. 62, certain amendments were made to its constitution and otherwise. By the Act of 1909, chap 31, the board was empowered to determine the maximum price to be charged for electricity developed through water powers leased from the Crown. An Act of 1910, chap 50, amended certain provisions of the Railway Act regarding the powers of the board, and the Act of the same year, chap 57, extended the jurisdiction of the board to cover the fixing by it of the tariffs of wireless telegraph and marine electric telegraphs or cables. The Act of 1911, chap. 22, gave powers to the board to require from railway companies the establishment of a staff of fire-rangers, modified the previous enactments regarding the disposal of electricity developed through government leased water powers, and amongst other enactments, made provision for action, through the board, to ensure the efficient operation of subsidized railways. The office of the board is at Ottawa, though it is authorized to hold sessions in any part of Canada. Its decisions and orders are final, subject to appeal to the Supreme Court upon questions of jurisdiction or law, and also to action thereon by the Governor in Council, in his discretion.

It is required to make, annually, a report of its proceedings, which report is laid before parliament. The report for the year ended March 31, 1913, has been received, and will be laid before parliament in due course.

CANALS.

The total expenditure on the Dominion canals for the twelve months ended March 31, 1913, was \$3,852,999.35, comprising \$2,250,257.45 charged to capital; \$331,987.21 charged to income; \$703,285.32 for staff; and \$558,469.37 for repairs; the last two items being charged to revenue.

The balance of rentals due on April 1, 1912, was \$174,312.44. The rentals accrued during the year amounted to \$231,913.20, making a total of \$406,225.64. Of this amount, there was collected during the year a total, after deducting abatements, \$19,607.77, of \$228,227.28. The balance remaining due on March 31, 1913, was \$158,390.59. It should be observed that, as a general rule, rentals are payable in advance, this fact accounting, to a considerable extent, for the large amount of rentals due at the end of each year.

The total revenue collected amounted to \$309,072.10, the balance being made up of wharfage dues, fines, etc., and a total of \$61,229.70 derived from the operation of the Port Colborne grain elevator on the Welland Canal. Of this amount, refunds were made to the extent of \$1,504.44, leaving the net revenue \$307,567.66.

No tolls are charged on any of the Dominion canals.

Summaries of these expenditures and receipts will be found in the statements furnished by the accountant of the department, printed in the appendices, Part I, of the present report.

The above figures relate to the fiscal year 1912-13, but very voluminous statistics relating to canal traffic, and various commercial statistics for the season of navigation of the year 1912, will be found in the 'Canal Statistics,' which are issued as a separate report.

The principal facts of these statistics, summarized, are as follows:—

The total traffic through the several canals of the Dominion for the season of 1912 amounted to 47,587,245 tons, an increase of 9,556,892 tons compared with the previous year. 292,267 passengers were carried, a decrease of 12,637.

The following features of the principal canal traffic during the season of 1912 will be of interest:—

On the Welland canal, 2,851,915 tons of freight were moved, an increase of 314,286 tons. Of the total, 1,205,912 tons were agricultural products and 227,684 tons produce of the forest; of coal, 534,201 tons were carried; 2,786,687 tons were through freight, of which 2,008,863 tons passed eastward.

Of the through freight, Canadian vessels carried 1,889,228 tons, an increase of 284,906 tons, and United States vessels 897,459 tons, a decrease of 7,950 tons.

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The total through freight passed eastward and westward through this canal to United States ports was 415,756 tons, a decrease of 69,599 tons, compared with the year 1911.

The quantity of grain passed down the Welland and St. Lawrence canals to Montreal was 961,855 tons, an increase of 124,931 tons, as compared with the previous year; no transshipments have been made at Ogdensburg since 1903.

On the St. Lawrence canals, 3,477,188 tons were moved, an increase of 371,477 tons, of which 2,518,307 tons were eastbound freight, and 958,881 tons westbound freight; 1,119,567 tons were agricultural products, 1,103,315 tons coal, and 578,760 tons forest products.

On the Ottawa River canals, the total quantity of freight moved was 392,350 tons, an increase of 72,279 tons, of which 226,600 tons were produce of the forest.

On the Chambly canal, 618,415 tons were moved, an increase of 18,586 tons, of which 425,313 tons were produce of the forest, and 120,305 tons of coal.

On the Rideau canal, 160,133 tons were carried, a decrease of 12,094 tons; 28,642 tons being produce of the forest, and 14,666 tons of coal.

On the St. Peter's canal, 74,809 tons were carried, a decrease of 489 tons; 35,543 tons were coal.

On the Murray canal, 170,081 tons passed, an increase of 6,624 tons.

On the Trent canal, 77,150 tons were moved, an increase of 19,860 tons, of which 67,489 tons were produce of the forest.

On the St. Andrew's lock on the Red river, Manitoba, the volume of business was 95,549 tons.*

On the Sault Ste. Marie canal, the total movement of freight was 39,699,655 tons, being an increase of 8,717,946 tons. There were 7,856 passages of vessels, the number of lockages being 6,200. Of wheat, 117,679,934 bushels, and of other grain, 37,116,343 bushels were carried; 2,388,710 barrels of flour; 31,141,063 tons of iron ore; 2,945,441 tons of coal; and 31,982,500 feet, board measure lumber.

The report of the Chief Engineer of the department, and the reports of the officers under his immediate control, which will be found in Part VI of the appendices, give comprehensive information as to the several works under his charge, the principal of which are the Hudson Bay railway, the Trent canal, the new Welland ship canal, and the terminals of the Intercolonial railway near Halifax.

* This work, which consists of a lock and dam on the Red River about 15 miles north of Winnipeg, was built and is operated by the Department of Public Works. It affords communication between Winnipeg and Lake Winnipeg. It is only mentioned here for statistical purposes.

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RAILWAY STATISTICS.

The digest of the sworn statements of railway companies relating to their operations in Canada for the twelve months ended June 30, 1913, is prepared by the Departmental Comptroller of Statistics, and is issued as a separate report.

CANAL STATISTICS.

The traffic statistics of the Dominion canals for the season of navigation of 1913 are compiled under the direction of the same officer, and are also issued as a separate report.

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

A. W. CAMPBELL,
Deputy Minister.

APPENDICES

PART I

STATEMENTS

OF THE

ACCOUNTANT OF THE DEPARTMENT

SHOWING

EXPENDITURE ON RAILWAYS AND CANALS

(Including Subsidized Railways)

AND RECEIPTS

FOR THE YEAR 1912-13

AND PREVIOUS YEARS

GENERAL Statement of the EXPENDITURE of the Department of Railways and Canals during the Fiscal Year ending March 31, 1913.

TOTAL EXPENDITURE—as per Statements, pages 35 and 36...		\$40,551,877 07	
Expenditure chargeable to Railways..	\$29,860,893 75		
“ “ Railways General..	380,312 49		
“ “ Quebec Bridge..	1,512,825 96		
“ “ Railway subsidies	4,935,507 35		
Total expenditure, Railways..		\$36,689,539 55	
Expenditure chargeable to Canals..	\$3,688,792 70		
“ “ Canals General	164,206 65		
Total expenditure, Canals..		3,852,999 35	
General expenditure..	\$ 9,338 17		9,338 17
Total expenditure...		\$40,551,877 07	

CLASSIFICATION OF EXPENDITURE IN GENERAL.

Capital Account..	\$21,148,051 51	
Revenue Account..	13,766,180 34	
Income Account..	702,137 87	
Consolidated Fund (railway subsidies) Income...	4,935,507 35	
Total expenditure during fiscal year..		\$40,551,877 07

CLASSIFICATION OF EXPENDITURE IN DETAIL.

<i>Railways.</i>			
Capital expenditure—Railways..	\$17,360,968 10		
“ “ Railways General	15,000 00		
		\$17,375,968 10	
Revenue expenditure—Railways..	\$12,499,925 65		
“ “ Railways General...	4,500 00		
		12,504,425 65	
Income “ Railways General..	\$360,812 49		360,812 49
<i>Quebec Bridge.</i>			
Capital expenditure—Quebec Bridge..		1,512,825 96	
<i>Railway Subsidies.</i>			
Consolidated Revenue—Railway subsidies..		4,935,507 35	
Total expenditure on Railways..	\$36,689,539 55		
<i>Canals.</i>			
Capital expenditure—Canals..	\$2,255,448 21		
“ “ Canals General...	3,809 24		
		2,259,257 45	
Income “ Canals..	292,960 26		
“ “ Canals General...	39,026 95		
		331,987 21	
Revenue “ Canals Staff..	605,248 57		
“ “ Canals Staff, General...	98,036 75		
“ “ Canals Repairs..	535,135 66		
“ “ Canals Repairs, General...	23,333 71		
		1,261,754 69	
Total expenditure on Canals..	\$3,852,999 35		
General expenditure—Income account...		9,338 17	
Total expenditure..		\$40,551,877 07	

Department of Railways and Canals,
Ottawa, August 1, 1913.

W. C. LITTLE,
Accountant.

GENERAL Statement of the REVENUE RECEIVED by the Department of Railways and Canals during the Fiscal Year ending March 31, 1913.

TOTAL REVENUE RECEIVED..		<u>\$12,749,771 12</u>
Revenue from Railways..	\$12,442,203 46	
Revenue from Canals	<u>307,567 66</u>	
Total revenue as above..		<u>\$12,749,771 12</u>

STATEMENT OF REVENUE RECEIVED, IN DETAIL.

Railways.

Intercolonial Railway..	\$11,984,482 69	
Windsor Branch Railway..	<u>68,246 70</u>	
Prince Edward Island Railway..	\$12,052,729 39	
	<u>389,474 07</u>	
Total Revenue from Railways..		\$12,442,203 46

Canals.

Welland Canal..	\$ 50,873 73	
" Elevator, Port Colborne..	60,828 06	
Lachine Canal..	144,571 79	
Beauharnois Canal..	14,944 89	
Cornwall Canal..	10,563 94	
Williamsburg Canal..	3,107 30	
Soulanges Canal..	3,576 00	
Chambly Canal..	711 50	
Carillon and Grenville Canal..	576 20	
Rideau Canal..	6,098 75	
Trent Canal..	10,866 51	
St. Peters Canal..	2 00	
Sault Ste. Marie Canal..	513 49	
Murray Canal..	200 00	
Ste. Anne's Lock Canal..	152 00	
Chats Falls Canal..	1 00	
	<u>\$307,590 16</u>	
Less refunds, St. Peters Canal..	<u>22 50</u>	
Total Revenue received..		<u>307,567 66</u>
		<u>\$12,749,771 12</u>

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, August 1, 1913.

SESSIONAL PAPER No. 20

CANALS.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.		Total Expenditure during year.
			Staff.	Repairs.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Carillon } Grenville }		774 60	25,730 35	16,209 00	42,803 95
Chambly.....	12,529 07	3,486 97	34,323 21	44,748 39	95,087 64
Cornwall.....		29,753 37	79,897 25	56,423 40	166,074 02
Lachine.....	463,291 97		89,509 15	91,689 64	644,490 76
Murray.....		11,254 14	5,512 70	2,955 94	19,722 78
Rideau.....	41,565 00	21,992 94	56,863 98	91,984 66	212,406 58
Sault Ste. Marie.....	45,941 17	13,726 84	27,588 62	26,762 40	114,019 03
Soulanges.....	180,816 28		38,080 18	27,221 50	246,117 96
Ste. Anne's Lock.....			2,769 63	2,298 26	5,067 89
St. Ours Lock.....		2,678 37	3,550 02	2,449 44	8,657 83
St. Peters.....		39,143 77	5,144 13	807 78	45,095 68
Trent.....	1,162,605 75	41,499 98	47,431 26	50,049 83	1,301,586 82
Welland.....	347,711 15	39,674 82	156,598 55	93,231 29	637,215 81
Williamsburg.....		3,541 48	32,269 54	28,214 13	64,025 15
Galops Canal.....	1,372 82	24,701 59			26,074 41
" Farran's Point.....		15,706 14			15,706 14
" Rapide Plat.....		45,025 25			45,025 25
Total.....	2,255,833 21	292,960 26	605,248 57	535,135 66	3,689,177 70
Less Culbute Canal unclaimed cheques.....	385 00				385 00
	2,255,448 21	292,960 26	605,248 57	535,135 66	3,688,792 70
GENERAL ON CANALS.					
Dredge Vessels—Lachine.....				7,010 28	7,010 28
" Rideau.....				14,814 77	14,814 77
Miscellaneous.....			2,650 92	620 41	3,271 33
Miscellaneous Works not provided for.....		842 33			842 33
Civil Service Gratuities.....		4,830 75			4,830 75
Statistical Officers.....			33,423 96		33,423 96
Sunday Labour.....			40,415 85		40,415 85
Surveys and Inspections.....		13,932 44			13,932 44
New Tug.....	3,809 24				3,809 24
Maintenance, staff.....			21,546 02		21,546 02
Protection wall north side Lake St. Francis.....		5,601 72			5,601 72
Automatic water gauges.....		298 44			298 44
Removing old stone piers of bridge over lost channel, St. Timothé.....		374 34			374 34
Dredging.....		7,146 93			7,146 93
Completing macadam- izing of H. B. Dyke.....		6,000 00			6,000 00
Hungry B. and Ste. Barbe Dyke Repairs.....				888 25	888 25
Total.....	3,809 24	39,026 95	98,036 75	23,333 71	164,206 65
Total.....	2,259,257 45	331,987 21	703,285 32	558,469 37	3,852,999 35

Grand total on canals, \$3,852,999.35.

RAILWAYS.

Name of work.	Chargeable to Capital.		Chargeable to Income.		Chargeable to Revenue.	
	\$	cts.	\$	cts.	\$	cts.
RAILWAYS.						
Intercolonial	2,391,987	53			11,979,982	69
National Transcontinental.....	13,766,916	39				
Prince Edward Island.....	103,001	03			489,972	34
Windsor Branch.....					29,970	62
Hudson Bay.....	1,099,063	15				
Quebec Bridge.....	1,512,825	96				
Total	18,873,794	06			12,499,925	65
RAILWAY SUBSIDIES			4,935,507	35		
GENERAL ON RAILWAYS.						
Purchase of car "Canada" for Governor General	15,000	00				
Railway Commission—Maintenance.....			171,044	24		
" " Statutory.....			53,427	95		
Surveys and inspections—Including inspection Grand Trunk Pacific Railway			99,935	59		
Railway grade crossing fund.....			20,807	38		
Attendance, repairs and alterations to Governor General's car.....			5,500	00		
To pay expenses in connection with consolidation of Railway Act.....			3,000	00		
Contribution of Government railways to the Faculty of McGill University.....			2,500	00		
Contribution of Government railways to Polytechnic School Montreal.....			2,500	00		
Remuneration to Government Director, Grand Trunk Pacific Railway.....			2,000	00		
Subscription to International Congress, Brussels.....			97	33		
Compassionate allowance to Mrs. E Bellavance, I.C.R. (special vote)					1,000	00
Compassionate allowance to Mrs. Emily Grenier, I.C.R. (special vote).....					1,000	00
Compensation to O. Savary, I.C.R. (special vote).....					500	00
Compassionate allowance to Mrs. Rebecca McDonald, I.C.R. (special vote).....					1,000	00
Allowance to the infant children of the late Joseph Cuthbertson, I.C.R (special vote).....					1,000	00
Total	15,000	00	360,812	49	4,500	00
Total on railways	18,888,794	06	5,296,319	84	12,504,425	65
Grand total on railways including Quebec Bridge, \$36,639,539.55.						
MISCELLANEOUS EXPENDITURE.						
Cost of litigation.....			194	81		
Miscellaneous investigations under the Inquiries Act.....			9,143	36		
Total			9,338	17		
Grand total on railways and canals, including miscellaneous expenditure.....	21,148,051	51	5,637,645	22	13,766,180	34
Total amount of expenditure, \$40,551,877.07.						

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, Ordinary Repairs and Working Staff up to March 31, 1913.

BAIE VERTE CANAL.

	Year ending.	Capital.	Income.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
" " since "	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		
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" " "	1912		
" " "	1913		
Total.....			44,387 53

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

BEAUHARNOIS CANAL.

	Year ending.	Capital.		Renewals Chargeable to Income.		Staff.		Repairs.	
		\$	cts.	%	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	19,238	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			1,636	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	10,428	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	32	13,463	01
" " " "	1900			4,959	22	20,147	59	14,505	30
" " " "	1901			483	40	20,118	42	14,199	12
" " " "	1902					16,682	52	6,532	33
" " " "	1903					8,218	14	10,063	38
" " " "	1904					9,236	27	11,936	37
" " " "	1905			14,949	83	9,086	68	10,499	99
" " " "	1906			2,531	24	9,291	91	13,640	71
" " " "	1907			598	64	7,552	02	11,711	09
" " " "	1908			2,260	81	7,032	31	13,019	76
" " " "	1909			21,758	84			†	
" " " "	1910			24,319	49			†	
" " " "	1911							†	
" " " "	1912							†	
" " " "	1913							†	
Total		*1,636,690	26	265,810	84	649,574	89	525,691	23

* See page 52 for total of St. Lawrence River and Canals.

† This canal being under lease since 1908, no expenditure has been incurred for maintenance nor operation.

W. C. LITTLE, ,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.
CHAMBLY CANAL.

	Year ending.	Capital.		Renewals Chargeable to Income.		Staff.		Repairs.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation since	1868	634,711	76			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
"	1874					2,810	00	11,675	67
"	1875	2,415	00					16,427	19
"	1876							12,201	99
"	1877	80	00					10,593	14
"	1878							13,273	56
"	1879							10,281	78
"	1880							10,413	99
"	1881							6,022	96
"	1882							11,301	53
"	1883							8,809	77
"	1884							12,377	74
"	1885							13,950	47
"	1886							20,705	17
"	1887							16,686	78
"	1888			31,796	41			16,843	60
"	1889			21,332	36			15,182	24
"	1890			41,640	77			12,003	34
"	1891			21,049	23			13,046	95
"	1892			14,547	27			11,999	77
"	1893			17,911	17			20,071	37
"	1894			65,536	64			11,823	74
"	1895			51,437	87			19,392	18
"	1896			23,221	48			14,399	93
"	1897			43,344	41			11,399	93
"	1898			38,353	99			12,976	48
"	1899			21,127	65			12,451	03
"	1900			8,567	78			11,779	12
"	1901			6,147	63			11,920	74
"	1902			3,694	63			11,801	12
"	1903			12,665	88			13,128	55
"	1904			*150.00				12,466	51
"	1905			13,184	68			11,997	51
"	1906			15,255	42			13,995	00
"	1907			5,448	88			17,572	35
"	1908			1,195	09			17,313	02
"	1909			19,132	80			21,745	65
"	1910			8,977	43			25,656	00
"	1911			26,701	59			19,896	57
"	1912			33,066	50			25,173	48
"	1913			26,192	72			22,508	88
"				29,953	80			30,627	72
"		157	90	34,264	31			24,389	29
"		13,307	02	35,784	54			22,825	53
"		30,479	41	8,207	00			34,796	66
"		20,000	04	8,717	20			44,748	39
"		15,469	29	26,838	40				
"		12,529	07	3,486	97				
Total		†728,999	47	727,097	75	841,414	37	787,829	80

* Less proceeds of sale of piece of land in 1898.

† Chamby Canal and Richelieu River.

Chamby Canal, as above	\$ 728,999 49
St. Ours Lock, see page 53	125,843 93

Less amounts deducted at Confederation, see Public Accounts, 1868, part I, page 9.	\$ 854,843 42
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Government expenditure prior to Confederation.

Chamby Canal as above	\$ 634,711 76
St. Ours Lock, see page 53	121,537 65

	\$ 756,249 41
Returned as an asset in Public Accounts, 1868.	433,807 83
	322,441 58

Agreeing with Public Accounts, 1913, page 4	\$ 532,401 84
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SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

CORNWALL CANAL.

—	Year ending.	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	143,032 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 61	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
" ".....	1900	169,889 51		18,547 50	18,798 10	13,998 29
" ".....	1901	62,032 47			17,104 13	13,166 89
" ".....	1902	90,535 18			17,896 58	15,045 95
" ".....	1903	77,833 81			70,129 29	19,205 66
" ".....	1904	113,795 16		1,730 16	45,792 64	20,932 55
" ".....	1905	104,093 45		8,324 83	71,073 68	28,100 67
" ".....	1906	37,879 09		20,063 79	71,246 77	31,893 13
" ".....	1907	5,218 03		4,191 61	52,050 56	24,489 18
" ".....	1908	9,897 90		11,270 83	73,651 90	35,703 68
" ".....	1909	495 00		151,628 65	75,581 54	42,978 72
" ".....	1910	89 54		35,549 06	76,519 49	51,330 83
" ".....	1911			76,719 09	78,583 80	45,362 81
" ".....	1912	8,037 07		60,352 90	83,784 79	59,338 24
" ".....	1913			29,753 37	79,897 25	56,423 40
Cost of enlargement.....			5,297,179 48			
Total.....			7,242,804 21	518,415 99	1,303,105 20	822,141 38

* Included in total cost of St. Lawrence River and Canals, See page 52.

W. C. LITTLE,
Accountant.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

CULBUTE LOCK AND DAM.

	Year ending.	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				
" " " "	1900	3,085 00			
" " " "	1901	197 00			
" " " "	1902		1,135 00		
" " " "	1903				
" " " "	1904		2,204 50		
" " " "	1905		2,255 00		
" " " "	1906				
" " " "	1907				
" " " "	1908				
" " " "	1909				
" " " "	1910				
" " " "	1911				
" " " "	1912				
Less unclaimed Cheques	1913		385 00		
Total		*382,391 46	60,923 37	11,507 48	7,036 15

* Included in total cost of Ottawa River Works, see page 47.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing the amount expended on Construction, Renewals, &c.—Continued.
LACHINE CANAL.

	Year ending	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 from 1845 to 1848 Expenditure by Dominion Government.....			2,589,532 85			
" ".....	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	183,266 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	52,729 37	67,499 62
" ".....	1893	445,983 21		50,937 40	53,185 00	51,616 79
" ".....	1894	64,345 14		17,152 48	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
" ".....	1900	125,009 41		12,210 88	56,791 45	31,988 81
" ".....	1901	97,305 52		12,072 87	58,364 29	50,005 48
" ".....	1902	113,328 26		36,249 02	59,435 33	45,853 97
" ".....	1903	58,426 92		109,893 43	69,762 03	53,054 20
" ".....	1904	181,487 06		162,705 14	77,233 17	50,660 92
" ".....	1905	112,460 47		144,996 37	86,209 93	65,202 42
" ".....	1906	103,798 28		133,518 77	84,708 78	69,064 84
" ".....	1907	18,840 85		65,872 25	53,308 11	47,465 20
" ".....	1908	203,307 25		92,362 48	74,222 78	70,427 37
" ".....	1909	359,041 77		143,526 35	72,049 32	82,081 39
" ".....	1910	215,611 98		70,000 20	77,701 55	75,247 71
" ".....	1911	253,098 27		73,260 66	72,285 61	91,941 84
" ".....	1912	312,868 94		56,174 60	87,989 26	111,254 82
" ".....	1913	463,291 97			89,509 15	91,689 64
Cost of enlargement.....			10,815,438 11			
Total.....			13,404,970 96	1,368,025 41	2,351,419 65	1,707,563 09

Total expenditure on capital account as above.....\$13,404,970 96

Less charged to St. Lawrence River and Canals, *see* page 52. \$2,950,104 15

Less expenditure by Imperial Government.....40,000 00

2,990,104 15

Agreeing with Public Accounts balance sheet 1913, page 4.....\$10,414,866 81

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.W. C. LITTLE,
Accountant.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

LAKE ST. FRANCIS.

	Year	Capital.	Renewals, Chargeable to Income.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
" " " "	1874		
" " " "	1875		
" " " "	1876		
" " " "	1877		
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" " " "	1879		
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" " " "	1884		
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" " " "	1893		
" " " "	1894		
" " " "	1895		
" " " "	1896		
" " " "	1897		
" " " "	1898	3,420 00	
" " " "	1899	23,110 00	2,495 47
" " " "	1900	15,431 46	12,288 39
" " " "	1901	15,000 00	8,060 30
" " " "	1902	13,945 25	
" " " "	1903	5,000 00	
" " " "	1904		2,199 52
" " " "	1905	†	
" " " "	1906	†	
" " " "	1907	†	
" " " "	1908	†	
" " " "	1909	†	
" " " "	1910	†	
" " " "	1911	†	
" " " "	1912	†	
" " " "	1913	†	
Total.....		*75,906 71	25,043 68

* Included in total cost of St. Lawrence River and Canals, see page 52.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

LAKE ST. LOUIS.

	Year ending.	Chargeable to Capital.		Chargeable to Revenue.	
		\$	cts.	\$	cts.
Government expenditure prior to Confederation	1868				
" " since	1869				
" " " "	1870				
" " " "	1871				
" " " "	1872				
" " " "	1873				
" " " "	1874				
" " " "	1875				
" " " "	1876				
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" " " "	1890				
" " " "	1891				
" " " "	1892				
" " " "	1893				
" " " "	1894				
" " " "	1895		4,753 14		
" " " "	1896		49,909 31		
" " " "	1897		73,300 41		
" " " "	1898		64,495 83		
" " " "	1899		57,607 79		
" " " "	1900		11,765 70		
" " " "	1901		12,918 31		
" " " "	1902		6,000 00		
" " " "	1903		9,508 72		
" " " "	1904		7,916 90		
" " " "	1905		†		
" " " "	1906		†		
" " " "	1907		†		
" " " "	1908		†		
" " " "	1909		†		
" " " "	1910		†		
" " " "	1911		†		
" " " "	1912		†		
" " " "	1913		†		
Total			*298,176 11		

* Included in total cost of St. Lawrence River and Canals, see page 52.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

MURRAY CANAL.

	Year ending.	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
" " " "	1900			5,613 83	2,777 60
" " " "	1901			5,175 74	1,138 15
" " " "	1902			5,254 51	6,377 19
" " " "	1903	500 00		5,757 00	4,627 70
" " " "	1904	750 00	2,521 13	5,291 43	6,075 94
" " " "	1905	100 00	740 45	5,346 62	4,452 68
" " " "	1905		293 75	5,133 61	2,840 91
" " " "	1907		10,423 00	2,788 14	1,710 55
" " " "	1908		37,334 70	4,244 42	2,953 23
" " " "	1909	126 45	20,250 61	4,720 09	3,374 82
" " " "	1910			4,378 74	2,674 57
" " " "	1911			3,942 94	2,075 26
" " " "	1912		14,390 45	4,213 21	3,344 46
" " " "	1913		11,254 14	5,512 70	2,955 94
Total.....		*1,248,946 71	97,608 23	117,189 52	84,378 73

* Agreeing with Public Accounts Balance Sheet, 1913, page 4.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

OTTAWA RIVER WORKS.

Ste. Anne's Lock, page 51.....		\$1,170,215 63
Carillon and Grenville Canal, page 39.....		4,182,092 96
Culbute Canal, page 42.....		382,391 46
Rideau Canal, page 48.....	\$4,127,454 21	
Less expenditure by Imperial government.....	3,911,701 47	215,752 74
<hr/>		
Total Ottawa River Works (Capital).....		\$5,950,452 79
Add expenditure on slides and booms prior to Confederation	\$719,247 13	
Add expenditure on slides and booms since Confederation	7,243 60	
Add expenditure on Chats Falls Canals prior to Confederation	482,950 81	
Add expenditure in 1881, charged to Miscel- laneous, see page 229, part ii, Public Accounts	1,136 84	
Add amount transferred, see page xxxvi, Public Accounts Balance Sheet, 1881.....	233,555 85	
<hr/>		1,444,134 23
		<hr/>
		\$7,394,587 07
Less expenditure prior to Confederation, trans- ferred to Income Account.....	\$320,618 28	
Less expenditure in 1872, on Carillon and Gren- ville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscel- laneous	165,257 28	
<hr/>		485,875 56
		<hr/>
Agreeing, less outstanding cheques, with Balance Sheet, Public Accounts, 1913, page 4.....		\$6,908,711 46
		<hr/>

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

RIDEAU CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....		3,911,701 47			
Government expenditure prior to Confed'n.....		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 88
"	1897		19,079 11	31,461 55	29,535 04
"	1898		13,608 39	30,759 05	26,599 93
"	1899		700 29	30,751 20	28,199 49
"	1900		11,780 41	30,623 27	30,237 09
"	1901			31,334 40	33,791 17
"	1902		8,894 40	32,193 66	33,959 86
"	1903		16,235 13	34,595 31	36,424 23
"	1904		13,525 04	39,127 96	38,496 78
"	1905	1,565 84	14,513 35	40,838 81	49,790 55
"	1906		5,272 90	41,819 77	54,495 63
"	1907		14,322 03	30,667 34	44,627 82
"	1908		42,903 03	44,875 16	55,090 45
"	1909		19,989 52	44,911 60	53,880 51
"	1910		9,225 73	48,324 13	35,188 97
"	1911		6,188 71	47,165 63	79,352 59
"	1912		4,358 40	54,156 89	85,912 96
"	1913	41,565 00	21,992 94	56,863 98	91,984 66
Total.....		*4,127,454 21	489,520 51	1,481,031 84	1,403,878 63

* Included in total cost of Ottawa River Works. See page 47.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

SAULT STE. MARIE CANAL.

	Year ending.	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								
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" " " "	1881								
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" " " "	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
" " " "	1897		209,561	82			15,381	59	7,671
" " " "	1898		21,004	56			14,389	92	8,172
" " " "	1899		63,935	48			13,840	24	6,564
" " " "	1900		27,157	98			13,901	40	13,219
" " " "	1901		323,353	93		48	13,730	93	10,289
" " " "	1902		122,505	73			15,920	80	14,839
" " " "	1903		65,933	43			16,077	22	10,855
" " " "	1904		32,029	54			14,653	35	9,491
" " " "	1905		110,181	69			15,681	55	14,776
" " " "	1906		120,000	00			15,878	11	20,086
" " " "	1907		95,504	63			12,290	94	11,520
" " " "	1908		140,433	22			20,345	38	23,206
" " " "	1909		42,109	63		11,453	15,231	79	16,462
" " " "	1910		46,809	13		147,147	18,976	64	20,300
" " " "	1911		54,797	37		77,066	24,951	49	19,357
" " " "	1912		18,227	10		29,706	27,054	50	28,798
" " " "	1913		45,941	17		13,726	27,588	62	26,762
Total			*4,987,498	24		280,098	315,401	90	265,623

* Agreeing with Public Accounts, 1913, page 4.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

SOULANGES CANAL.

	Year ending.	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			
"	1900	693,806 24		6,711 84	5,000 00
"	1901	462,626 36	115 00	25,154 78	5,888 77
"	1902	235,021 79		22,672 50	2,267 13
"	1903	248,929 10		31,987 06	10,362 23
"	1904	113,328 45	15,608 69	25,235 25	39,382 01
"	1905	34,202 71	30,406 25	25,432 49	21,174 84
"	1906	5,000 22	16,033 79	24,817 37	17,096 33
"	1907	13,508 88	3,216 29	19,964 04	15,604 71
"	1908	50,634 01	4,245 18	28,988 36	35,687 11
"	1909	17,795 79	12,363 78	32,324 20	34,802 37
"	1910	153,022 23	2,299 93	32,851 69	46,287 16
"	1911	102,699 69	3,999 58	32,283 03	37,532 93
"	1912	286,787 88	14,375 47	36,871 50	38,554 54
"	1913	180,816 28		38,080 18	27,221 50
Total		*7,696,439 46	102,663 96	383,374 29	336,861 63

*Included in total cost of St. Lawrence River and Canals. *see* page 52.

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS.
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—(continued).

STE. ANNE'S LOCK AND CANAL.

	Year ending	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
" " "	1900			1,840 51	2,679 21
" " "	1901			1,895 89	3,999 02
" " "	1902			1,994 52	3,015 97
" " "	1903		1,984 39	2,072 17	4,684 42
" " "	1904			2,292 94	2,244 13
" " "	1905			2,151 01	6,091 44
" " "	1906			2,259 16	2,291 86
" " "	1907		2,449 96	1,595 62	901 47
" " "	1908		2,501 42	2,248 29	1,693 63
" " "	1909		199 87	2,292 19	4,290 57
" " "	1910		2,539 76	2,267 60	2,446 28
" " "	1911		2,880 93	2,315 34	2,628 91
" " "	1912			2,770 51	2,738 40
" " "	1913			2,769 63	2,298 26
Total		*1,170,215 63	69,621 46	100,562 87	122,735 32

*Included in total cost of Ottawa River Works, see page 47.

Original Construction	\$ 134,456 51
Enlargement, including new lock	1,035,759 12
	\$ 1,170,215 63

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

ST. LAWRENCE RIVER AND CANALS, SURVEYS, &c.

	Year ending.	CHARGEABLE TO CAPITAL.				Chargeable to Income.
		North Channel.	River Reaches.	Galops Channel.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation					18,442 85	98,373 46
Government expenditure since Confederation	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		6,933 45	22,000 00	28,933 45	
"	1883		3,574 31	41,300 00	44,874 31	
"	1884		15,546 03	74,300 00	89,846 03	
"	1885		13,710 17	101,400 00	115,110 17	
"	1886		16,251 73	99,800 00	116,051 73	
"	1887		20,037 31	54,400 00	74,437 31	
"	1888		16,082 85	40,400 00	56,482 85	
"	1889		1,293 92	17,200 00	18,493 92	
"	1890		18,279 91	5,700 00	23,979 91	
"	1891		35,137 25		35,137 25	
"	1892		59,779 31		59,779 31	
"	1893		52,643 39		52,643 39	
"	1894		13,721 66		13,721 66	
"	1895		1,223 72	181,552 03	182,775 75	
"	1896		7,457 05		7,457 05	
"	1897		12,347 31		12,347 31	
"	1898	171,336 65	7,491 11	32,710 00	211,537 76	
"	1899	461,979 50	9,366 47	42,430 00	513,775 97	
"	1900	225,000 00	72,484 41	50,000 00	347,484 41	
"	1901	184,790 34	19,389 75	91,211 97	295,392 06	
"	1902	125,000 00	29,268 64	24,037 85	178,306 49	
"	1903	126,833 94	16,432 28	25,000 00	168,266 22	
"	1904	68,595 42	9,634 66	6,450 00	84,680 08	
"	1905	93,025 89	25,743 51	49,734 70	168,504 10	
"	1906	83,028 98		26,506 26	109,535 24	
"	1907	61,528 34		13,350 00	74,878 34	
"	1908	40,500 00		12,976 77	53,476 77	
"	1909	42,770 45		25,378 21	68,148 66	
"	1910	34,389 32		2,057 86	36,447 18	13,694 97
"	1911					16,224 68
"	1912					
"	1913					
Total		1,718,778 83	483,830 20	1,039,895 65	3,469,913 41*	128,298 11

* In this total is included an expenditure on capital account of \$227,408.73 on the St. Lawrence River and Canals for the period previous to 1882.

ST. LAWRENCE RIVER AND CANALS, SURVEYS, &c.

St. Lawrence River and Canals, as above	\$ 3,469,913 41
Beauharnois Canal, <i>see</i> page 38	1,636,690 26
Cornwall Canal " 41	7,242,804 21
Williamsburg Canal " 58 and 59	10,490,184 51
Lake St. Louis " 45	298,176 11
Soulanges Canal " 50	7,696,439 46
Lachine Canal, prior to Confederation to June 30, 1875, <i>see</i> page 43	2,950,104 15
Lake St. Francis, <i>see</i> page 44	75,906 71

Agreeing with Public Accounts balance, 1913, page 4..... \$ 33,860,218 82

DEPARTMENT OF RAILWAYS AND CANALS,

W. C. LITTLE,

OTTAWA, August 1, 1913,

Accountant.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

ST. OURS LOCK.

	Year ending.	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 87	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
" " " "	1900	.....	1,596 88	2,181 43	2,681 10
" " " "	1901	.....	3,610 06	2,128 25	1,681 44
" " " "	1902	.....	15,549 27	2,262 39	984 36
" " " "	1903	.....	9,344 89	2,288 63	1,671 83
" " " "	1904	.....	7,984 41	2,334 67	1,690 61
" " " "	1905	.....	14,900 90	2,479 66	1,716 35
" " " "	1906	.....	7,307 39	2,582 95	3,872 75
" " " "	1907	.....	4,260 00	2,064 62	1,142 79
" " " "	1908	.....	3,338 79	2,894 76	2,121 43
" " " "	1909	.....	.....	2,994 78	3,693 19
" " " "	1910	.....	1,925 08	4,137 64	1,752 66
" " " "	1911	.....	1,200 23	3,527 69	2,353 81
" " " "	1912	4,306 28	3,998 58	3,584 10	2,259 46
" " " "	1913	.....	2,678 37	3,530 02	2,449 44
Total ... ..	.....	*125,843 93	172,664 17	101,239 95	86,783 40

* Included in the total cost of Chambly Canal and Richelieu River, see page 40.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

ST. PETER'S CANAL.

	Year ending—	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	882	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
"	1900					2,833	24	1,483	30
"	1901			2,311	26	2,730	44	841	63
"	1902			10,014	43	2,939	81	274	44
"	1903					2,836	49	764	11
"	1904					3,126	94	122	45
"	1905			3,000	10	2,969	90	1,095	90
"	1906					3,239	19	253	65
"	1907					2,468	78	246	87
"	1908					3,371	13	942	64
"	1909					3,282	22	532	78
"	1910					3,449	43	238	14
"	1911					4,180	96	473	44
"	1912			5,208	18	4,768	20	361	49
"	1913			39,143	77	5,144	13	807	78
		648,755	64						
Less—Refunds in 1897-8		208	50						
Total		*648,547	14	195,486	45	101,551	85	35,085	96

* Expenditure as above. \$ 648,547 14

Less expenditure prior to Confederation. 156,523 32

Agreeing with Public Accounts, 1913, page 4. \$ 492,023 82

W. C. LITTLE,
Accountant.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

TAY CANAL.

	Year ending,	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		95,561 51						
" " " "	1887		49,617 92						
" " " "	1888		54,166 57						
" " " "	1889		89,486 18						
" " " "	1890		22,226 23				*		*
" " " "	1801		17,114 78				*		*
" " " "	1892		29,771 65				*		*
" " " "	1893						*		*
" " " "	1894						*		*
" " " "	1895						*		*
" " " "	1896						*		*
" " " "	1897		19,720 50				*		*
" " " "	1898						*		*
" " " "	1899						*		*
" " " "	1900		2,750 00				*		*
" " " "	1901						*		*
" " " "	1902						*		*
" " " "	1903						*		*
" " " "	1904						*		*
" " " "	1905						*		*
" " " "	1906						*		*
" " " "	1907						*		*
" " " "	1908						*		*
" " " "	1909						*		*
" " " "	1910						*		*
" " " "	1911						*		*
" " " "	1912						*		*
" " " "	1913						*		*
Total.....		†489,599	23		748 65		*		*

* Included in Rideau Canal since 1890.
 † Agreeing with Public Accounts, 1913, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, August 1, 1913.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

TRENT CANAL.

	Year ending.	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
"	1900	334,583	01	8,043	39	5,131	52	9,989	26
"	1901	284,503	89	10,494	82	5,254	51	13,075	89
"	1902	449,075	45	26,165	93	5,575	52	14,984	88
"	1903	523,950	74	18,548	58	6,993	25	10,791	15
"	1904	489,038	44	21,228	55	7,237	05	21,179	12
"	1905	333,261	75	36,853	28	12,071	88	26,056	78
"	1906	319,789	49	26,030	36	17,440	68	33,398	85
"	1907	153,045	42	35,360	10	19,229	25	36,516	47
"	1908	343,176	05	96,315	87	32,826	38	33,382	94
"	1909	1,099,836	38	80,517	65	32,028	57	44,849	83
"	1910	1,000,000	00	59,483	51	36,800	42	54,206	13
"	1911	1,682,449	32	78,914	08	38,019	33	40,178	54
"	1912	1,746,095	48	97,254	20	44,811	08	50,175	72
"	1913	1,162,605	75	41,499	98	47,431	26	50,049	83
Total		* 12,464,651	64	796,545	08	374,937	71	527,805	46

* Total expenditure on Capital Account as above \$12,464,651 64
 LESS—Expenditure prior to Confederation \$ 309,371 31
 " Year 1880 561 50

Agreeing with Public Accounts Balance Sheet, 1913, page 4. \$12,154,718 83

W. C. LITTLE,

Accountant.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

WELLAND CANAL.

	Year ending.	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			59,912	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
"	1900	18,167	29	37,164	84	84,888	36	59,507	64
"	1901	224,536	96	87,777	43	86,889	24	72,055	89
"	1902	303,997	81	78,905	37	88,048	95	69,279	90
"	1903	315,819	49	94,127	21	90,684	05	72,004	59
"	1904	555,751	00	31,140	58	91,115	35	85,717	88
"	1905	890,457	82	34,559	42	91,928	96	111,418	62
"	1906	715,198	24	28,799	66	107,932	96	78,704	93
"	1907	480,305	03	56,036	47	75,031	24	53,247	50
"	1908	806,760	46	138,430	19	108,101	56	78,460	40
"	1909	255,986	16	129,489	99	115,934	78	88,409	53
"	1910	168,247	17	75,233	28	136,783	47	77,723	23
"	1911	236,429	80	28,688	57	128,000	33	92,739	05
"	1912	159,946	87	28,238	13	149,848	27	105,056	89
"	1913	347,711	15	39,674	82	156,598	55	93,231	29
Total	*	29,250,951	01	1,354,885	35	4,035,686	36	3,320,241	88

* Total expenditure as above.....\$ 29,250,951 01
 Less expenditure by Imperial Government..... 222,220 00

Agreeing with Public Accounts Balance Sheet, 1913, page 4... \$ 29,028,731 01

Original cost of construction, including first enlargement.....\$ 7,693,824 03
 Enlargement, including new Welland Canal..... 21,557,126 98

Total expenditure as above.....\$ 29,250,951 01

STATEMENT showing the amounts expended on Construction, Renewals, &c—Continued.
WILLIAMSBURG CANAL.

	Year ending.	CAPITAL.				Total.	Renewals Chargeable to Income.	Staff.	Repairs.
		Farraan's Point.		Rapid Plat.					
		%	cts.	%	cts.				
Government expenditure prior to Confederation being amount of original construction.....	1868					1,320,635 54	\$	cts.	
Government expenditure since Confederation.....	1869						5,745 97	6,442 41	
"	1870						5,769 81	5,670 88	
"	1871						5,573 13	6,546 16	
"	1872						6,382 17	5,308 41	
"	1873						5,512 94	3,230 07	
"	1874						6,424 49	7,347 75	
"	1875						6,857 19	7,395 92	
"	1876						6,547 62	4,110 29	
"	1877						7,418 39	11,690 98	
"	1878						7,388 61	10,053 61	
"	1879						7,430 11	4,449 78	
"	1880						7,517 20	3,549 71	
"	1881						7,590 15	3,999 77	
"	1882						7,572 35	5,020 73	
"	1883						7,589 44	7,447 69	
"	1884					13 19	7,423 48	7,299 39	
"	1885					2,473 44	7,757 04	7,549 37	
"	1886					103,237 12	7,696 67	8,198 03	
"	1887					149,835 71	7,671 54	7,851 65	
"	1888					115,853 00	7,635 54	7,904 76	
"	1889					70,128 29	7,646 79	8,190 43	
"	1890					59,867 26	7,485 28	8,794 61	
"	1891					139,078 37	7,485 28	8,191 69	
"	1892					230,670 60	8,678 25	7,987 40	
"	1893					376,945 32	797 83	8,458 33	
"	1894					372,193 29	3,675 00	8,347 97	
"	1895					498,390 23	10,230 09	7,029 95	
"	1896					347,357 23	13,730 36	7,371 37	
"	1897					412,121 12	8,607 04	9,638 51	
"	1898					468,274 33	3,880 76	8,210 71	
"	1898					1,081,886 06	10,708 66	8,403 84	

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1899	346,956 54	987,186 41	1,392,012 16	7,410 00	9,950 64	10,000 00
1900	100,534 64	752,799 27	867,632 65	4,137 04	11,090 06	10,897 79
1901	111,158 33	800,112 78	577,772 74	.....	12,842 32	11,755 09
1902	42,209 89	421,945 81	601,973 92	.....	14,403 28	13,673 36
1903	10,266 92	320,354 92	349,105 18	.....	15,246 91	20,092 79
1904	18,700 00	256,536 30	302,010 57	.....	20,570 17	13,450 05
1905	8,108 99	292,337 29	8,209 63	5,573 69	23,399 45	21,492 46
			308,556 26			
1906	.....	140,930 65	140,930 65	20,493 00	17,280 42	16,148 66
1907	.....	45,782 52	46,537 43	18,405 65	13,953 58	8,501 57
1908	.....	400,312 81	190,312 81	16,635 15	19,441 86	18,563 82
1909	.....	11,987 59	11,987 59	3,744 50	22,638 02	23,454 80
1910	.....	.....	.....	.....	20,682 88	20,045 76
1911	.....	.....	.....	2,622 39	21,803 61	21,681 75
1912	.....	.....	.....	43,965 21	25,753 98	26,875 25
1913	.....	1,372 82	1,372 82	88,974 46	32,269 54	28,214 13
Total	877,090 57	6,120,300 14	90,490,184 51	247,311 60	520,270 13	501,033 93

* Original construction..... \$ 1,320,655 54
 Cost of enlargement..... 9,169,528 97

Total..... \$10,490,184 51
 Included in total cost of St. Lawrence River and Canals, see page 52.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing amount expended on Construction and Enlargement of Canals, to
March 31, 1913.

Canal.	Construction.		Enlargement.		Total.	
	\$	cts.	\$	cts.	\$	cts.
Beaubarnois.....	1,636,690	26			1,636,690	26
Carillon and Grenville.....	*63,053	64	4,119,039	32	4,182,092	96
Chambly.....	637,214	66	91,784	83	728,999	49
Cornwall.....	1,945,624	73	5,297,179	48	7,242,804	21
Culbute.....	382,391	46			382,391	46
Lachine.....	2,589,532	85	10,815,438	11	13,404,970	96
Lake St. Francis.....			75,906	71	75,906	71
Lake St. Louis.....			298,176	11	298,176	11
Murray.....	1,248,946	71			1,248,946	71
Rideau.....	4,127,454	21			4,127,454	21
Saut Ste. Marie.....	4,987,498	24			4,987,498	24
Soulanges.....	7,696,439	46			7,696,439	46
Ste. Anne's.....	134,456	51	1,035,759	12	1,170,215	63
St. Lawrence River and Canals.....	18,442	85	3,451,470	56	3,469,913	41
St. Ours.....	121,537	65	4,306	28	125,843	93
St. Peter's.....	648,547	14			648,547	14
Tay.....	489,599	23			489,599	23
Trent.....	12,464,651	64			12,464,651	64
Welland.....	7,693,824	03	21,557,126	93	29,250,951	01
Williamsburg {	Farran's Point.....		877,090	57	10,490,184	51
	Galops.....		6,120,300	14		
	Rapide Plat.....		2,158,242	00		
	Williamsburg.....	1,320,655	54	13,896			26
Total ..	48,206,560	81	55,915,716	47	104,122,277	28

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

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

RECAPITULATION.*

YEARLY Expenditure on Canals and Revenue received to March 31, 1913.

	Year ending.	Capital.	Income.	Staff.	Repairs.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation, including Imperial Government expenditure.....		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	58,298 29	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	291,048 97	204,759 39	357,089 87
"	1894	3,027,164 19	110,512 07	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	2,348,636 91	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
"	1900	2,639,564 93	120,653 93	292,609 24	227,626 97	322,642 86
"	1901	2,360,569 89	135,500 57	314,095 04	262,876 07	315,425 69
"	1902	2,114,689 88	213,044 91	317,838 61	263,768 27	300,413 68
"	1903	1,823,273 61	275,103 58	390,281 82	204,113 92	230,213 15
"	1904	1,880,787 20	298,678 23	381,016 82	350,278 54	79,536 51
"	1905	2,071,593 72	352,855 43	431,499 60	401,742 79	78,009 21
"	1906	1,552,121 21	310,716 70	447,962 92	375,889 60	108,067 76
"	1907	887,838 61	254,423 18	329,629 63	287,231 03	105,003 15
"	1908	1,708,156 37	483,250 11	473,638 95	411,660 53	144,882 13
"	1909	1,868,834 45	699,304 73	475,515 04	433,958 10	199,501 26
"	1910	1,630,706 64	453,835 62	515,585 16	491,793 02	193,384 28
"	1911	2,349,474 49	385,534 55	511,305 94	471,530 32	221,138 49
"	1912	2,554,938 91	384,860 73	585,899 54	555,709 95	264,114 48
"	1913	2,255,448 21	292,960 26	605,248 57	535,135 66	307,567 66
Total		104,122,277 28	7,286,123 39	13,397,764 20	11,051,278 87	14,949,174 77

* This does not include expenditure which has been charged to Canals General but only the amount expended on specified canals.

† Canal tolls abolished this year.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANAL,
OTTAWA, August 1, 1913.

CANAL REVENUE STATEMENT FOR YEAR ENDING MARCH 31, 1913.

Canal Revenue.			Collection Divisions. 1912 13.			Deposits to the credit of the Receiver General.		Total.		Cost of Staff, Repairs, and Offices of Collection, chargeable to Revenue.	
Wharfage, Storage, Harbour Dues, &c.	Port Colborne Elevator.	Total Canal Revenue Accrued.	Hydraulic and other Rents, &c.	Total.	Collection Divisions. 1912 13.	On Account Canal Revenue.	On Account Hydraulic and other Rents.	Total.			
		\$ cts.									\$ cts.
8 40	373 24	381 64	580 00	961 64	Welland Canal	28 40	580 00	608 40	580 00	233,445 59	
1,728 19	373 24	2,101 43	7,811 93	9,913 37	Port Colborne	373 24	7,811 93	8,185 17	7,811 93	3,274 00	
26 30	60,828 06	60,854 36	42,080 16	102,934 72	Port Dalhousie	60,828 06	42,080 16	102,914 88	60,828 06	2,722 30	
1,600 18		1,600 18		1,600 18	Port Colborne Elevator		60,828 06	1,600 18		20,053 85	
14,090 01		14,090 01		14,090 01	Totals	61,229 70	50,472 09	111,701 79		265,495 74	
78 00		78 00	3,107 00	3,185 00	St. Lawrence Canals			3,185 00			
17,522 68		17,522 68	159,244 24	176,766 92	Beauharnois		898 74	898 74		459,639 14	
			14,944 89	14,944 89	Cornwall		14,944 89	14,944 89			
			8,835 75	8,835 75	Cardinal	1,728 19	8,835 75	10,563 94		2,031 10	
			2,770 00	2,770 00	Lachine	26 30	2,770 00	2,796 30		1,158 81	
			1,600 18	1,600 18	Montreal	1,600 18	1,600 18	1,600 18		2,796 19	
			142,777 87	142,777 87	Kingston	14,090 01	128,687 86	142,777 87		9,228 30	
			78 00	3,185 00	Saultages	78 00	3,107 00	3,185 00		720 00	
			17,522 68	176,766 92	Totals	17,522 68	159,244 24	176,766 92		477,563 89	
				594 50	Chambly Canal		594 50	594 50		80,487 06	
				55 00	Chambly		55 00	55 00		1,518 87	
				62 00	St. John's		62 00	62 00		1,782 60	
					St. Ours					766 55	
				711 50	Totals		711 50	711 50		90,555 08	
				311 20	Ottawa Canals			311 20		51,417 24	
				5 00	Ottawa			5 00		780 90	
				380 00	Grenville			380 00		957 05	
				32 00	Carillon			32 00		1,115 70	
				1 00	Ste. Anne's Lock			1 00			
				729 20	Chats Falls Canal			729 20			
				729 20	Totals		729 20	729 20		54,270 89	

4 GEORGE V., A. 1914

GENERAL STATEMENT of the Revenue received on the Canals for the year ending
March 31, 1913.*

Canals.	Hydraulic and other rents.	Lock house rents.	Miscellaneous Canal revenue.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland	49,892 09	580 00	61,229 70	111,701 79
Williamsburg.....	2,770 00	311 00	26 30	3,107 30
Cornwall.....	8,835 75	.....	1,728 19	10,563 94
Beauharnois.....	14,944 89	.....	.....	14,944 89
Lachine	128,687 86	196 74	15,690 19	144,574 79
Chambly.....	117 00	594 50	.....	711 50
Rideau.....	3,561 75	1,949 00	588 00	6,098 75
Trent.....	9,566 51	1,300 00	.....	10,866 51
Sault Ste. Marie.....	513 49	.....	.....	513 49
Carillon and Grenville.....	385 00	191 20	.....	576 20
Soulanges.....	3,107 00	391 00	78 00	3,576 00
Sundry Canals.....	24 50	308 00	.....	332 50
	222,405 84	5,821 44	79,340 38	307,567 66

*Amount deposited to the Credit of the Receiver General.....	\$	309,072 10	
Less Refunds on Cancelled Leases.....		1,504 44	\$ 307,567 66
Net amount of Revenue.....			\$ 307,567 66

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT of Hydraulic and other rents, showing rent accrued, paid and balances yet due March 31, 1913.

Balance due April 1, 1912.	Hydraulic and other rents accrued 1912-13.		Lock House rents.		Totals.		Canals.	Abatement for overcharges		Deposited to the credit of the Receiver General.		Balance due March 31, 1913	Totals.	
	\$	cts.	\$	cts.	\$	cts.		\$	cts.	\$	cts.		\$	cts.
83,226 28	56,908 51	140,714 79	580 00	17,431 57	49,892 09	72,811 13	Welland.....	1 00	580 00	2,770 00	5,961 17	140,714 79	9,043 17	149,758 96
3,303 17	3,439 00	9,043 17	311 00	1 00	2,770 00	9,043 17	Williamsburg.....		311 00	8,835 75	3,568 87	9,043 17	12,404 62	21,447 79
4,739 12	7,605 50	12,404 62			14,944 89	12,404 62	Cornwall.....			14,944 89	7,177 84	12,404 62	22,122 73	44,527 52
7,256 19	14,866 54	22,122 73			128,687 86	22,122 73	Beauharnois.....			128,687 86	32,169 71	22,122 73	162,791 28	384,919 80
37,148 01	125,386 53	162,731 28	196 74	1,676 97	128,687 86	162,731 28	Lachine.....		196 74	128,687 86	32,169 71	162,731 28	162,791 28	325,522 56
885 84	118 00	1,598 34	594 50	435 59	1,949 00	1,598 34	Chambly.....		594 50	1,949 00	886 84	1,598 34	1,598 34	3,153 90
6,329 95	4,301 50	12,580 45	1,949 00	40 14	1,449 00	12,580 45	Rideau.....		1,449 00	3,561 75	6,634 11	12,580 45	12,580 45	25,160 90
1,367 80	9,292 18	11,889 98	1,300 00		9,566 51	11,889 98	Trent.....		1,300 00	9,566 51	983 33	11,889 98	11,889 98	27,050 88
80 00	511 00	591 00			513 49	591 00	Sault Ste. Marie.....			513 49	77 51	591 00	591 00	32,641 88
27,905 08	3,107 00	28,691 28	191 20		385 00	28,691 28	Carillon and Grenville.....		191 20	385 00	28,115 08	28,691 28	28,691 28	61,333 16
	3,107 00	3,498 00	391 00		3,107 00	3,498 00	Soulanges.....		391 00	3,107 00		3,498 00	3,498 00	64,831 16
	41 00	360 00	308 00	22 50	24 50	360 00	Sundry Canals.....		308 00	24 50	5 00	360 00	360 00	65,191 16
174,312 44	226,091 76	406,225 64	5,821 44	19,607 77	222,405 84	406,225 64	Totals.....		5,821 44	222,405 84	158,390 59	406,225 64	406,225 64	857,451 23

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August, 1, 1913.

RECAPITULATION—STATEMENT OF EXPENDITURE BY CANAL, TO
MARCH 31, 1913.

Canals.	Capital.	Income.	Staff.	Repairs.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Baie Verte.....		44,387 53			44,387 53
Beauharnois.....	1,636,690 26	265,810 84	649,574 89	525,691 23	3,077,767 22
Carillon and Grenville.	4,182,092 96	340,967 21	709,496 19	516,589 21	5,749,145 57
Chambly.....	728,999 49	727,097 75	841,414 37	787,829 80	3,085,341 41
Cornwall.....	7,242,804 21	518,415 99	1,303,105 20	822,141 38	9,886,466 78
Culbute Lock.....	382,391 46	60,923 37	11,507 48	7,036 15	461,858 46
Lachine.....	13,404,970 96	1,368,025 41	2,351,419 65	1,707,563 09	18,831,979 11
Lake St. Francis.....	75,906 71	25,043 68			100,950 39
Lake St. Louis.	298,176 11				298,176 11
Murray.....	1,248,946 71	97,608 23	117,189 52	84,378 73	1,548,123 19
Rideau.....	4,127,454 21	489,520 51	1,481,031 84	1,403,878 63	7,501,885 19
Sault Ste. Marie.....	4,987,498 24	280,098 04	315,401 90	265,623 07	5,848,621 25
Soulanges.....	7,696,439 46	102,663 96	383,374 29	336,861 63	8,519,339 34
Ste. Anne's Lock.....	1,170,215 63	69,621 46	100,562 87	122,735 32	1,463,135 28
St. Lawrence Riv. and Canals	3,469,913 41	128,298 11			3,598,211 52
St. Ours' Lock.....	125,843 93	172,664 17	101,239 95	86,783 40	486,531 45
St. Peters'.....	648,547 14	195,486 45	101,551 85	35,085 96	980,671 40
Tay.....	489,599 23	748 65			490,347 88
Trent.....	12,464,651 64	796,545 08	374,937 71	527,805 46	14,163,939 89
Welland.....	29,250,951 01	1,354,885 35	4,035,686 36	3,320,241 88	37,961,764 60
Williamsburg.....	1,334,551 80				
" Farran's Point.....	877,090 57	247 11 0	520,270 13	501,033 93	11,758,800 17
" Galops.....	6,120,300 14				
" Rapide Plat....	2,158,242 00				
*Expendit. on Canals General	104,122,277 28	7,286,123 39	13,397,764 20	11,051,278 87	135,857,443 74
Total expenditure on Canals.					2,450,635 77
					138,308,079 51

*See page 85.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.		Income 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 89		
" " "	1893		2,190 62		
" " "	1894		1,675 36		
" " "	1895		570 55		
" " "	1896				
" " "	1897		41,457 29		
" " "	1898				
" " "	1899				
" " "	1900				
" " "	1901				8,381 82
" " "	1902				
" " "	1903				
" " "	1904				
" " "	1905				
" " "	1906				
" " "	1907				
" " "	1908				
" " "	1909				
" " "	1910				
" " "	1911				
" " "	1912				
" " "	1913				
Total			*660,683 09		8,381 82

* Of this amount Parliament voted, under 52 Vic., chap. 8, the sum of \$500,000 as a subsidy to the Western Counties Railway, N.S.

W. C. LITTLE,
Accountant.

CANADIAN PACIFIC RAILWAY.

	Year.	Construction, including subsidy of \$25,000,000.		Working Expenses.		Revenue received.	
		\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation	1868						
" " since "	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				
" " "	1900		236 11				
" " "	1901		8,978 87				
" " "	1902		448 70				
" " "	1903						
" " "	1904		33,076 39				
" " "	1905						
" " "	1906						
" " "	1907						
" " "	1908		600 00				
" " "	1909		937 77				
" " "	1910						
" " "	1911		2,918 35				
" " "	1912						
" " "	1913						
Total			*62,789,776 09		318,216 30		396,473 75

* Agrees with Public Accounts Balance Sheet, 1912-1913, page 8.

(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 page 87 and following for the expenditure.

CAPE BRETON RAILWAY.

	Year.	Capital.		Working Expenses.	
		\$	cts.	\$	cts.
Government expenditure prior to Confederation	1868				
" " " "	1869				
" " " "	1870				
" " " "	1871				
" " " "	1872				
" " " "	1873				
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" " " "	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				
" " " "	1900				
" " " "	1901				
" " " "	1902				
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" " " "	1910				
" " " "	1911				
" " " "	1912				
" " " "	1913				
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 75.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

CARLETON BRANCH RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868		
" " since. "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
" " " "	1874		
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" " " "	1885		
" " " "	1886	85,610 69	
" " " "	1887	2,299 62	
" " " "	1888	500 17	
" " " "	1889		
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" " " "	1910		
" " " "	1911		
" " " "	1912		
" " " "	1913		
Total		88,410 48	
* Less amount received from city of St. John, N. B.		40,000 00	
		48,410 48	

* Victoria, chap. 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.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

DRUMMOND COUNTY RAILWAY.

	Year.	Construction.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation		
" since		
" " " "	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
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" " " "	1898		
" " " "	1899		
" " " "	1900	1,459,000 00	
" " " "	1901		
" " " "	1902	5,000 00	
" " " "	1903		
" " " "	1904		
" " " "	1905		
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" " " "	1909		
" " " "	1910		
" " " "	1911		
" " " "	1912		
" " " "	1913		
Total.....	*1,464,000 00	

* Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

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						
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" " "	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			*		†	
" " "	1900			*		†	
" " "	1901			*		†	
" " "	1902			*		†	
" " "	1903			*		†	
" " "	1904			*		†	
" " "	1905			*		†	
" " "	1906			*		†	
" " "	1907			*		†	
" " "	1908			*		†	
" " "	1909			*		†	
" " "	1910			*		†	
" " "	1911			*		†	
" " "	1912			*		†	
" " "	1913			*		†	
Total		† 1,324,042	81	538,094	06	462,465	68

* Included in Intercolonial Railway expenses.

† Included in Intercolonial Railway revenue.

‡ Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

HUDSON BAY RAILWAY.

		Year.	Capital.
			\$ cts.
Government expenditure prior to Confederation.....		1868
" " since "		1869
" " " "		1870
" " " "		1871
" " " "		1872
" " " "		1873
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" " " "		1907
" " " "		1908
" " " "		1909	92,427 83
" " " "		1910	53,042 63
" " " "		1911	184,149 81
" " " "		1912	159,632 00
" " " "		1913	1,009,063 15
Total.....		1,588,315 42

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

—	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			3,453,891	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
" " "	1900	1,796,348	29			4,444,296	25	4,599,423	14
" " "	1901	3,633,836	57			5,477,285	30	5,019,497	76
" " "	1902	4,621,841	05			5,596,939	57	5,720,990	50
" " "	1903	2,254,266	68			6,214,496	38	6,366,884	53
" " "	1904	1,880,856	60			7,264,263	13	6,392,865	48
" " "	1905	3,937,621	93			8,535,689	91	6,833,561	50
" " "	1906	3,765,170	90			7,599,400	33	7,693,282	40
" " "	1907	1,506,209	26			6,045,597	15	6,293,751	52
" " "	1908	4,363,494	01			9,195,347	64	9,229,989	21
" " "	1909	3,867,232	16			9,364,256	10	8,583,100	79
" " "	1910	1,278,409	45			8,668,620	23	9,328,888	97
" " "	1911	762,869	06			9,613,774	77	9,911,974	83
" " "	1912	1,710,448	56			10,624,889	89	10,666,962	44
" " "	1913	2,391,687	53			12,009,953	31	12,052,729	39
Total		*87,684,523	68	280,000	00	180,046,381	70	172,692,640	49

*Continued page 76.

* Including \$296,872.90 paid to Nova Scotia Ry. and European and North American Ry., N.B., and charged to 'Consolidated Fund.'

‡ Expenditure for year \$ 1,894,856 90
 Less refunds of previous years 14,000 30

 \$ 1,880,856 60

‡ Expenditure for the year \$ 3,760,942 95
 Add refunded cheque of 1901-2 paid during fiscal year
 1905-6 4,227 95

 \$ 3,765,170 90

INTERCOLONIAL RAILWAY—*Concluded.*

Total cost of construction as shown on page 75.....	†\$87,681,523 68
Less amounts transferred from Capital to Consolidated Fund as follows:—	
European and North American Railway from	
1868 to 1873	\$ 88,363 18
Nova Scotia Railway from 1868 to 1873.....	208,509 72
	296,872 90
	\$87,387,650 78
To which add the following—	
Canada Eastern Railway, page 68.....	819,000 00
Cape Breton Railway, page 70.....	3,860,679 14
Drummond County Railway, page 72.....	1,464,000 00
Eastern Extension Railway, page 73.....	1,324,042 81
Montreal and European Short Line Railway, page 77.....	333,942 72
Oxford and New Glasgow, page 79.....	1,949,063 21
Total capital cost of Intercolonial Railway System.....	*\$97,138,378 66

* Agreeing, less outstanding cheques, with Public Accounts, 1912-1913, page 4.

† Includes \$220.48, amount of an Exchequer Court award in 1907 against the Oxford and New Glasgow Railway.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.		Working Expenses.	
		\$	cts.	\$	cts.
Government expenditure prior to Confederation.....					
" since "	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872				
" " "	1873				
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" " "	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				
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" " "	1910				
" " "	1911				
" " "	1912				
" " "	1913				
Total.....			*333,942 72		

* Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

OXFORD AND NEW GLASGOW RAILWAY.

	Year.	Capital.		Working Expenses.	
		\$	cts.	\$	cts.
Government expenditure prior to Confederation.....	1868				
" " since "	1869				
" " " "	1870				
" " " "	1871				
" " " "	1872				
" " " "	1873				
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" " " "	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				
" " " "	1900				
" " " "	1901				
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" " " "	1907	*			
" " " "	1908				
" " " "	1909				
" " " "	1910				
" " " "	1911				
" " " "	1912				
" " " "	1913				
Total		‡ 1,949,063	21	†	

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.

‡ Included in total cost of Intercolonial Railway system, page 75. Add \$220.48 amount of Exchequer Court Award paid in 1907 and included in Intercolonial Ry.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

PRINCE EDWARD ISLAND RAILWAY.

	Year.	Construction.		Working Expenses.		Revenue received.	
		\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation.....		3,114,733 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	5,860	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
" " " " " "	1900	53,546	02	220,931	81	174,738	73
" " " " " "	1901	280,173	93	261,766	24	193,883	48
" " " " " "	1902	475,997	94	270,159	97	197,999	93
" " " " " "	1903	829,414	18	259,637	82	217,714	24
" " " " " "	1904	698,877	47	335,695	44	234,390	03
" " " " " "	1905	591,412	65	370,464	44	217,330	61
" " " " " "	1906	496,124	89	294,253	16	257,270	57
" " " " " "	1907	91,710	52	283,148	50	215,434	97
" " " " " "	1908	390,461	83	399,947	79	304,579	83
" " " " " "	1909	561,206	90	400,330	41	311,319	63
" " " " " "	1910	206,396	97	427,283	73	319,074	74
" " " " " "	1911	94,320	56	424,104	00	337,419	55
" " " " " "	1912	128,041	91	449,962	91	367,203	39
" " " " " "	1913	103,001	03	489,972	34	389,474	07
Total.....		*8,790,794 06		10,441,340 54		7,332,376 60	

* Agrees with Public Accounts Balance Sheet, 1912-1913, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

YUKON TERRITORY WORKS.

(Stikine-Teslin Railway.)

	Year.	Construction.
		\$ 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	
" " "	1893	
" " "	1894	
" " "	1895	
" " "	1896	
" " "	1897	
" " "	1898	
" " "	1899	
" " "	1900	
" " "	1901	
" " "	1902	283,323 55
" " "	1903	
" " "	1904	
" " "	1905	
" " "	1906	
" " "	1907	
" " "	1908	
" " "	1909	
" " "	1910	
" " "	1911	
" " "	1912	
" " "	1913	
Total.		*283,323 55

* Included in Public Accounts Balance Sheet, 1902-1903, page 6.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing amount expended on Capital Account on Railways.

Railways.	—	—
	\$	cts.
Intercolonial	87,387,650	78
Cape Breton	3,860,679	14
Oxford and New Glasgow	1,949,063	21
Eastern Extension	1,324,042	81
Drummond County ..	1,464,000	00
Montreal and European Short Line	333,942	72
Canada Eastern ..	819,000	00
Total		
		97,138,378 66
Carleton Branch		48,410 48
Prince Edward Island		8,790,794 06
Canadian Pacific		62,789,776 09
Annapolis and Digby		660,683 09
Yukon Territory Works (Stikine-Teslin Ry)		283,323 55
National Transcontinental		130,300,684 92
Governor General's Car		71,538 87
Hudson Bay Railway		1,588,315 42
Total		301,671,905 09
<i>Memo re Recapitulation—Railway.</i>		
Total cost as per statement above		301,671,905 09
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, <i>see</i> statement page 75		296,872 90
Agreeing with total amount paid on Construction, as per statement, page 84		301,968,777 99

W. C. LITTLE.

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

RECAPITULATION—GOVERNMENT RAILWAYS.

	Year.	Construction.		Working expenses.		Revenue.	
		\$	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
" " " "	1900	3,309,130	42	4,665,228	06	4,774,161	87
" " " "	1901	3,922,989	87	5,739,051	54	5,213,381	24
" " " "	1902	5,386,611	24	5,861,099	54	5,918,990	43
" " " "	1903	3,083,680	86	6,474,134	20	6,584,598	77
" " " "	1904	2,619,059	86	7,599,958	57	6,627,255	51
" " " "	1905	6,125,481	79	8,906,154	35	7,050,892	11
" " " "	1906	6,102,565	74	7,893,653	49	7,950,552	97
" " " "	1907	7,174,370	17	6,328,745	65	6,509,186	49
" " " "	1908	23,684,005	25	9,595,295	43	9,534,569	04
" " " "	1909	29,414,227	34	9,764,586	51	8,894,400	42
" " " "	1910	21,505,975	91	9,095,903	96	9,647,963	71
" " " "	*1911	24,532,466	18	10,037,878	77	10,249,394	38
" " " "	*1912	23,108,805	52	11,074,852	80	11,034,165	83
" " " "	1913	17,375,968	10	12,499,925	65	12,442,203	46
Total		302,008,777	99	192,262,712	57	180,882,956	52

Total amount paid on construction \$302,008,777 99

Less amount received from the City of St. John, N.B., as purchase price of the Carleton Branch Railway 40,000 00

Cost of construction +\$301,968,777 99

* Amount paid for Quebec Bridge deducted this year to form a separate statement by itself.

† Agreeing with amount expended on Capital Account on Railways, etc., see page 83.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing Miscellaneous Expenditure of the Department of Railways and Canals yearly.

Year ending.	Chargeable to Capital.	Chargeable to Income.			Chargeable to Revenue.			Total Yearly expenditure.
	Canals.	Canals.	Railways.	General.	Canals.	Railways.	General.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1868.				6,305 66	12,000 00		2,416 66	20,722 32
1869.				8,367 52	12,000 00		1,000 00	21,367 52
1870.				7,853 03	18,698 89		7,679 78	34,231 70
1871.				34,773 72	12,018 98			46,792 70
1872.				20,049 50	12,208 76			32,258 26
1873.				36,891 74	12,099 44		6,889 20	55,880 38
1874.				40,098 84	12,959 25		5,428 98	58,487 07
1875.				35,579 24	12,047 43		5,620 17	53,246 84
1876.				42,920 10	86 08		5,690 28	48,696 46
1877.					51 87	43,639 97		43,691 84
1878.		1,860 00			556 00		34,388 59	36,804 59
1879.								
1880.		2,561 55			323 16			2,884 71
1881.		2,338 41			5,535 22			7,873 63
1882.					9,826 23			9,826 23
1883.		11,781 27			6,978 54			18,759 81
1884.		7,486 62	62,256 58		8,305 41			78,048 61
1885.		16,725 47	11,003 38		1,210 61			28,939 46
1886.		20,323 62	10,383 59		776 30			31,483 51
1887.		23,512 00	23,545 34		649 04			47,706 38
1888.		34,533 07	22,898 90		5,799 83			63,231 80
1889.		10,091 87	16,552 64		5,207 64			31,852 15
1890.		16,426 69	50,909 74		49,550 21			116,886 64
1891.		16,925 31	16,314 41		56,922 05			90,161 77
1892.		6,540 49	19,062 51		65,074 07			90,677 07
1893.		8,498 41	4,313 73	28,640 93	63,965 54			105,418 61
1894.		2,883 11	4,855 11	15,746 31	60,265 22			83,749 75
1895.		4,132 28	13,221 27	19,304 87	60,769 56			97,427 98
1896.		10,893 40	6,562 20	25,194 21	70,340 22			112,990 03
1897.		2,937 47	5,118 99	25,142 90	62,777 12		597 39	96,573 87
1898.		1,719 69	8,327 96	28,042 10	56,284 42	1,400 00		95,774 17
1899.		1,318 79	67,005 86	22,085 19	66,850 29			157,260 13
1900.		11,873 35	33,496 99	22,802 18	58,836 57			127,009 09
1901.		12,267 99	28,658 78	33,986 68	61,938 61			136,852 06
1902.		3,658 23	21,752 58	34,138 50	65,770 65			125,319 96
1903.		2,491 84	15,570 43	35,398 00	63,175 19			116,635 46
1904.		3,730 79	85,353 17	36,262 32	66,067 30			191,413 58
1905.		1,498 14	97,507 00	38,660 52	64,515 07			202,180 73
1906.		9,160 44	99,018 80	37,484 64	62,171 45			267,835 33
1907.		9,687 55	92,115 62	34,183 75	66,251 27			202,238 19
1908.	14,999 70	24,760 08	178,266 39	45,115 99	105,518 99			368,661 15
1909.	5,034 00	28,819 54	181,615 90	20,912 04	106,065 87			342,447 35
1910.		29,421 06	200,329 52	4,706 79	111,755 68			346,213 05
1911.		54,734 48	218,178 85	2,369 52	103,398 27	1,000 00		379,681 12
1912.	5,999 20	57,151 70	257,670 45	2,922 06	110,049 21	3,950 00		437,742 62
1913.	3,809 24	39,026 95	360,812 49	9,338 17	121,370 46	4,500 00		538,857 31
	29,842 14	491,771 66	2,212,679 18	755,277 02	1,929,021 97	54,489 97	69,711 05	5,542,792 97

N.B.—The expenditure of Quebec Bridge included in Miscellaneous Expenditure (income railways) in 1909 and 1910 has been deducted from each of these years to form a separate account under the heading of "QUEBEC BRIDGE."

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the TOTAL EXPENDITURE and REVENUE of the Department of Railways and Canals prior to and since Confederation to March 31, 1913.

TOTAL EXPENDITURE		\$687,219,980 78
Expenditure on Railways	\$496,778,659 71	
" Quebec Bridge	2,778,337 57	
" Railway Subsidies	*48,529,915 92	
" Canals	138,308,079 51	
" General	824,988 07	
Total expenditure		\$687,219,980 78

Classification of EXPENDITURE IN GENERAL—

Capital Account	\$408,167,706 94	
Revenue	218,764,978 63	
Income	11,757,379 29	
Consolidated Fund—Railway Subsidies.....	48,529,915 92	
Total expenditure		\$687,219,980 78

Classification of EXPENDITURE IN DETAIL—

Railways—		
Capital—See page 83	\$301,671,905 09	
Income—See pages 75, 76 and 85	2,789,552 08	
Revenue—See pages 84 and 85	192,317,202 54	
		\$496,778,659 71
Quebec Bridge—		
Capital—See page 81	\$ 2,343,682 43	
Income—See page 81	434,655 14	
		2,778,337 57
Railway Subsidies—See pages 90 to	\$48,529,915 92	48,529,915 92
Canals—		
Capital—See pages 61 and 85	\$104,152,119 42	
Income—See pages 61 and 85	7,777,895 05	
Revenue—See pages 61 and 85	26,378,065 04	
		138,308,079 51
General Expenditure—		
Income—See page 85	\$755,277 02	
Revenue—See page 85	69,711 05	
		824,988 07
Total expenditure		\$687,219,980 78

* This amount does not include the subsidy of \$25,000,000 to the Canadian Pacific Railway, nor the amount \$660,683.08 expended on the Annapolis and Digby Railway, both of which are included in Capital Account, nor the annual payment of \$219,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 up to 1905, granted by 47 Vict., cap. 8 (1884) and the annual payment of \$107,730, being interest at the rate of 4½ per cent since and including 1905 on the said sum of \$2,394,000 for the line between Ottawa and Quebec which sum was transferred to the Public Debt as a liability and is dealt with by the Finance Department, See Public Accounts, 1898-1913 and page 79, 1908.

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Classification of Expenditure into Capital and Consolidated Fund—

Railways—		
Capital—Including Quebec Bridge	\$304,015,587 52	
Consolidated Fund (Income and Revenue)—		
Railway Subsidies, etc.....	244,071,325 68	
		\$548,086,913 20
Canals—		
Capital	\$104,152,119 42	
Consolidated Fund (Income and Revenue)....	34,155,960 09	
		138,308,079 51
General Expenditure—		
Consolidated Fund (Income and Revenue)....		824,988 07
Total expenditure		<u>\$687,219,980 78</u>

Total REVENUE RECEIVED from July 1, 1867 to Mar. 31, 1913—

Railways—See page 84	\$180,882,956 52	
Canals—See page 61	14,949,174 77	
Total Revenue		<u>\$195,832,131 29</u>

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

STATEMENT

Showing Subsidies voted for Railways as to which contracts have been entered into and payments made from July 1, 1883, to March 31, 1913.

SESSIONAL PAPER No. 20

STATEMENT showing the Railway Subsidies paid during the year ending March 31, 1913

Name of Railway.	Amount.
1. Algoma Central & Hudson Bay Railway Company, Ont.— Sault Ste. Marie to point on Canadian Pacific Railway.. From point on Canadian Pacific Railway to the National Transcontinental Railway	\$ 85,819 06 309,040 38
2. Algoma Eastern Railway Co. (formerly the Manitoulin and North Shore Railway Co.)— Little Current to Sudbury, Ont.....	254,089 40
3. Atlantic, Quebec & Western Ry. Co.— Paspebiac to Gaspé, Que.....	414,618 00
4. Canadian Northern Pacific Railway Co.— Yellowhead Pass to Vancouver and mouth of Fraser River, B.C.....	2,705,378 00
5. Canadian Pacific Railway Co.— Winnipeg to Gimli, Man..... Teulon to Icelandic River, Man.....	4,346 43 81,200 00
6. Esquimalt & Nanaimo Railway Co.— Wellington to Alberni, B.C.....	365,440 00
7. Fredericton & Grand Lake Railway Co., N.B.— Point near Gibson to Point near Minto on the Inter- colonial Railway	104,996 04
8. Ha-Ha Bay Railway Co.— From point near St. Mathias to Ha-Ha Bay, Que. From Labrosse Junction to the Saguenay River. From La Terrière Junction to Lake Kenogami. From point near Bagotville to St. Alexis	148,148 20
9. Kettle River Valley Railway Co., B.C.— Midway to Merritt	107,138 40
10. Northern New Brunswick & Seaboard Railway Co., N.B.— Drummond to point on Intercolonial Railway.....	86,525 00
11. Orford Mountain Railway Co.— Mansonville to International boundary, Quebec.....	9,984 00
12. Quebec Central Railway Co.— Extension Ste. Justine to St. Sabine, Que.....	8,576 00
13. Quebec & Saguenay Railway Co., Quebec— St. Joachim, northwesterly	27,641 60
14. Southampton Railway Co.— Millville to St. John, N.B.....	48,442 88
15. St. John & Quebec Railway Co.— St. John to Grand Falls, N.B.....	174,120 96
Total	\$4,935,507 35

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$	cts.		\$	cts.
46 Vic., chap. 25	156,800	00	1 International Railway, Quebec.....	156,800	00
53 " 2					
45 " 14	384,000	00	2 Quebec and Lake St. John Railway, Quebec.....	1,092,759	50
46 " 25	80,000	00			
48-49 " 59	96,000	00			
49 " 10	186,295	00			
50-1 " 24	23,800	00			
51 " 3	96,000	00			
52 " 3	64,000	00			
53 " 2	30,000	00	3 Kingston, Napanee and Western Railway, formerly Napanee, Tamworth and Quebec Ry., Ontario...	208,732	80
54-5 " 8	5,250	00			
57-8 " 4	44,800	00			
46 " 24	89,600	00			
49 " 10	70,000	00			
50-1 " 24	12,800	00			
52 " 3	32,000	00			
55-6 " 5	64,000	00	4 Pontiac Pacific Junction Railway, Quebec.....	193,578	00
47 " 8	272,000	00			
51 " 3	41,000	00			
53 " 2	24,000	00			
46 " 25	115,200	00	5 Caraquette Railway, N.B.....	224,000	00
47 " 8	76,800	00			
50-1 " 24	32,000	00			
47 " 8	32,000	00	6 Canadian Northern Quebec Ry. Co., formerly Great Northern Ry., Quebec.....	557,788	31
49 " 10	57,600	00			
52 " 3	22,400	00			
53 " 2	48,000	00			
56 " 2	48,000	00			
57-8 " 4	70,400	00			
7-8 Ed. VII 63	*		7 Kingston and Pembroke Railway, Ontario.....	48,000	00
47 " 8	48,000	00			
45 " 14	660,000	00	8 Northern and Pacific Junction Railway, Ontario..	1,320,000	00
46 " 26	660,000	00			
53 " 2	128,000	00			
47 " 8	19,200	00	9 Canada Eastern Ry., formerly Northern and Western Ry., N.B., including also Chatham Branch Ry.	374,839	84
48-9 " 59	32,000	00			
49 " 10	24,439	84			
48-9 " 59	140,800	00			
51 " 3	35,200	00			
57-8 " 4	*				
62-3 " 7			10 Quebec Central Railway, Quebec.....	348,342	00
47 " 8	60,342	00			
51 " 3					
7-8 " 63	288,000	00	11 Montreal and Sorel Railway, Quebec.....	93,757	57
53 " 2	72,000	00			
48-9 " 59	40,000	00			
53 " 2	30,000	00	12 Montreal and Champlain Junction Railway, Quebec.	103,600	00
48-9 " 59	64,000	00			
50-1 " 24	9,600	00	13 Elgin, Petitecodiac and Havelock Railway, N.B....	82,652	82
51 " 3	38,400	00			
46 " 25	44,252	82	14 St. Louis and Richibucto Railway, N.B.....	22,400	00
51 " 3	96,000	00			
47 " 8	22,400	00	15 Canada Atlantic Railway, Ontario.....	282,355	20
48-9 " 59	96,000	00			
49 " 10	38,400	00			
50-1 " 24	180,000	00	16 Esquimalt and Nanaimo Railway, B.C.....	750,000	00
47 " 6	750,000	00			
47 " 8	96,000	00	17 Erie and Huron Railway, Ontario.....	96,000	00
47 " 8	320,000	00			
46 " 25	300,000	00	18 Baie des Chaleurs Railway, Quebec.....	620,000	00
47 " 8					
52 " 3					
Carried forward.....				6,575,606	04

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have been entered into and payments made up to March 31, 1913.

Payments.							Total March 31, 1913.	Number.
1906-1907.	1907-1908.	1908-1909.	1909-1910.	1910-1911.	1911-1912.	1912-1913		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
							156,800 00	1
67,712 00	73,472 00				27,520 00		1,261,463 50	2
							208,732 80	3
							193,578 00	4
							224,000 00	5
	256,870 40	55,449 60	164,172 29	144,608 51	86,468 03		1,265,357 14	6
							48,000 00	7
							1,320,000 00	8
							374,839 84	9
	55,638 69			129,320 61		8,576 00	541,877 10	10
							93,757 57	11
							103,600 00	12
							82,652 82	13
							22,400 00	14
							282,355 20	15
						365,440 00	1,115,440 00	16
							96,000 00	17
							620,000 00	18
67,712 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	8,010,854 17	

4 GEORGE V., A. 1914

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883 to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$			\$	cts.
	cts.		Brought forward.	6,575,606	04
48-9 Vic. c. 59	118,400 00	1	New Brunswick and Prince Edward Island Ry.	113,440	00
50-1 " 24	217,600 00	2	Laurentian Railway, formerly St. Lawrence, Lower Laurentian and Saguenay Railway, Quebec.	217,000	00
49 " 10	11,200 00	3	L'Assomption Railway, Quebec.	11,200	00
49 " 10	32,000 00	4	} Great Eastern Railway, Quebec.	40,345	00
50-1 " 24	96,000 00				
56 " 2	64,000 00	5	} Irondale, Bancroft and Ottawa Railway, Ontario. ...	144,000	00
53 " 2	37,500 00				
47 " 8	160,000 00	6	} Buctouche and Moncton Railway, N.B.	101,600	00
52 " 3					
49 " 10	96,000 00	7	} Albert Southern Railway, N.B.	50,460	00
50-1 " 24	6,400 00				
47 " 8	51,200 00	8	} Lake Temiscamingue Colonization Railway, Quebec.	310,335	95
52 " 3					
50-1 " 24	65,200 00	9	} Joggins Railway, N.S.	37,500	00
57-8 " 4	274,940 00				
49 " 10	38,400 00	10	} Temiscouata Railway, N.B., and Quebec.	645,950	00
50-1 " 24	4,000 00				
45 " 14	240,000 00	11	} Leamington and St. Clair Railway, Ontario.	51,200	00
48-9 " 58	258,000 00				
51 " 3	100,000 00	12	} Toronto, Grey and Bruce Railway, Ontario.	14,656	00
53 " 2	51,200 00				
48-9 " 50	44,800 00	13	} Dominion Lime Co., Quebec.	15,360	00
50 1 " 24	6,400 00				
59 " 10	16,000 00	14	} West Ontario Pacific Railway and Ontario and Quebec Railway.	256,000	00
50-1 " 24	22,400 00				
49 " 10	256,000 00	15	} Drummond County Railway, Quebec.	423,936	00
53 " 2					
50-1 " 24	96,000 00	16	} Brockville, Westport and Sault Ste. Marie, Railway, Ontario.	105,200	00
52 " 3	14,400 00				
53 " 2	76,800 00	17	} Montreal and Lake Maskinonge Railway, Quebec. ..	41,280	00
57-8 " 4	96,000 00				
48-9 " 59	128,000 00	18	} South Norfolk Railway, Ontario.	54,400	00
53 " 2					
54-5 " 8	64,000 00	19	} Guelph Junction Railway, Ontario.	46,000	00
57-8 " 4					
49 " 10	32,000 00	20	} Belleville and North Hastings Railway, Ontario.	21,888	00
53 " 2	10,200 00				
50-1 " 24	54,400 00	21	} Hereford Railway, Quebec.	155,200	00
50-1 " 24	51,200 00				
48-9 " 54	22,400 00	22	} Lake Erie and Detroit River Railway, Ontario.	475,851	00
49 " 19					
49 " 10	108,800 00	23	} Beauharnois Junction Railway, Quebec.	62,400	00
52 " 0	48,000 00				
50-1 " 23	118,400 00	24	} St. Catharines and Niagara Central Ry., Ontario. ..	38,400	00
55-6 " 4	224,000 00				
62-3 " 5	*	25	} Fredericton and St. Mary's Ry. Bridge Co., N.B.	30,000	00
50-1 " 27	62,400 00				
56 " 4	62,400 00	26	} Harvey Branch Railway Co., N.B.	5,553	57
50-1 " 24	138,400 00				
55 6 " 5	108,000 00	27	} Nova Scotia Central Railway Co., N.S.	235,200	00
57-8 " 4	108,800 00				
52 " 3	30,000 00	28	} Cumberland Railway and Coal Co., N.S.	39,850	00
50-1 " 24	44,800 00				
55-6 " 5	240,000 00	29	} Pontiac and Renfrew Railway, Ontario.	13,600	00
61 " 1	*				
50-1 " 24	44,800 00	30	} Thousand Islands Railway, Ontario.	29,840	00
52 " 3	19,200 00				
52 " 3	54,400 00				
63 4 " 8	*				
			Carried forward.	10,363,851	56

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have been entered into and payments made up to March 31, 1913.

Payments.							Total March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
							\$	cts.
67,712 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	8,010,854 17	
							113,440 00	1
							217,600 00	2
							11,200 00	3
							40,345 00	4
							144,000 00	5
							101,600 00	6
							50,460 00	7
							310,335 95	8
							37,500 00	9
							645,950 00	10
							51,200 00	11
							14,656 00	12
							15,360 00	13
							256,000 00	14
							423,936 00	15
35,600 00							140,800 00	16
							41,280 00	17
							54,400 00	18
							46,000 00	19
							21,888 00	20
							155,200 00	21
							475,851 00	22
							62,400 00	23
							38,400 00	24
							30,000 00	25
							5,553 57	26
							235,200 00	27
							39,850 00	28
							13,600 00	29
							29,840 00	30
103,312 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	11,834,699 69	

STATEMENT showing subsidies voted for Railways as to which contracts

SUBSIDIES VOTED.		Number.	Railways.	July 1, 1883, to June 30, 1906.	
Authority.	Amount.			§	cts.
			Brought forward	10,363,851	56
52 Vic., chap.	3	1	Quebec, Montmorency and Charlevoix Ry. Co., Que.	96,000	00
56 "	3	2	St. Clair Frontier Tunnel Co., Ontario	375,000	00
52 "	3	3	Brantford, Waterloo and Lake Erie Ry., Ontario....	57,600	00
50-1 "	24	4	Port Arthur, Duluth and Western Ry., Ontario.....	287,200	00
57-8 "	4	5	Montreal and Ottawa Railway, Ontario.....	192,000	00
51 "	3	6	Cornwallis Valley Railway, N.S.	44,800	00
53 "	2	7	Ottawa, Northern and Western Ry., Quebec, formerly Ottawa and Gatineau Valley Railway.	64,000	00
50-1 "	24	8	Central Railway, N B.	48,000	00
52 "	3	9	Montreal and Western Railway, Quebec	361,270	00
52 "	3	10	Parry Sound and Colonization Railway, Ontario	128,000	00
57-8 "	4	11	Shuswap and Okanagan Railway, B.C.....	64,000	00
52 "	3	12	Tobique Valley Railway, N.B.....	163,200	00
54-5 "	8	13	Columbia and Kootenay, B.C.....	89,600	00
53 "	2	14	Waterloo Junction Railway, Ontario.....	35,200	00
55-6 "	5	15	Orford Mountain Railway Co., Quebec.....	9,600	00
53 "	2	16	St. Lawrence and Adirondack Railway, Quebec.	112,000	00
53 "	2	17	New Glasgow Iron, Coal and Railway Co., N.S.	35,200	00
53 "	2	18	United Counties Railway Co., Quebec.	99,200	00
55-6 "	5	19	Philipsburg Junction Ry. Quarry Company, Quebec.	57,600	00
56 "	2	20	Ottawa, Arnprior and Parry Sound Ry., Ontario....	25,024	00
57-8 "	4	21	Montford Colonization, Railway, Quebec..	*40,000	00
60-1 "	4	22	Lotbinière and Megantic Railway, Quebec.	102,400	00
55-6 "	5	23	Grand Trunk, Georgian Bay and Lake Erie Ry., Ont.	48,000	00
57-8 "	4	24	Canadian Pac. Ry., B.C., Revelstoke to Arrow Lake..	48,000	00
56 "	2	25	Nakusp and Slocan Railway, B.C.....	80,000	00
55-6 "	5	26	Dominion Coal Company, N.S.	121,600	00
56 "	2	27	Oshawa Railway and Navigation Company, Ontario.	89,600	00
57-8 "	4	28	Tilsonburg, Lake Erie and Pacific Ry., Ontario.....	22,400	00
56 "	2	29	St. Stephen and Milltown Ry., N.B.....	*11,200	06
57-8 "	4	30	Gulf Shore Railway Company, N.B.....	*38,400	00
57-8 "	4	31	Cap de la Magdeleine Railway, Quebec.....	9,000	00
56 "	2	32	Ontario, Belmont and Northern Ry. Company, Ont..	32,000	00
*	*	33	Coast line of N.S., now Halifax and Yarmouth Ry..	*	*
*	*	34	Ottawa and New York Railway Company, Ontario..	*	*
			Carried forward	15,578,072	80

SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.

Payments.							Total March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
103,312 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	11,834,699 69	
							96,000 00	1
							375,000 00	2
							57,000 00	3
							271,200 00	4
							192,000 00	5
							44,800 00	6
	4,243 20						414,931 20	7
							226,012 54	8
							361,270 00	9
							152,800 00	10
							163,200 00	11
							134,016 00	12
							88,800 00	13
							32,800 00	14
	24,128 00					9,984 00	202,926 50	15
							149,481 60	16
							39,840 00	17
							188,816 00	18
							23,712 00	19
							779,712 00	20
							167,440 00	21
							96,000 00	22
							39,744 00	23
							80,000 00	24
							117,760 00	25
							87,808 00	26
							22,400 00	27
							117,431 48	28
							14,848 00	29
							53,699 20	30
							7,424 00	31
							20,720 00	32
							160,000 00	33
							262,384 00	34
103,312 00	414,352 29	55,449 60	164,172 29	273,929 12	113,988 03	384,000 00	17,087,276 21	

4 GEORGE V., A. 1914

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$	cts.		\$	cts.
			Brought forward	15,578,072	80
60-61 Vic., c. 5	3,630,000	00	1 Canadian Pacific Ry. Co., B.C. (Crow's Nest Pass)..	3,404,720	00
60-61 " " 4	500,000	00	2 Grand Trunk Ry. Co. 'Victoria Jubilee Bridge,' Que.	500,000	00
63 " " 3			3 International Ry. of New Brunswick, formerly Res-		
67-8 Ed. VII, 63			tigouche and Western Ry. Co	127,208	07
" " *	"	"	4 East Richelieu Railway Co., Quebec	69,952	00
7-8 Ed. VII, 63	"	"	5 South Shore Ry. (Quebec, Montreal and Southern)..	203,240	81
" " *	"	"	6 Pembroke Southern Railway, Ontario	64,000	00
" " *	"	"	7 Massawippi Valley Railway Co., Quebec	5,376	00
" " *	"	"	8 Inverness and Richmond Co. Ry. N.S., now Inverness		
" " *	"	"	Ry. and Coal Co.	368,545	97
" " *	"	"	9 Canadian Northern Railway Co., Ontario, Manitoba		
" " *	"	"	and N. W. T.	1,909,132	00
6-7 Ed. VII, 40	"	"	10 Canadian Pacific Railway Co. (Pipestone Branch)..	160,000	00
" " *	"	"	11 Central Ontario Railway Co., Ontario	67,200	00
" " *	"	"	12 Midland Railway Co., N.S.	362,200	00
62-3 Vic., c. 7	1,000,000	00	13 Quebec Bridge Co., Quebec	374,353	33
63-4 " " 8			"	"	14 St. Mary River Railway Co., N. W. T. ....	148,094	00
60-1 Vic., c. 4	212,500	00	15 (Pontiac and Pacific and Ottawa and Gatineau Ry.		
63-4 " " 2			Co. (Interprovincial Bridge over Ottawa River)..	212,500	00
1 Ed. VII, c. 7	"	"	16 Atlantic and Lake Superior Ry., Quebec	146,490	84
1 " " 7	"	"	17 Montreal and Province Line Railway, Quebec	58,560	00
62-3 Vic., c. 7	"	"	18 York and Carleton Railway, N.B.	18,336	00
62-3 " " 7	"	"	"		
63-4 " " 8	"	"	19 Algoma Central and Hudson Bay Railway, Ontario..	924,976	00
1 Ed. VII, c. 7	"	"	"		
" " *	"	"	20 Cape Breton Extension Railway, N.S.	182,400	00
" " *	"	"	21 Can. Pac. Ry. Co. (Kootenay and Arrowhead Branch)	153,866	00
" " *	"	"	22 " (Selkirk Branch)	83,200	00
" " *	"	"	23 " (Dymont Branch)	22,336	00
" " *	"	"	24 " (Waskada Branch)	64,000	00
9-10 Ed. VII, 51	"	"	25 Manitoulin and North Shore Ry. Co., Ontario, now		
" " *	"	"	Algoma Eastern Railway Co. (1913)	32,000	00
" " *	"	"	26 Bay of Quinté Railway Ont	69,120	00
" " *	"	"	27 Bruce Mines and Algoma Railway, Ont	53,920	00
" " *	"	"	28 Maganetawan River Railway Co., Ont	3,552	00
" " *	"	"	29 Canadian Northern Quebec Ry., formerly Chateau-		
" " *	"	"	guay and Northern Ry., Quebec	307,595	00
" " *	"	"	30 Canadian Pacific Ry. Co. (Pheasant Hill Branch)..	425,200	00
" " *	"	"	31 Halifax and Southwestern Railway Co., N.S.	653,776	00
" " *	"	"	32 Northern Colonization Railway Co., Quebec	133,760	00
" " *	"	"	33 New Brunswick Coal and Railway Co., N.B.	48,000	00
" " *	"	"	34 Schomberg and Aurora Railway Co., Ont	46,144	00
" " *	"	"	35 Lindsay, Bobcaygeon and Pontypool Ry. Co., Ont...	185,173	06
" " *	"	"	36 Middleton and Victoria Beach Ry. Co., N.S.	98,092	09
" " *	"	"	37 Beersville Coal and Ry. Co., N.B., now North Shore		
" " *	"	"	Ry.	20,736	00
Ed. VII, c. 57	"	"	38 Nicola, Kamloops and Similkameen Coal and Ry. Co.	110,592	00
4 " " 34	"	"	39 Canadian Pacific Ry. (Staynerville Branch)		
6 " " 43	"	"	40 Klondike Mines Railway		
6 " " 43	"	"	41 Kettle River Valley Ry. Co., B.C.		
6 " " 43	"	"	42 Colchester Coal and Ry. Co., N.S.		
3 " " 57	"	"	43 Minudie Coal Co., N.S.		
6 " " 43	"	"	44 Atlantic, Quebec and Western Ry. Co., Quebec		
9-10 " " 51	"	"	"		
6 " " 43	"	"	45 Napierville Junction Ry. Co., Quebec		
6-7 " " 40	"	"	46 Edmonton, Yukon and Pac. Ry. Co., Alberta		
6-7 " " 40	"	"	47 Canadian Northern Ontario Ry. Co., formerly }		
1-3 " " 63	"	"	James Bay Ry. Co	651,264	00
			Carried forward	28,057,685	06

† Of this amount, \$16,164.43 were in connection with subsidy to Montreal and Sorel Railway.

‡ Reimbursement of amounts for claims still unpaid and others in duplicate.

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have been entered into and payments made up to March 31, 1913.—Continued.

Payments.							Total, March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
103,312 00	414,352 29	55,448 60	164,172 29	273,929 12	113,988 03	384,000 00	17,087,276 21	
							3,404,720 00	1
							500,000 00	2
51,200 00		189,849 60	187,494 40	169,536 00			725,288 07	3
		43,414 55	184,320 00	60,000 00	23,835 70		69,952 00	4
							514,811 06	5
							64,000 00	6
							5,376 00	7
							368,545 97	8
							1,909,132 00	9
							160,000 00	10
							204,893 49	11
4,967 70	76,861 36	35,404 64		24,601 32	826 17		399,060 40	12
	31,892 40						374,353 33	13
							148,094 00	14
							212,500 00	15
1,521 82							144,969 02	16
							58,560 00	17
	14,560 00						32,896 00	18
						133,584 00	394,859 44	19
			14,400 00				196,800 00	20
							153,866 00	21
							83,200 00	22
							22,336 00	23
							64,000 00	24
				68,638 72		254,089 40	354,728 12	25
72,602 45							141,722 45	26
							53,920 00	27
							3,552 00	28
84,224 75							391,819 75	29
							435,200 00	30
263,107 20	316,567 73						1,238,450 93	31
		68,320 00	153,120 00				355,200 00	32
							48,000 00	33
							46,144 00	34
							185,173 06	35
27,667 20							125,760 00	36
							20,736 00	37
	190,208 00						300,800 00	38
9,700 00	3,424 00						13,024 00	39
96,000 00	101,184 00						197,184 00	40
	97,771 52				148,800 00	107,138 40	353,709 92	41
	12,800 00						12,800 00	42
	18,544 00						18,544 00	43
	64,000 00	92,672 00	208,896 00	31,334 40	91,279 60	414,618 00	902,800 00	44
	173,440 00						173,440 00	45
	91,200 00						91,200 00	46
420,608 00	244,224 00	556,864 00	250,982 40	116,889 60			2,240,832 00	47
1,136,767 48	1,851,029 30	1,041,974 39	1,163,385 09	744,929 16	512,313 50	1,554,705 24	36,062,789 22	

^a Amount actually paid after deductions amounting to \$1,521.82 made in 1905-06 (being for refunds, &c.) from the total of \$146,490.84, previously reported, for which cheques had issued.

4 GEORGE V., A. 1914

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883 to June 30, 1906.	
Authority.	Amount.			\$	cts.
			Brought forward	28,057,685	06
7-8 Ed. VII. c. 63	*	1	Maritime Coal and Railway Co.		
7-8 " 63	*	2	St. Marys and Western Ontario Ry. Co.		
7-8 " 63	*	3	North Shore Ry. Co., formerly Beersville Coal and Ry. Co.		
7-8 " 63	*	4	St. Maurice Valley Ry. Co.—Three Rivers to St. Maurice.		
7-8 " 63	*	5	Grand Trunk Pacific Ry. Co.		
6 " 43	*	6	Canadian Pacific Ry. Co., Teulon to Icelandic River.		
7-8 " 63	*	7	Canadian Pacific Ry. Co., Moosejaw northwesterly ..		
7-8 " 63	*	8	Canadian and Gulf Terminal Ry. Co.		
6-7 " 40	*	9	Liverpool and Milltown Ry. 5 miles.		
7-8 " 63	*	10	Thessalon and Northern Ry. Co.		
7-8 " 34	*	11	Vancouver and Lulu Island Ry. Co.		
7-8 " 51	*	12	Quebec and Saguenay Ry. Co.		
7-8 " 63	*	13	Canadian Pacific Ry., Winnipeg to Gimli.		
		14	Ha Ha Bay Railway Co., Q.		
		15	Northern New Brunswick and Seaboard Railway Co., N.B.		
		16	Can. Northern Pacific Ry. Co., B.C.		
		17	Fredericton and Grand Lake Ry. Co., N.B.		
		18	Southampton Railway Co., N.B.		
		19	St. John and Quebec Railway Co., N.B.		
			Total	28,057,685	06
	186,500 annually				
37 Vic., ch. 14	for 20 years.	20	Atlantic and Northwestern Railway	3,172,200	00
46 " 2	} 1,525,250 00	21	Canada Central Railway	1,525,250	00
47 " 8		22	Canadian Pacific extension.	1,500,000	00
48-9 " 58	1,500,000 00		Total	34,255,135	06

* 60-61 Victoria, Cap. 4, 62-63 Victoria, Cap. 7, 63-64 Victoria, Cap. 8, 1 Edward VII., Cap. 7, 40, and 7-8 Edward VII, Cap. 63, 8-9 Edward VII, Cap. 35, 9-10 Edward VII, Cap. 51 authorise a further sum of fifty per cent on so much of the average cost of the mileage subsidized as is in excess

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.—*Concluded.*

Payments.							Total March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1,136,767 48	1,851,029 30	1,041,974 39	1,163,385 09	744,929 16	512,313 50	1,554,705 24	36,062,789 22	
		3,200 00					3,200 00	1
		67,344 00				365 00	67,709 00	2
		6,880 00					6,880 00	3
		112,640 00		60,480 00			173,120 00	4
		367,249 00	550,551 96	302,679 04			1,220,480 00	5
			30,800 00			81,200 00	112,000 00	6
			303,360 00		78,432 00		381,792 00	7
				144,803 84	65,249 75		210,053 59	8
				32,000 00			32,000 00	9
					6,112 00		6,112 00	10
					61,760 00		61,760 00	11
					104,992 00	27,641 60	132,633 60	12
					30,176 00	4,346 43	34,522 43	13
						148,148 20	148,148 20	14
						86,528 00	86,528 00	15
						2,705,378 00	2,705,378 00	16
						104,996 04	104,996 04	17
						48,442 88	48,442 88	18
						174,120 96	174,120 96	19
1,136,767 48	1,851,029 30	1,599,287 39	2,048,097 05	1,284,892 04	859,400 25	4,935,507 35	41,772,665 92	
186,600 00	186,600 00	186,600 00					3,732,000 00	20
							1,525,250 00	21
							1,500,000 00	22
1,323,367 48	2,037,629 30	1,785,887 39	2,048,097 05	1,284,892 04	859,400 25	4,935,507 35	48,529,915 92	

3 Edward VII, Cap. 57, 4 Edward VII, Cap. 34, 6 Edward VII, Cap. 43, 6-7 Edward VII, Cap. \$3,200 per mile subsidy if the cost does not average more than \$15,000 per mile, if over that amount, of \$15,000, per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile.

W. C. LITTLE,
Accountant.

PART II

STATEMENTS

ON THE

DEPARTMENTAL SOLICITOR

FOR THE YEAR 1912-13

SHOWING

- (1) Guarantee agreements.
- (2) Money subsidy agreements.
- (3) Contracts entered into during the year.
- (4) Leases, of water-powers and properties granted.
- (5) Property conveyed to the Crown and lands conveyed by the Crown.
- (6) Damages released.

4 GEORGE V., A. 1914

GUARANTEE AGREEMENTS for the construction of Railways entered into with the

No. of agreement.	Date of signature.	Railway Company.	Line of Railway.	Authority for execution.	
				Act of Parliament.	Order in Council.
19764	1912. Nov. 29...	The Canadian Northern Alberta Ry. Company.	A line of railway extending from a point on the line of railway of the Company 150 miles west of St. Albert and thence westerly to the boundary of British Columbia at or in the Yellowhead Pass, 115 miles.	2 George V., Chap. 7.	Oct. 29, 1912

†Against east-bound traffic.

‡Against west-bound traffic.

SESSIONAL PAPER No. 20

Department of Railways and Canals during the Fiscal Year ended March 31, 1913.

Amount of Guarantee.	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 of Completion.
Guarantee of principal and interest of securities of the Company to the extent of \$35,000 per mile.	115	Feet. 716	Feet. ‡26-40 ‡31-68	Feet. 50	Feet. 20	Feet. 15	Lbs. 80	May 4th, 1915.

H. F. ALWARD,
Departmental Solicitor.

SUBSIDY AGREEMENTS for the construction of Railways

No of Contract.	Date of Signature.	Railway Company.	Line of Railway or Work subsidized.	Authority for Execution.	
				Act of Parliament.	Order in Council.
	1912.				1912.
(a) 19646	Sept. 27...	The Algoma Central and Hudson Bay Ry. Co.	From Sault Ste. Marie to point on C.P.R. between White River and Dalton station.	Canada, 1912, Chap. 48.	June 29....
(b) 19806	Dec. 28..	" "	From a point on the Canadian Pacific Railway, northerly towards the National Transcontinental Railway.	Can., 1912, c. 48.	Dec. 24....
(c) 19807	Dec. 28..	" "	From a point 50 miles northerly from junction of its line with C.P.R. northerly to a junction with the N.T.R.	Can., 1912, c. 48.	Dec. 24....
(d) 19545	June 11..	The Canadian Pacific Railway Company.	From a point at or near Teulon to a point on the Icelandic River, in lieu of subsidy granted by cap. 43 of 1906.	Can., 1912, c. 48.	May 2....
19605	Aug. 27..	The Canadian Northern Pacific Railway Company.	From point at Yellowhead Pass to Vancouver and the mouth of the Fraser River.	Can., 1912, c. 49.	June 29....
19609	Aug. 2..	The Canadian Pacific Ry. Co. (lesses of the Calgary and Edmonton Ry. Company).	Towards the construction of a railway bridge over the Saskatchewan River connecting Strathcona and Edmonton.	Can., 1912, c. 48.	June 8....
	1913.				1913.
19884	Feb. 1..	Central Railway Co. of Canada.	Line of railway at or near Ste. Agathe des Monts station towards township of Howard, in Co. of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction.	Can., 1912, c. 48.	Jan. 2....
	1912.				1912.
19475	June 1..	The Dominion Atlantic Railway Co	From a point on the Dominion Atlantic Railway to Government pier or wharf at Canning.	Can., 1910, c. 51.	Feb. 20....
19578	July 2..	" "	From Centreville on the Dominion Atlantic Ry. westerly to Weston, in lieu of subsidy granted by Chap. 63 of 1908, section 1, item 30.	Can., 1910, c. 51.	Feb. 30 and May 22..
(e) 19689	Oct. 19..	The Esquimalt and Nanaimo Railway Company.	From Wellington to Alberni in lieu of Chap. 63 of 1908, section 1, item 35.	Can., 1912, c. 48.	June 29....
(f) 19491	June 13..	The Fredericton and Grand Lake Coal and Railway Co.	From a point on I.C.R. at Gibson to a point at or near Minto, together with a branch line from point on above mentioned line to Marysville.	Can., 1912, c. 48.	May 30 and June 29...
19643	Sept. 12..	The Great Northern Mining and Railway Co., Ltd.	From Little River through Belle Marche to Eastern Harbour.	Can., 1912, c. 48.	Aug. 26....

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entered into during the Fiscal Year ended March 31, 1913.

Amount of Subsidy.		Number of miles subsidized.	Maximum grade feet per mile.	Radius of curvature not less than.	Width of cutting each side.	Width of Cutting.	Embankment.	Steel rails, lbs. per lineal yard.	Date of Completion.
Per Mile.	Not exceeding.								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400	200	106	478	50	20	15	56	Aug. 1, 1916.
3,200	6,400	50	32	955	50	20	15	56	Aug. 1, 1914.
3,200	6,400	65	32	1,910	50	20	15	56	Aug. 1, 1914.
3,200	6,400	35	21	1,910	50	20	15	56	Jan. 1, 1912.
12,000	12,000	525	26-40	717	50	20	15	56	July 1, 1914.
	126,000								Aug. 1, 1916.
3,200	6,400	15	98	478	50	20	15	56	Aug. 1, 1916.
3,200	6,400	1	52-80	717	50	20	15	56	Dec. 31, 1912.
3,200	6,400	15	80	1,433	50	20	15	56	Aug. 1, 1914.
3,200	6,400	60	80 116	573 410	50	*18 **16	14	56	Aug. 1, 1913.
3,200	6,400	35	63-4	955-36	50	20	15	56	Aug. 1, 1916.
3,200	6,400	3	92	819	50	20	15	56	Aug. 1, 1913.

4 GEORGE V., A. 1914

SUBSIDY AGREEMENTS for the construction of Railways entered

Number of Contract.	Date of Signature.	Railway Company.	Line of Railway or Work Subsidized.	Authority for Execution.	
				Act of Parliament.	Order in Council.
19587	July 18.	Ha Ha Bay Railway Company.	(a) From a point on Quebec and Lake St. John Railway in Tp. of Jonquieres, at or near St. Mathias, to Ha Ha Bay; not exceeding 20 miles; (b) From Labrosse Junction to the Saguenay River, northerly through the town of Chicoutimi; not exceeding 5 miles; (c) From La Terriere Junction, southerly to Lake Kenogami, via La Terriere village; not exceeding 12 miles; (d) From a point on the Ha Ha Bay Railway, at or near Bagotville village, easterly, to the village of St. Alexis; not exceeding 3 miles.	Can., 1912, c. 48.	May 23 and June 29.
19494	June 11.	The Joliette and Lake Manuan Colonization Ry. Co.	From Joliette to or near Lake Manuan.	Can., 1910, c. 51.	May 23.
19489	June 12.	The North Railway Company.	From point near Montreal to Mile 837 west of Moncton of the N. T. Railway 200 miles; and from point on N. T. Railway near Mile 837 west of Moncton in a northerly and northwesterly direction, 300 miles.	Can., 1912, c. 48.	June 7.
(g) 19577	July 18.	The Northern New Brunswick and Seaboard Ry. Co.	From Drummond Mines at Austin Brook to point on I.C.R. from such point to Alston Point	Can., 1912, c. 48.	April 17 and May 2.
(h) 19560	June 29.	Quebec and Saguenay Ry. Co.	From St. Joachim, northeasterly.	Can., 1912, c. 48.	May 23.
19648	Sept. 25.	Quebec Central Ry. Company.	Extension of line of railway from point (30 miles from St. George in parish of St. Justine, Co. of Dorchester, to a point in parish of St. Sabine, Co. of Bellechasse.	Can., 1912, c. 48.	July 19.
(i) 19492	May 14.	The Southampton Ry. Co.	From point at or near Millville to a point on the St. John River, near the Pokiok Bridge.	Can., 1912, c. 48.	May 2 and June 1.
19705	Nov. 5.	The Saint John and Quebec Ry. Co.	From St. John to Grand Falls, N.B., exclusive of a railway bridge across Kennebecasis River, at or near Perry Point and two railway bridges across St. John River.	Can., 1912, c. 48.	Oct. 19.

(a) Cancels and supersedes Subsidy Agreement No. 19258, dated Oct. 21st, 1911.

(b) Varied by Supplemental Agreement No. 19808.

(c) Varied by Supplemental Agreement No. 19809.

(d) Supersedes Subsidy Agreement No. 16776, dated Sept. 28, 1907.

(e) Cancels and supersedes No. 17151, dated May 27th, 1908.

(f) Permission to use 72 and 73 lb. used rails granted by authority.

Permission to use, in branch line, 56 pound used steel rails.

Varied by No. 19681. Modified by endorsement dated Dec. 21, 1912, as to curvature

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into during the Fiscal Year ended March 31, 1913—Continued.

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 Completion.
Per Mile.	Not exceeding.								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400	20	66	573	50	20	15	56	April 25, 1913.
		5	317	153	50	20	15	56	April 25, 1913.
		12	148	573	50	20	15	56	April 25, 1913.
		3	63	573	50	20	15	56	April 25, 1913.
3,200	6,400	60	79.2	955.36	50	20	15	56	April 1, 1914.
3,200	6,400	200	716	26.40 31.68	50	20	15	80	Aug. 1, 1916.
		300							
3,200	6,400	26	80	717	50	20	15	56	Dec. 1, 1913.
3,200	6,400	62.8	66	573	50	20	15	56	Aug. 1, 1916.
3,200	6,400	1.34	52.80	1,146.3	50	20	15	56	Aug. 1, 1916.
3,200	6,400	13	79.2	819.02	33	20	15	52	Aug. 1, 1916.
3,200	6,400	228	53	818	49½	20	16	80	Nov. 1, 1915.

(g) Superseded by Subsidy Agreement No. 20151.

(h) Supersedes Subsidy Agreement No. 19367, dated Feb. 2, 1912.

(i) Varied by No. 19700.

†Against east-bound traffic.

‡Against west-bound traffic.

*In earth.

**In rock.

H. F. ALWARD,
Departmental Solicitor.

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.

INTERCOLONIAL RAILWAY.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1912.		
19442	April 9.	R. O. McCurdy & Co.....	Erection and completion of a brick freight shed at Truro, N.S.
19481	June 1.	Frank W. Wilson.....	Moving of part of old Station and building used by yardmen at Truro, N.S.
19482	June 1.	Nova Scotia Car Works, Limited.	Delivery of 373 Steel Framed Box Cars, 60,000 lb. capacity.
19483	June 1.	The Preston Car and Coach Company, Limited.	Delivery of One Vestibule First-class Day Coach.
19484	June 1.	The Canadian Locomotive Company, Limited.	Delivery of 5 Consolidation Freight Locomotives.
19485	" 1.	James Pender & Company, Limited.	For the construction of a siding connecting Contractor's buildings and premises with Intercolonial Railway at St. John, N.B.
19495	" 1.	City of Fraserville.....	Supply of water.
19542	" 20.	Canadian Car and Foundry Company, Limited.	Delivery of 10 Refrigerator Cars.
19544	" 20.	Canadian Car and Foundry Company, Limited.	Delivery of 20 steel underframe stock cars.
19561	" 29.	The Canadian Locomotive Company, Limited.	Delivery of 4 Simple Switching Engines.
19589	July 20.	Canadian Sand Blast Company, Limited.	Sandblasting stonework of old portion of Intercolonial Railway general office building at Moncton, N.B.
19590	April 29.	The Pullman Company.....	Delivery of 1 Dining Car.
19591	" 29.	" " ".....	Delivery of 2 Sleeping cars.
19598	July 20.	La Compagnie D'Aqueduc de St. Pierre.	Supply water at St. Pierre, Montmagny, P.Q.
19623	Aug. 21.	Sumner Company.....	Supply and installation of a hot water heating system in new wing of General Office Building at Moncton, N.B.
19631	Sept. 5.	John McQuarrie and Dan. A. McDonald.	Addition to Freight Shed at Stellarton, N.S.
19644	" 21.	Thomas McAloney.....	Handling coal at Springhill Junction, N.S.
19645	" 20.	LeBlanc and Leger.....	Erection and completion of a Standard Passenger Station and Dwelling at Nelson, N.B.
19649	" 30.	Saint John Railway Company.....	Privilege to cross Intercolonial Railway tracks on the level at Brussels Street, St. John, N.B.
19651	" 26.	Charles E. Smith.....	Erection of an addition to No. 7 Pier, and rock excavation at Richmond, N.S.
19652	" 26.	William Cooke.....	Ballasting of Sydney Mines Diversion.
19656	Oct. 3.	William P. McNeil and Company, Limited.	Supply and delivery of 75 ft. through steel turntable at Point Tupper, N.S.
19660	" 3.	S. H. Stevenson.....	Addition to freight shed at Sydney, N.S.....
19661	" 3.	Jesse C. Stewart.....	Addition to freight shed at Sydney Mines, N.S.
19662	" 3.	D. H. McLean.....	Erection of a combined standard passenger station dwelling and freight shed at Little Bras D'Or, N.S.
19663	" 3.	D. H. McLean.....	Erection of a combined standard passenger station, dwelling and freight shed at Florence, N.S.
19669	" 8.	Emile Dube.....	Erection of a brick and stone passenger station at Ste. Flavie, Que.
19684	" 19.	Morrison and Clark.....	Erection and completion of a ten stall engine house and annex, a brick chimney with concrete foundation, &c., at Point Tupper, Co. of Richmond, N.S.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*INTERCOLONIAL RAILWAY—*Concluded.*

Number of Contract.	Date of Signature.	Contractors.	Description.
	1912.		
19686	Oct. 19..	J. A. Boulay.....	Erect and complete Freight Sheds at Kempt and St. Anaclet, Que.
19687	" 22..	John C. McLean.....	Erection of addition to freight portion of station building at Eel River, N.B.
19699	" 26..	J. W. Begin.....	Erection of passenger station, and moving and re-modelling of present station for a dwelling at Sayabec, Que.
19713	Nov. 11..	D. R. Morrison and P. G. Clark..	Erection of Passenger station at Chatham, N.B.
19714	" 13..	The Dominion Express Company..	The right to carry on business of express company.
19715	" 11..	The Canadian Locomotive Company, Limited.	Delivery of 4 Simple Switching Engines.
19716	" 11..	The Canadian Locomotive Company, Limited.	Delivery of 5 Consolidation Freight Locomotives.
19718	" 16..	The Montreal Locomotive Works, Limited.	Deliver 5 Consolidation Freight Locomotives.
19795	Dec. 14..	D. H. McLean.....	Erection of a Brick and Stone Passenger Station at Point Tupper, N.S.
19796	" 17..	Canada Foundry Company, Limited.	Delivery of 5 Consolidation Freight Locomotives.
19797	" 18..	Canadian Sand Blast Company, Limited.	Sandblasting and painting Intercolonial Railway bridge at Grand Narrows, C.B., N.S.
19798	" 18..	Godfroid Boulay.....	Erection of an addition to freight shed at Rimouski, Que.
19817	" 20..	The Moncton Tramways, Electricity and Gas Company, Limited.	Supply of natural gas for the operations of the Intercolonial Railway at Moncton, N.B.
19824	" 27..	The Dominion Iron and Steel Company, Limited.	Delivery of 5,000 tons of steel rails.
	1913.		
19828	Jan. 4..	D. H. McLean.....	Erection of a two-apartment dwelling at Point Tupper, N.S.
	1912.		
19835	July 22..	Canadian Car and Foundry Company, Limited.	Delivery of 2 Sleeping cars.
19837	Dec. 20..	The Commissioners of the Transcontinental Railway.	Respecting the use of the terminals of the I.C.R. at Moncton, N.B.
	1913.		
19891	Jan. 30..	Canadian Car and Foundry Company, Limited.	Delivery of 100 Steel Underframe Flat Cars of 80,000 lbs. capacity.
19892	" 30..	Canadian Car and Foundry Company, Limited.	Delivery of 1 Dining Car.
19893	" 30..	Canadian Car and Foundry Company, Limited.	Delivery of 50 all steel Hart-Otis Coal Cars of 100,000 lbs. capacity.
19894	Feb. 1..	Ernest Dionne.....	Erection of a Rest House at Rivière du Loup, Que.
19895	" 3..	Canadian Car and Foundry Company, Limited.	Delivery of 250 steel frame box cars.
19897	" 1..	Polycarpe Ouellet.....	Erection of a Standard Sand House at Rivière du Loup, Que.
19898	" 6..	The Canadian H. W. Johns-Manville Company, Limited.	Cork insulation of roof of passenger car repair shop at Moncton, N.B.
19903	" 10..	Rhodes, Curry Company, Limited	Erection of an addition to Freight Car Repair Shop at Moncton, N.B.
19908	" 12..	The Bennett and Wright Company, Limited.	Supply and installation of Vacuum Car Cleaning Plants at St. John and Moncton, N.B.

4 GEORGE V., A. 1914

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—Continued.

INTERCOLONIAL RAILWAY—Concluded.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
19917	Feb. 18.	Dominion Iron and Steel Com- pany, Limited.	Delivery of 5,000 gross tons of No. 1 steel rails.
19930	" 26.	Canadian Car and Foundry Com- pany, Limited.	Delivery of 1 Vestibule First-class Day Coach.
19942	Mar. 14.	The Preston Car and Coach Com- pany, Limited.	Supply and delivery of 3 Baggage cars.
19966	Feb. 20.	Fraser and Chalmers, Limited.....	Delivery of a No. 2 size Bettington Boiler, together with one extra pulverizer com- plete for Moncton shops.

HUDSON BAY RAILWAY.

	1912.		
19421	April 9.	Canada Foundry Company, Lim- ited.	Construction of a railway bridge over the Saskatchewan River at Le Pas.
19546	June 13.	The Steel Company of Canada, Limited.	Delivery of 3,200 kegs of track spikes.
19593	" 28.	Canadian Tube and Iron Company, Limited.	Delivery of 840 kegs of track bolts and nuts.
19638	Sept. 20.	J. D. McArthur.....	Construction of section, Thicket Portage to Split Lake Junction, 68 miles.
19647	" 20.	Canadian Steel Foundries, Limited	Delivery of 40 sets of switches and frogs.
19799	Dec. 17.	J. D. McArthur.....	Construction of Section from Split Lake Junc- tion to Port Nelson, 165 miles.
	1913.		
19833	Jan. 16.	The Algoma Steel Company, Limited.	Delivery of 12,000 tons of steel rails.
19896	" 30.	The Algoma Steel Company, Limited.	Delivery of 40,000 Sellers Anchor Bottom Tie Plates.
19899	Feb. 6.	The Steel Company of Canada, Limited.	Delivery of 6,800 kegs of railway spikes, 200 lbs. to the keg.
19900	Jan. 30.	The Algoma Steel Company, Limited.	Supply and delivery of 680 gross tons of steel splice bars.
19904	Feb. 10.	Canadian Steel Foundries, Limited	Delivery of 70 sets switches and frogs, being 60 sets of No. 10 and 10 sets of No. 8.
19905	" 6.	The Steel Company of Canada, Limited.	Delivery of 1,320 gross tons of Splice bars.
19906	" 10.	The Canadian Tube and Iron Company, Limited.	Delivery of 1,600 kegs of 200 lbs. each of bolts and nuts for steel rails.
19954	Mar. 29.	Dominion Iron and Steel Com- pany, Limited.	Delivery of 24,000 tons of steel rails.

QUEBEC BRIDGE.

	1912.		
19614	April 18.	The St. Lawrence Bridge Com- pany, Limited, The Canadian Bridge Company, Limited, and The Dominion Bridge Company, Limited.	Modifying Contract No. 19,007, dated April 4, 1911, in respect of substitution of carbon steel eyebars for riveted plate members in building of top chords of cantilever and anchor arms.
19805	Dec. 26.	M. P. Davis and J. T. Davis.....	Modifying Contract No. 18,113, substructure of Quebec Bridge.

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CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—Continued.

CORNWALL CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
19486	June 4..	G. R. Phillips.....	Improvement of Lower Entrance to Lock No. 15.
19487	" 6..	The Hamilton Bridge Works Company, Limited.	Delivery of a steel highway bridge over Old Lock No. 17 of Canal.
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland cement.

FARRAN'S POINT CANAL.

	1913.		
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland cement.

GALOPS CANAL.

	1912.		
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland Cement.
19696	Oct. 24..	Dominion Bridge Company, Limited.	Supply and erection of three steel trussed box girders for stop log purposes for needle dam at Lock No. 28.

LACHINE CANAL.

	1912.		
19572	July 4..	Canada Cement Company, Limited.	Delivery of 43,425 bbls. of Portland cement for the Quebec Canals.

MURRAY CANAL.

	1912.		
19608	Aug. 20..	The MacDonald Contracting Company, Limited.	Dredging of Canal.
19682	Oct. 19..	S. McLellan and J. Whitley.....	Erection of a bridge tender's residence on Canal.

RAPIDE PLAT CANAL.

	1912.		
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland Cement.

4 GEORGE V., A. 1914

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*

RIDEAU CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1912.		
19441	April 12..	J. George Gravelle and Company.	Carboning and regulating arc lamps on electric light line of Canal from foot of locks to Laurier Bridge and patrolling between said points.
19460	" 18..	The Ottawa Transportation Company, Limited.	Supply of British Columbia or 'Douglas' Fir Dimension Timber for 1912-13.
19573	July 4..	Canada Cement Company, Limited.	Delivery of 750 bbls. of Portland Cement.
19603	" 25..	John Burns and William Waters...	Delivery of 2 side dumping scows for Canal dredging plant.
19650	Sept. 27..	Concrete Constructions, Limited..	Sandblasting and painting the following bridges: Elgin Street Bridge, Concession Street Bridge, Manotick, Merriekville, Oliver's Ferry, Newboro and Brass's Point.
19674	Oct. 12..	The W. H. Kelly Lumber Company.	Delivery of a Boom Dredge.
19688	" 22..	James Bogue.....	Construction of a Concrete Lining Wall along south side of cut below Detached Lock in Smith's Falls, Ont.
	1913.		
19826	Jan. 3..	The W. H. Kelly Lumber Company.	Delivery of a Wooden Tug for Canal dredging plant.

SOULANGES CANAL.

	1912.		
19706	Nov. 6..	The Phoenix Bridge and Iron Works, Limited.	Supply and delivery of 18 Steel Stop Log Frames.

SAULT STE. MARIE CANAL.

	1912.		
19604	Aug. 19..	Polson Iron Works, Limited.....	Delivery of a Steel Steam Screw Tug.

TRENT CANAL.

	1912.		
19574	July 4..	Canada Cement Company, Limited.	Delivery of 51,000 barrels of Portland Cement. (Supplemented for further delivery of 51,000 bbls. of Portland Cement.)
19667	Oct. 8..	Canadian General Electric Company, Limited.	Supply and erection of electrical equipment for Strauss Highway Bascule Bridge at Campbellford, Ont.
19717	Nov. 12..	The Hamilton Bridge Works Company, Limited.	Delivery and erection of a Strauss Bascule Railway Bridge and a Fixed Span Railway Bridge over Canal at Campbellford, Ont.
	1913.		
19943	Mar. 4..	Canadian General Electric Company, Limited.	Erection of electrical equipment for the Strauss Bascule Railway Bridge over Canal at Campbellford, Ont.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*

WELLAND CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1912.		
19571	July 4..	Canada Cement Company, Limited.	Delivery of Portland Cement.
19630	Sept. 5..	M. J. Hogan.....	Removal of old pier and extension of the east docking at Port Colborne Entrance of Canal.
19653	" 26..	James Battle and N. W. Gowan...	Supply and delivery of 20 steel castings forming the Gowan Safety Appliances for lock gates.
19800	Nov. 14..	Dominion Bridge Company.....	Supply and erection of the steel superstructure of proposed addition to Port Colborne Elevator.

H. F. ALWARD,
Departmental Solicitor.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1912.		
19497	June 1	Wood and McConnell, Ltd.....	Priv. to lay and maintain a 4" cast iron pipe across the lands and under the tracks of the I. C. Railway at Sydney, C.B..
19551	" 18	John Sherman & Son....	Land at River Philip, Co. of Cumberland, N.S.....
19552	" 11	James Casey.....	Land at Shediac, Co. of Westmorland, N.B.....
19555	" 12	Town of Campbellton...	Priv. to lay and maintain a 6" terra cotta sewer pipe through reserve land at Campbellton, N.B.....
19554	" 11	Herbert B. Steeves.....	Land, pt. of Ballast Pit property in Town of Shediac, Co. of Westmorland, N.B.....
19579	July 4	Roberts, Simpson & Co.	Land at Point du Chêne, Co of Westmorland, N.B.....
19580	June 28	The Tudhope Carriage Company, Limited....	Land at Hopewell, N.S.....
19581	July 4	Joseph Beaulieu.....	Priv. to lay and maintain a 2" inch wrought iron pipe across lands and under tracks of I. C. Railway at Cedar Hall, Que...
19582	" 4	William P. McNeil & Co., Ltd.....	Land at New Glasgow, Co. of Pictou, N.S.....
19599	" 20	Maritime Telegraph and Telephone Company, Ltd.....	Priv. to lay and maintain a 4" terra cotta conduit across lands and under tracks of I. C. Railway at New Glasgow, N.S....
19601	" 20	Town of Shediac.....	Land at Shediac, N.B.....
19602	" 20	Autosales Gum and Chocolate Company..	To place automatic selling machines in station buildings of I. C. Railway.....
19610	Aug. 7 1911	Municipality of Lauson..	Land at Lauson, Co. of Levis, Que.....
a19629	Sept. 30 1912	Alexander McIsaac.....	Land at Sydney, C.B.....
19639	Sept. 5	Jessie E. Harper.....	Ballast pit property in Town of Shediac, N.B.....
19640	" 5	The St. John Railway Company.....	Priv. to connect line of railway with the Courtenay Bay Branch of the I. C. R. at point on Erin Street, St. John, N.B.....
19649	" 30	The St. John Railway Company.....	Priv. of crossing I. C. R. tracks on level at Brussels Street, St. John, N.B.....
19665	Oct. 7	Haliburton B. McLaughlin.....	Land at Folliegh, Co. of Colchester, N.S.....
19668	" 3	William C. Cummings..	Land at Doaktown Co. of Northumberland, N.B.....
19671	" 7	McKay Sutherland.....	Land at Brown's Point, Co. of Pictou, N.S.....
19675	Sept. 20	E. Pelletier.....	Right and priv. to lay and maintain a pipe line across lands and under tracks at Ste. Louise Station, Que.....
19676	Oct. 12	The Maritime Telegraph and Telephone Co., Ltd.....	Priv. to lay and maintain 2 underground conduits across lands and under tracks of I. C. R. at George and Townsend Streets, Sydney, N.S.....
19677	Sept. 20	The Moncton Tramways, Electricity and Gas Company, Limited.....	Priv. to lay and maintain a 4" wrought iron gas pipe on the I. C. Railway Wharf Track Branch from Foundry Street to Mechanic Street, Moncton, N.B.....
19685	Oct. 19	The Moncton Tramways, Electricity and Gas Company, Limited.....	Right and privilege to cross I. C. R. on a level and string trolley wires at Main Street, East Crossing, Moncton, N.B.....

a Too late for last year's report.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.

Area.	Term.	Commencement of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First installment due.
			\$		
.....	During pleasure.....	Jan. 1, 1912.	1 00	Jan. 1.....	Jan. 1, 1912.
470.25 sq. ft.....	".....	April 1, 1912.	1 00	April 1.....	April 1, 1912.
0.924 acre.....	".....	" 1, 1912.	5 00	" 1.....	" 1, 1912.
.....	".....	Dec. 1, 1911.	1 00	Dec. 1.....	Dec. 1, 1911.
0.091 acre.....	".....	April 1, 1912.	1 00	April 1.....	April 1, 1912.
0.14 acre.....	".....	" 1, 1912.	5 00	April 1.....	April 1, 1912.
2,750 sq. ft.....	".....	Dec. 1, 1911.	5 00	Dec. 1.....	Dec. 1, 1911.
.....	".....	" 1, 1911.	1 00	Dec. 1.....	Dec. 1, 1911.
6,400 sq. ft.....	".....	Mar. 1, 1912.	5 00	Mar. 1.....	Mar. 1, 1912.
.....	".....	Jan. 1, 1912.	1 00	Jan. 1.....	Jan. 1, 1912.
4.66 acre.....	".....	April 1, 1912.	1 00	April 1.....	April 1, 1912.
.....	3 yts. from April 1, 1912, renewable.....	.....	35% of gross collections to railway and 10% to Agent, monthly.	.....	.....
156 sq. ft.....	During pleasure.....	Jan. 1, 1912.	1 00	Jan. 1.....	Jan. 1, 1912.
0.6 acre.....	".....	Sept. 30, 1911.	20 00	Sept. 30.....	Sept. 30, 1911.
0.099 acre.....	".....	July 1, 1912.	1 00	July 1.....	July 1, 1912.
.....	".....	April 1, 1912.	1 00	April 1.....	April 1, 1912.
.....	99 years from Oct. 1, 1912.....	Oct. 1, 1912.	1 00	Oct. 1.....	Oct. 1, 1912.
1,740 sq. ft.....	During pleasure.....	Sept. 1, 1912.	5 00	Sept. 1.....	Sept. 1, 1912.
4,700 sq. ft.....	".....	" 1, 1912.	5 00	Sept. 1.....	" 1, 1912.
3,750 sq. ft.....	".....	" 1, 1912.	5 00	" 1.....	" 1, 1912.
.....	".....	Aug. 1, 1912.	1 00	Aug. 1.....	Aug. 1, 1912.
.....	".....	July 1, 1912.	1 00	July 1.....	July 1, 1912.
.....	".....	" 1, 1912.	5 00	July 1.....	" 1, 1912.
.....	".....	Jan. 1, 1912.	1 00	Jan. 1.....	Jan. 1, 1912.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19690	Oct. 19	The Atlantic Lumber Company, Limited...	Priv. to lay and maintain one 10" blow-pipe across the lands and under tracks of the I.C.R. at a point 9.06 miles east of Truro, N.S.
19691	" 19	Hiram D. McLean.....	Priv. to lay and maintain a 10" blow-pipe across lands and under tracks of I.C.R. at a point 8.99 miles east of Truro, N.S.
19692	" 19	Corporation of the Seminary of Rimouski....	Priv. to lay and maintain a 1" water pipe across right of way and under tracks of the I.C.R. near station at Rimouski, Que.
19693	" 21	The River Philip Lumber and Sluice Company.....	Priv. to lay and maintain a sluice-way under eastern span of River Philip Bridge and across right of way of I.C.R. at point .35 miles west of Oxford Junction Station, N.S.
19701	" 26	The New Brunswick Telephone Co., Ltd...	Priv. to erect and maintain a telephone wire across tracks of I.C.R. at Painssee Junction, Co. of Westmorland, N.B.
19702	" 26	The New Brunswick Telephone Co., Ltd.....	Priv. to erect and maintain telephone wires across lands and over tracks of I.C.R. at point 1,716 feet east of Mile Post 42 from St. John, and at point 588 feet west of Mile Post 42 from St. John.
19707	Nov. 2	Thomas G. Scott.....	Land at Dalhousie Co. of Restigouche, N.B.
19708	" 2	Charles A. Ross.....	Land at Pictou Landing, Co. of Pictou, N.S.
19721	" 16	Price Brothers and Company, Limited.....	Land at Montmagny, Co. of Montmagny, Que.
19724	" 20	Moncton Tramways, Electricity and Gas Co., Ltd.....	Priv. to lay, maintain and operate extension of street railway on John Street, Moncton, N.B., from boundary line of I.C.R. property towards railway shops, 665 feet.
19726	" 20	The New Brunswick Telephone Company, Limited.....	Priv. to stretch and maintain six telephone wires across tracks of I.C.R. at public crossing 376 feet west of Loggieville Station, N.B.
19802	Dec. 17	The Acadia Coal Company, Limited.....	Priv. to erect and maintain 2 telephone wires across lands and tracks of I.C.R. at a point 600 feet west of Lourdes Station, N.S.
19803	" 17	Leon N. Cotnoir.....	Land at St. Germain, Co. of Drummond, Que.
19811	" 20	The Acadia Telephone Company.....	Priv. to erect and maintain telephone poles and wires on I.C.R. lands at Rogersville, N.B.
19812	" 20	J. Alfred Savoie and J. Alcide Savoie.....	Land at Manseau, Co. of Nicolet, Que.
19813	" 20	Municipality of St. Romuald.....	Priv. to lay and maintain a 4" water pipe and an 8" sewer pipe across lands and under tracks of I.C.R. at St. Romuald, Co. of Levis, Que.
19814	" 20	John Edward McDonald	Land at Belmont, Co. of Colchester, N.S.
19815	" 20	The Moncton Tramways Electricity and Gas Company, Limited...	Priv. to stretch and maintain 4 wires for lighting purposes across lands and tracks of I.C.R. on line of George St., Moncton, N.B.
19816	" 20	The Moncton Tramways, Electricity and Gas Company, Limited...	Priv. to lay and maintain pipes for the conveyance of natural gas under tracks of I. C. Railway at certain crossings in the City of Moncton, N.B.
19825	" 27	John Herbert Shaw.....	Land at Pictou Landing, Co. of Pictou, N.S.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—Continued.

Area.	Term.	Commencement of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First installment due.
			\$		
.....	During pleasure.....	Aug. 1, 1912.	1 00	Aug. 1....	Aug. 1, 1912.
.....	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
.....	“	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
.....	“	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
.....	“	Aug. 1, 1912.	1 00	Aug. 1....	Aug. 1, 1912.
.....	“	Sept. 1, 1912.	2 00	Sept. 1....	Sept. 1, 1912.
525 sq. ft.	“	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
6,600 sq. ft.	“	Sept. 1, 1912.	5 00	Sept. 1....	Sept. 1, 1912.
1,264 sq. ft.	“	Oct. 1, 1912.	1 00	Oct. 1....	Oct. 1, 1912.
6,756 sq. ft. 192 sq. ft.	“	“ 1, 1912.	1 00	Oct. 1....	“ 1, 1912.
.....	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
.....	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
.....	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
3,500 sq. ft.	“	“ 1, 1912.	5 00	“ 1....	“ 1, 1912.
.....	“	Jan. 1, 1910.	1 00	Jan. 1....	Jan. 1, 1910.
687 sq. ft.	“	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
.....	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
300 sq. ft.	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
.....	“	“ 1, 1912.	1 00	“ 1....	“ 1, 1912.
.....	“	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
5,000 sq. ft.	“	Sept. 1, 1912.	5 00	Sept. 1....	Sept. 1, 1912.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19834	1913 Jan. 4	City of St. John.....	Priv. to lay and maintain a 36" pipe across lands and under tracks of I.C.R. at St. John, N.B.....
619960	" 7	Atlantic Sugar Refining Company, Limited...	Land in the City of St. John, N.B.....
19996	Mar. 20	The Adamsville Telephone Company, Limited.....	Priv. to stretch and maintain a telephone wire across main line of I.C.R. at Adamsville, Co. of Kent, N.B.....

PRINCE EDWARD

19465	1912 Apr. 30	G. DesRoches & Company.....	Land at Miscouche, Co. of Prince, P.E.I.....
19804	Dec. 18	M. C. Delaney.....	Land at Albany Station, P.E.I.....
19818	" 20	Benjamin Gallant.....	Land at Bloomfield, P.E.I.....
19819	" 20	Daniel W. Howard.....	Land at Milton Station, P.E.I.....
19910	1913 Jan. 30	Government of Prince Edward Island.....	Priv. to lay and maintain a sewage pipe across right of way of railway in Royalty of Charlottetown, P.E.I.....

LACHINE

19434	1912 Apr. 9	Dominion Flour Mills, Limited.....	Priv. to construct and maintain a concrete tunnel under and across Canal lands opposite Cad. Lot. No. 3412-4, in Par. of Montreal, Que.....
*19435	" 9	Dominion Cartridge Company, Limited	Priv. to maintain a 3" water pipe from Canal to Lessee's property on Cadastral Lot No. 2152, St. Henri, Montreal; and draw water.....
19461	" 25	The Steel Company of Canada, Limited.....	Land on north bank of Canal near River St. Pierre Culvert....
19462	" 25	The Canadian Pacific Railway Company....	Priv. to lay, maintain and operate a siding on south side of Canal, in St. Paul Ward, Montreal.....
19488	June 1	Town of Lachine.....	Priv. to erect and maintain on Canal lands above Lachine Locks, two steel towers to carry electric wires across Canal.....
19499	" 1	The William Rutherford and Sons Company, Ltd.....	Land on North West side of Canal near Brewster's Bridge in Town of Ste. Cunegonde, Parish of Montreal.....
19548	" 11	Page Hersey Iron, Tube and Lead Company, Ltd.....	Land at St. Henry, Montreal.....
19549	" 1	The N.K. Fairbank Company, Limited...	Priv. to lay and maintain a sewer across Canal lands and under Canal from Lessee's works on Cad. Lot No. 1020, Par. of Lachine, to Collecting drain on North side of Canal.....
†19553	" 12	City of Montreal.....	Land, part of Cad. Lot No. 327 in Ste. Ann's Ward, Montreal..

b Letters Patent.

*Supersedes Lease No. 16900 dated Nov. 21, 1907.

†Cancels or supersedes Lease No. 19168.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commencement of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First installment due.
			\$		
.....	During pleasure.....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
0.66 acre.....	21 years.....	Jan. 7, 1913.	1 00	Jan. 7....	Jan. 7, 1913.
.....	During pleasure.....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.

ISLAND RAILWAY.

1,250 sq. ft.	During pleasure.....	Mar. 1, 1912.	5 00	Mar. 1....	Mar. 1, 1912.
1,050 sq. ft.	"	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
625 sq. ft.	"	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
600 sq. ft.	"	Nov. 1, 1912.	5 00	Nov. 1....	Nov. 1, 1912.
.....	"	Oct. 1, 1911.	1 00	Oct. 1....	Oct. 1, 1911.

CANAL.

.....	During pleasure.....	Mar. 1, 1912.	20 00	Mar. 1....	Mar. 1, 1912.
.....	"	Feb. 1, 1912.	60 00	Feb. 1....	Feb. 1, 1912.
1,550 sq. ft.	"	Mar. 1, 1912.	45 00	Mar. 1....	Mar. 1, 1912.
.....	"	April 1, 1912.	96 00	April 1....	April 1, 1912.
.....	"	" 1, 1912.	25 00	" 1....	" 1, 1912.
5,550 sq. ft.	"	May 1, 1912.	333 00	May 1....	May 1, 1912.
3,800 sq. ft.	"	" 1, 1912.	152 00	" 1....	" 1, 1912.
.....	"	April 1, 1912.	50 00	April 1....	April 1, 1912.
6,600 sq. ft.	21 years renewable.....	May 1, 1912.	5 00	May 1....	May 1, 1912.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1912		
c19588	July 19	The Ottawa Forwarding Company, Limited...	Space, Flour Shed No. 1, fronting on Basin No. 4.....
19594	" 20	G. E. Jacques & Company.....	Space, Flour Shed No. 3, fronting on Basin No. 3.....
19595	" 20	G. E. Jacques & Company.....	Space, St. Gabriel Shed No. 1, on St. Gabriel Basin No. 1....
d19596	" 20	The Canadian Sand and Gravel Company.....	Land on south bank of Canal, west of St. Gabriel Lock.....
19600	" 20	J. W. Norcross.....	Flour Shed No. 2 on Basin No. 3, and Flour Sheds Nos. 4 and 5 on North side of Basin No. 2.....
19616	Aug. 20	Matthews-Laing, Ltd...	Land on south east side of Mill Street, fronting on Oak Street, at Point St. Charles.....
19620	Aug. 7	The Hall Engineering Works.....	Tate Dry Dock and Canal lands, being pt. of Cad. Lot No. 326, in Parish of Montreal.....
e19641	Sept. 5	Montreal Park and Island Railway.....	Lots 1005, 950 and 964 of Par. of Lachine, Co. of Jacques Cartier, Que.....
19642	" 5	Montreal Park and Island Railway.....	Part of Lot No. 3606 of Par. of Montreal, Co. of Jacques Cartier, Que.....
19678	Oct. 12	Canadian Car and Foundry Company, Limited.....	Priv. to lay and maintain and operate on Canal lands, on north bank of Canal, a track 2,000 feet long.....
19683	Sept. 25	The Bell Telephone Company of Canada, Ltd.....	Priv. to erect and maintain 2 poles on north side of Canal for purposes of running wires to premises of Dominion Mallogany and Veneer Company.....
19694	Oct. 22	The Imperial Oil Company, Limited.....	Priv. to lay and maintain three 6-inch iron pipes under Canal lands at Cote St. Paul.....
f19801	Dec. 17	The Grand Trunk Railway Company of Canada.....	Priv. to lay, maintain and operate railway tracks on Canal lands west of Wellington Basin.....
19820	" 20	City of Montreal.....	Priv. to lay and maintain a 36" water main under Canal on line of Seminary Street.....
	1913		
19829	Jan. 9	Andrew Baile.....	Land, part of Lot No. 324 on west side of Wellington Basin, St. Anne's Ward, Montreal.....
	1912		
19830	Dec. 17	Canadian Pacific Ry. Co.....	Priv. to lay and maintain 2 12" water pipes across Canal lands and under Canal near swing bridge.....
19831	" 27	Canadian Pacific Ry. Co.....	Priv. to lay and maintain and operate spur line of railway on Canal land from Boundary stone No. 77 and connecting with south branch line, 240 feet.....

c Assigned to The Ottawa Transportation Company, Limited, by No. 19933.

d Surrendered.

e Cancels Lease No. 12294, of March 5th, 1896, and supersedes said Lease as to part of Lots Nos. 950, and 964.

f Cancels and supersedes Lease No. 8735, dated Feb. 1st, 1888.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—Continued.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
14,122.5 sq. ft.....	5 years.....	May 1, 1912.	2,118 37½	May 1....	May 1, 1912.
7,078.8 sq. ft.....	5 ".....	Oct. 1, 1912.	1,061 82	Oct. 1....	Oct. 1, 1912.
30,260 sq. ft.....	5 ".....	May 1, 1912.	3,631 20	May 1....	May 1, 1912.
13,500 sq. ft.....	During pleasure.....	" 1, 1912.	405 00	" 1....	" 1, 1912.
13,949.5 sq. ft. 6,212.5 "					
9,256.4 ".....	5 years.....	" 1, 1912.	5,465 19	" 1....	" 1, 1912.
15,491 sq. ft.....	17 " 10 mos.....	" 1, 1912.	620 00	" 1....	" 1, 1912.
.....	10 ".....	" 1, 1912.	4,000 00	" 1....	" 1, 1912.
4.7815 acre..... 0.233 arp. 0.215 arp.	6 ".....	" 1, 1911.	10 00	" 1....	" 1, 1911.
6,672 sq. ft.....	21 years.....	June 1, 1910.	66 72	June 1....	June 1, 1910.
.....	During pleasure.....	Oct 1, 1912.	640 00	Oct. 1....	Oct. 1, 1912.
.....	".....	Sept. 1, 1912.	2 00	Sept. 1....	Sept. 1, 1912.
.....	".....	Aug. 1, 1912.	10 00	Aug. 1....	Aug. 1, 1912.
.....	".....	Oct. 1, 1912.	2,197 50	Oct. 1....	Oct. 1, 1912.
.....	".....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
27,300 sq. ft.....	5 years renewable.....	Oct. 1, 1912.	2,184 00.....	April 1.... Oct. 1	April 1, 1912.
.....	During pleasure.....	April 1, 1912.	50 00	April 1....	April 1, 1912.
.....	12 yrs. and 2 mths.....	Sept. 1, 1912.	60 00	Sept. 1....	Sept. 1, 1912.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19832	1913 Jan. 4	The Grand Trunk Railway Company of Canada.....	Priv. to lay cable for transmission of 30 h.p. of electric power from Mill Street power station to Lessee's swing bridge, east of the Wellington Street Bridge.....
19836	1912 Dec. 26	The N. K. Fairbank Company, Limited....	Priv. to lay and maintain an 8" service pipe to draw water from Canal to Lessee's works at Cote St. Paul, and a 12" pipe to draw water for fire protection.....
19911	1913 Jan. 30	The Dominion Gresham Guarantee and Casualty Company.....	Priv. to lay and maintain a 1" iron pipe across Canal land on north bank of Canal.....
19912	Feb. 10	Dominion Flour Mills, Limited.....	Land on north bank of Canal at south east corner of new Basin at St. Henry; also priv. to erect and maintain a conveyor, spout and wire.....
19936	Mar. 5	Canadian Carbonate Company, Limited....	Priv. to lay and maintain an 8" water pipe across Canal lands from Canal to Lessee's works on Cad. Lots Nos. 3523 and 3524, Par. of Montreal, Que., and draw water.....
19944	" 4	Dominion Mahogany & Veneer Company, Limited.....	Priv. to lay and maintain an 8" pipe from Canal to Lessee's works on Cad. Lot No. 1005 of Parish of Lachine, and draw water.....
19949	" 14	Canadian Car and Foundry Company, Limited.....	Priv. to lay, maintain and operate a single track line of railway on north bank of canal.....
19950	" 20	The Bell Telephone Co. of Canada, Limited....	Priv. to lay and maintain nine 3½ inch conduit pipes across Canal lands and across Canal west of Napoleon Street Bridge, Montreal.....

BEAUHARNOIS

19433	1912 April 12	Pascal Mercier.....	Land, part of lot No. 531 of Town of Valleyfield, Que.....
†19569	June 29	Joseph Lalonde.....	Land between King's Highway and River St. Lawrence, pt. of Lot No. 160 of Official Plan and Book of Reference for Par. of Ste. Cecile, Co. of Beauharnois, Que.....

CHAMBLY

19913	1913 Jan. 30	The Montreal and Southern Counties Ry. Co.	Priv. to erect and maintain 2 sets of poles on Canal land to carry a trolley wire for electric railway line crossing Canal at Chambly Canton.....
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† Supercedes Lease No. 15418, dated April 20, 1904.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
	During pleasure.....	July 19, 1912.	225 00	July 19....	July 19, 1912.
	“	Oct. 1, 1912.	463 32	Oct. 1....	Oct. 1, 1912.
	“	Jan. 1, 1913.	1 00	Jan. 1....	Jan. 1, 1913.
1,660 sq. ft.....	“	Feb. 1, 1913.	66 00	Feb. 1....	Feb. 1, 1913.
	“	Mar. 1, 1913.	360 00	Mar. 1....	Mar. 1, 1913.
	“	May 1, 1913.	360 00	May 1....	May 1, 1913.
	21 years.....	Mar. 1, 1913.	50 00	Mar. 1....	Mar. 1, 1913.
	During pleasure.....	“ 1, 1913.	50 00	“ 1....	“ 1, 1913.

CANAL.

0.8 arp.....	During pleasure.....	Oct. 1, 1911.	1 00	Oct. 1....	Oct. 1, 1911.
8 arp., 25 per.....	“	April 1, 1912.	4 00	April 1....	April 1, 1912.

CANAL.

	During pleasure.....	Nov. 1, 1912.	5 00	Nov. 1....	Nov. 1, 1912.
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4 GEORGE V., A. 1914

WATER POWER and other Public Property leased by the Department of
CHATS FALLS

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19670	1912 Oct. 3	The Canadian Northern Ontario Railway Co.	Land, part of Lot No. 29, Range 1, Tp. of Bristol, Co. of Pontiac, Que.....

GALOPS

19633	1912 Sept. 5	M. F. Beach.....	Priv. to erect and maintain an electric transmission line on Canal lands in Village of Iroquois, Ont., on Iroquois section of Canal.....
19666	Oct. 3	The Bell Telephone Co. of Canada, Limited...	Priv. to lay and maintain a telephone cable under Canal at point 406 feet west of Swing Bridge over Lock No. 25 at Iroquois, and to erect and maintain 2 poles.....
**19711	Nov. 2	George Robinson.....	Land and land covered with water on north side of King's highway on west half of Lot No. 30 in 1st Concession of the Township of Matilda, Co. of Dundas, Ont.....

MURRAY

19673	Oct. 3	W. W. Porte.....	Priv. to erect and maintain a telephone line across Canal and Canal lands at Brighton Road Bridge.....
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RIDEAU

19436	1912 April 12	The Ottawa Gas Company.....	Priv. to lay and maintain a 12" gas main across Canal lands and under Canal west of Bronson Avenue Swing Bridge, in the City of Ottawa, Ont.....
19467	May 3	Ottawa Terminals Ry. Co.....	Priv. to lay a tile pipe from point between Chateau Laurier and Dufferin Bridge to Canal.....
h19469	June 1	W. W. Walker.....	Land, part of Lot No. 17 in the 7th Con. of the Tp. of North Elmsley, Ont.....
i19583	" 28	Trustees of "The Ottawa Motor Boat Association.....	Land covered with water on south side of Canal, opposite Exhibition Grounds, near Bank Street Bridge, Ottawa, Ont.....
j19597	July 20	W. J. Henry.....	Land covered with water, part of Lot "K," Concession "C," Tp. of Nepean, Co. of Carleton, Ont.....
k19901	1913 Jan. 30	W. H. Sturgeon.....	Part of Lot No. 1 in the 5th Con. of Tp. of South Crosby, in the County of Leeds, Ont.....
l19914	Jan. 30	William J. Henry.....	Land on east bank of Canal in Lot "K," Concession "C," Tp. of Nepean County of Carleton, Ont.....
19932	Mar. 1	The Ottawa Gas Co....	Priv. to lay and maintain a 24" gas main across Canal lands and under Canal in vicinity of Hawthorne Street, Ottawa, Ont..

** Cancels and supersedes Lease No. 17933, dated Sept. 1, 1909.

h Assigned to Jas. V. Watson by No. 19722.

i Assigned to The Ottawa Motor Boat Club, Ltd., by No. 20018.

j Cancelled, surrendered and superseded by No. 19914.

k Supersedes No. 18877, dated Dec. 21, 1910.

l Cancels, surrenders and supersedes Lease No. 19597, dated July 20, 1912.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

CANAL.

Area.	Term.	Commence- ment to term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
0.46 acre.....	21 years renewable....	Oct. 1, 1912.	\$ 1 00	Oct. 1....	Oct. 1, 1912.

CANAL.

.....	During pleasure.....	Aug. 1, 1912.	2 00	Aug. 1....	Aug. 1, 1912.
.....	"	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
1,342 acre.....	"	Mar. 1, 1912.	1 00	Mar. 1....	Mar. 1, 1912.

CANAL.

.....	During pleasure.....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
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CANAL.

.....	During pleasure.....	April 1, 1912.	1 00	April 1....	April 1, 1912.
.....	"	Oct. 1, 1911.	1 00	Oct. 1....	Oct. 1, 1911.
0.6 acre.....	"	May 1, 1912.	5 00	May 1....	May 1, 1912.
2.37 acre.....	"	" 1, 1912.	1 00	" 1....	" 1, 1912.
0.63 acre.....	"	July 1, 1912.	50 00	July 1....	July 1, 1912.
1.6 acre.....	"	Jan. 1, 1913.	7 50	Jan. 1....	Jan. 1, 1913.
1.3 acre.....	"	" 1, 1913.	15 00	" 1....	" 1, 1913.
.....	"	Feb. 1, 1913.	1 00	Feb. 1....	Feb. 1, 1913.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19951	Mar. 20	T. A. Kidd.....	Land and land covered with water on south side of Canal Cut at Burritt's Rapids Lock Station, being part of Lot 5 in the 1st Concession, Co. of Grenville, Ont.....

SAULT STE.

n19607	1912 Aug. 2	The Algoma Central and Hudson Bay Railway Company.....	Portions of St. Mary's Island and adjacent waters, in Town of Sault Ste. Marie, Algoma District, Ont.....
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TRENT

o19437	April 9	George E. Laidlaw.....	Land, parts of Lots Nos. 1, 2, 3, 4, and 5, parts of Lot lettered "C" and parts of Block known as Govt. Reserve, south of Portage Road, Tp. of Bexley, Co. of Victoria, Ont.....
19438	April 9	The Canadian Pacific Railway Company....	Priv. to erect and maintain a telegraph line over Canal on lot No. 6, Con. "B," Tp. of Thorah, Co. of Ontario, Ont.....
19617	Aug. 7	E. H. Mann and Company.....	Land, pt. of Lot No. 1 in the 12th Concession of the Tp. of Douro, Co. of Peterborough, Ont.....
p19619	" 7	John McPherson.....	Land in 3rd and 4th Concession of Township of Eldon, Co. of Victoria, Ont.....
19823	Nov. 26	The Scymour Power and Electric Co., Ltd.....	Priv. to erect and maintain a transmission line across Trent River in Campbellford, Ont.....
19946	1913 Mar. 14	The Campbellford, Lake Ontario and Western Railway Company....	Priv. to construct and maintain a high level bridge over Trent River in Town of Trenton, Ontario, and of operating a line of railway thereon.....
19961	Mar. 29	Crushed Stone, Limited	Land, part of the east half of Lot No. 1 and the west half of Lot No. 1 in the 8th Con. of the Tp. of Carden, Co. of Victoria, Ont.; and privilege to take stone piled thereon.....

WELLAND

q19477	1912 May 1	The Buffalo Union Furnace Company.....	Land and Land covered with water on east side of Canal Basin in Port Colborne, being parts Lots Nos. 26 and 27 in 1st Con. of Tp. of Humberstone, Co. of Welland.....
19498	June 1	Milo Gillap.....	Land on north side of Canal Feeder between Tamarack and Oak Streets, in Dunnville, Ont.; being part of Lot No. 3 in 1st Range, Tp. of Moulton, Co. of Haldimand.....
19584	" 28	The Queen City Oil Co., Ltd.....	Land, part of Lot No. 12 in 6th Con. of the Tp. of Grantham, Co. of Lincoln, Ont.; and privilege to lay and maintain 3 pipe lines from Canal to said parcel of land.....

n Cancels and supersedes Lease No. 14879, dated March 29th, 1902.

o Cancels and supersedes Lease No. 18363, dated April 25th, 1910.

p Cancels and supersedes Lease No. 18404 granted to Peter McPherson, dated May 30th, 1910.

q Supersedes Leases Nos. 15220, 15222, 15223, 15224, 15225, 15226 and 15287.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
1,332 sq. ft.....	During pleasure.....	April 1, 1913.	\$ 5 00	April 1....	April 1, 1913.
MARIE CANAL.					
17.94 acre.....	21 years.....	April 1, 1912.	400 00	April 1....	April 1, 1912
CANAL.					
16.88 acres.	During pleasure.....	Mar. 1, 1912.	28 50	Mar. 1....	Mar. 1, 1912.
40.6 acres.....		Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
1.4 acres.....	".....	Mar. 1, 1912.	25 00	Mar. 1....	Mar. 1, 1912.
26.66 acres.		Mar. 15, 1912.	39 89	Mar. 15....	Mar. 15, 1912.
13.23 acres.....	".....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
.....		21 years renewable....	Jan. 1, 1913.	10 00	Jan. 1....	Jan. 1, 1913.
2.415 acres.....	During pleasure.....	Mar. 1, 1913.	30 00	Mar. 1....	Mar. 1, 1913.
CANAL.					
5.00 acres.....	} 21 years renewable....	May 1, 1912.	2,689 80	May 1....	May 1, 1912.
55.47 acre.....					
0.06 acres.....	During pleasure.....	" 1, 1912.	10 00	" 1....	" 1, 1912.
1.9 acres.½.....	".....	April 1, 1912.	25 00	April 1....	April 1, 1912.

WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19618	Aug. 20	The Grand Trunk Railway Company of Canada.....	Land, part of Lot No. 27 in 1st Con. of Tp. of Humberstone, Co. of Welland, Ont., now in Village of Port Colborne....
19658	Sept. 25	City of St. Catharines..	Land and priv. to construct concrete arch bridge over old canal in St. Catharines.....
19672	" 25	The Ontario Power Co. of Niagara Falls.....	Priv. to erect and maintain an electric transmission line along east and south sides of Old Canal, from Lock No. 4 to vicinity of Lock No. 2, St. Catharines, Ont.....
19679	" 25	The Ontario Power Co. of Niagara Falls.....	Priv. to lay and maintain a 3" intake pipe across Canal lands and draw water from Canal, and lay and maintain a return pipe, at Port Colborne, Ont.....
19695	Oct. 19	The Dunnville Consolidated Telephone Company, Ltd.....	Priv. to erect 2 telephone lines, one on each side of Feeder from Junction to line between Tps. of Moulton and Wainfleet; also to lay submarine cable across Feeder at Stromness Station...
19698	Oct. 26	The Maple Leaf Rubber Company, Limited...	Land between Old and New Canals, near Lock No. 1, and being part of Lot No. 21 in 1st Con. of the Tp. of Grantham, Co. of Lincoln, Ont.....
19710	Nov. 2	The Steel and Radiation, Limited.....	Priv. to lay and maintain a 4" water pipe across Canal land at St. Catharines, Ont.; and draw 25,000 gal. of water per day..
19719	" 11	The Niagara, St. Catharines and Toronto Railway Company....	Priv. to lay and maintain rails upon Bridge over Canal at Niagara Street crossing at St. Catharines, Ont.; for purposes of electric line of railway.....
19821	Dec. 20	Township of Crowland.	Priv. to lay and maintain a 12" Sewer Pipe on Canal lands in Tp. of Crowland, and to connect same with Government sewer along east side of Canal.....
19822	" 20	E. H. McNulty.....	Land in Village of Port Dalhousie, being part of Lot No. 21 in 1st Con. of Tp. of Grantham, Co. of Lincoln, Ont.....
19907	1913 Feb. 6	Village of Port Colborne	Land, parts of Lot No. 27 in the 1st Con. of the Tp. of Humberstone, County of Welland, Ont.....
19916	" 17	The Ontario Power Company of Niagara Falls	Priv. to erect and maintain a transmission line over railway spur to the Government elevator at Port Colborne, Ont...

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913—Continued.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
14.33 acres.....	21 years renewable....	Feb. 1, 1912.	475 20	Feb. 1....	Feb. 1, 1912.
0.09 acre.....	21 years.....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912
.....	During pleasure.....	July 1, 1912.	200 00	July 1....	July 1, 1912.
.....	“.....	Aug. 1, 1912.	20 00	Aug. 1....	Aug. 1, 1912.
.....	“.....	July 1, 1911.	25 00	July 1....	July 1, 1911.
0.38 acre.....	8 yrs. and 9 mths. re- newable.....	Aug. 1, 1912.	30 00	Aug. 1....	Aug. 1, 1912.
.....	During pleasure.....	Sept. 1, 1912.	100 00	Sept. 1....	Sept. 1, 1912.
.....	“.....	Jan. 1, 1913.	300 00	Jan. 1....	Jan. 1, 1913.
.....	“.....	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
0.06 acre.....	“.....	Dec. 1, 1912.	10 00	Dec. 1....	Dec. 1, 1912.
1.70 } 0.11 }	“.....	Jan. 1, 1913.	1 00	Jan. 1....	Jan. 1, 1913.
.....	“.....	Feb. 1, 1913.	1 00	Feb. 1....	Feb. 1, 1913 .

H. F. ALWARD,
Departmental Solicitor.

PROPERTY leased to the Department of Railways and Canals by
INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19621 19712	1912 Aug. 7 " 29	J. P. Fairbanks..... The Western Union Telegraph Company.....	Space for ticket office and division freight office, in Nos. 107, 109 and 144 Hollis Street, Halifax, N.S..... All rooms of ground floor of building known as No. 3, and 2 rooms and toilet of 2nd floor of building known as No. 5 King Street, St. John, N.B.....
TRENT			
19637	Sept. 5	The Hamilton Bridge Works Co., Ltd.....	Land in City of Hamilton, Ont.....
QUEBEC			
19439 19523	April 12 " 18	William Massey Birks et al..... St. Lawrence Bridge Company, Limited....	Of Rooms Nos. 301, 302, 303, 304, 305, 306 and 307 in building known as "New Birks Building," on Phillips Square, Montreal Land, part of Cad. Lot No. 915 in Par. of Lachine Co. of Jacques Cartier.....
QUEBEC			
19440	April 9	William Massey Birks et al.....	Rooms Nos. 708, 709, 710, 711 and 713 in building known as "New Birks Building," on Phillips Square, Montreal.....

SESSIONAL PAPER No. 20

various parties during the Fiscal Year ended March 31, 1913.

RAILWAY.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
.....	5 years renewable.....	May 1, 1912.	\$ 2,500 00	Quarterly...	May 1, 1912.
.....	5 years.....	" 1, 1912.	1,000 00	"	" 1, 1912.

CANAL.

5,000 sq. ft.....	Until expiry of con- tract No. 19144.....	Sept. 5, 1912.	1 00	Sept. 5....	Sept. 5, 1912.
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CANALS.

.....	3 years.....	May 1, 1912.	2,500 00	Quarterly...	May 1, 1912.
700,400 sq. ft.....	Until metal work un- der contract No. 19007 is delivered...	Mar. 1, 1912.	1 00	for whole period of occupancy	Mar. 1, 1912.

BRIDGE.

.....	3 years.....	May 1, 1912.	1,800 00	Quarterly...	May 1, 1912.
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H. F. ALWARD,

Departmental Solicitor.

PROPERTY conveyed to the Department of Railways and
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
1912.			
†19527	Feb. 12	James D. Ross.....	Land at.....
†19532	Feb. 15	W. Medford Christie <i>et al.</i>	Land at.....
1911.			
†19534	Dec. 23	Estate of Wm. Rhodes	Land in St. Lawrence Ward.....
†19562	May 8	Jacob Y. Mersereau <i>et ux.</i>	Land at White Rapid Brook, 5½ miles east of Blackville.....
†19625	Nov. 10	Margaret Matheson...	Land at.....
1912.			
19627	July 11	Sarah J. C. Kelly.....	Land at North Sydney, Lot No. 240.....
19628	May 9	Patrick Dwyer.....	Land on east side of Campbell Road.....
19697	July 4	Joseph J. Johnson <i>et ux</i>	Land in.....
19720	April 11	Emran C. Steeves <i>et ux</i>	Land under toe of abutment wing of St. George Street over- head bridge, and damages.
1911.			
†19735	Feb. 1	James A. McDonald..	Parcel of land in Campbellton, N.B., granted under lease of April 30, 1909, between George Duncan and James A. Mc- Donald, for the term of 999 years from June 16, 1892.
1912.			
†19736	Jan. 23	“	Parcel of land in Campbellton, N.B., granted under lease of June 16, 1892, between George Duncan and James A. Mc- Donald, for the term of 999 years from June 16, 1892.
†19737	Jan. 22	Peter M. Shannon.....	Parcel of land in Campbellton, N.B., granted under lease of Aug. 1, 1895, from Jno. and Mary A. Adams to Peter Roy, for term of 999 years from Aug. 1, 1895.
†19738	Feb. 1	Elizabeth Nickerson..	Parcel of land in Campbellton, N.B., granted under lease of April 20, 1877, between Elizabeth J. Adams and Robert J. Gordon, for the term of 999 years from Oct. 20, 1877.
*19739	May 13	Pacifique D. Breau <i>et ux.</i>	Land on west side of Butler Street.
*19740	May 14	Moncton Land Co. Ltd.	Land at.....
1909.			
†19741	Feb. 19	Andrew Loggie <i>et al.</i> ..	Land at.....
1911.			
†19742	March 25	Annie Cooke <i>et al.</i>	“
†19743	Dec. 1	Robert Maddison <i>et ux</i>	Land at.....
1912.			
†19744	Jan. 2	William Richards & Co., Ltd.	“
†19745	Jan. 22	John Adams <i>et al.</i>	“
†19746	Jan. 24	Jane C. Duncan.....	“
†19747	Jan. 25	William F. Ferguson..	Parcel of land in Campbellton, N.B., granted under a lease from George Duncan on July 6, 1889, for 99 years.
†19748	Feb. 14	City of Halifax.....	Land in.....
†19749	Feb. 19	Francis A. Ronnan <i>et al.</i>	“
19750	April 29	Frederick M. Tennant <i>et al.</i>	“
19751	May 8	Isaac Creighton <i>et ux.</i>	Land on east side of Campbell Road.....
19752	May 8	Abigail Hunt.....	“ “ “
19753	May 8	Emma F. Knowlan <i>et al.</i>	“ “ “

SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.

RAILWAY

District.	County.	Area.	Amount.
			\$
Truro.....	Colchester, N.S.....	0.369 acre.....	1,006 58
".....	".....	0.332 acre.....	2,013 16
Levis.....	Levis, Que.....	1,783 sq. ft.....	713 20
			Principal
			178 30
			Interest
Blackville.....	Northumberland, N.B.....	0.80 acre.....	80 00
North Sydney.....	Cape Breton, N.S.....	1,300 sq. ft.....	100 00
Sydney.....	".....	2 acres.....	412 49
Halifax.....	Halifax, N.S.....	4,785 sq. ft.....	2,322 40
Truro.....	Colchester, N.S.....	855 sq. ft.....	1 00
Moncton.....	Westmorland.....	1 sq. ft.....	730 00
Campbellton.....	Restigouche.....		1 00
".....	".....		2,000 00
".....	".....		1,100 00
".....	".....		4,000 00
Moncton.....	Westmorland.....	825 sq. ft.....	200 00
".....	".....	{ 1.02 } acres.....	30,677 55
		{ 10.36 }	
Dalhousie.....	Restigouche, N.B.....	2,079 sq. ft.....	Exchange of land
Painsec Junction.....	Westmorland, N.B.....	0.53 acre.....	53 00
Moncton.....	".....	420 sq. ft.....	232 50
Campbellton.....	Restigouche, N.B.....	{ 9.50 } acres.....	25,000 00
".....	".....	{ 7.70 }	
".....	".....	{ 12,282 } sq. ft.....	594 00
".....	".....	{ 7,280 }	
".....	".....	1.62 acre.....	6,300 00
".....	".....		1,100 00
Halifax.....	Halifax, N.S.....	1.208 acres.....	483 20
Sackville.....	".....	0.22 acres.....	220 00
Moncton.....	Westmorland, N.B.....	0.928 acre.....	275 77
Halifax.....	Halifax, N.S.....	{ 10,320 } sq. ft.....	3,547 40
".....	".....	{ 7,657 }	
".....	".....	4,734 sq. ft.....	535 94
".....	".....	12,521 sq. ft.....	3,777 08

4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
1912.			
19754	May 9.	John McKinnon <i>et ux.</i>	Land on east side of Campbell Road.
19755	May 9.	Richard Shea <i>et ux.</i>	" " " " " "
19756	May 25.	Ellen Flanagan	Land on east side of Charlotte Street.
19757	June 7.	Lucinda Taylor <i>et al.</i>	Land at Painsec Junction.
19758	July 3.	Herbert A. Johnson <i>et al.</i>	Land at.
19759	July 4.	Mary Jane Johnson and husband.	" " " " " "
19760	July 26.	Mariner Blakney <i>et ux.</i>	Land at Sunny Brae.
19761	Aug. 7.	A. Duncan Thomas <i>et ux.</i>	Land on west side of George Street.
19762	Aug. 5.	Bertram E. Smith <i>et al.</i>	Land at.
19763	Aug. 22.	Albert J. Trevors <i>et ux.</i>	" " " " " "
19765	Nov. 2.	Minnie Russel <i>et mar.</i>	Land on west side of George Street.
†19766	1910. Dec. 21.	George J. Sproul <i>et ux.</i>	Land at.
†19767	1911. March 23.	William Fenton	" " " " " "
19768	1912. Aug. 22.	William McLaughlin	" " " " " "
†19769	1911. May 11.	The Riverside Cemetery Co.	" " " " " "
‡19770	1912. April 29.	Barbara A. Mowat	Parcel of land in Campbellton, N.B., granted under lease of Aug. 22, 1889, between George Duncan and Cassimere Gallant, for the term of 99 years from Aug. 22, 1889.
‡19771	1912. Jan. 24.	Alphonse C. Belle Isle	Parcel of land in Campbellton, granted under lease of Aug. 1, 1895, between John and Mary A. Adams and Peter Roy, for term of 999 years from Aug. 1, 1895.
19793	May 30.	William A. Black <i>et ux.</i>	Land on north east side of I. C. R.
†19839	1911. Nov. 8.	Cyrus E. Pugsley <i>et ux.</i>	Land $\frac{3}{4}$ of a mile east of.
†19840	Nov. 18.	Clarence A. McCabe	Land $\frac{3}{4}$ of a mile east of.
†19841	1912. Feb. 12.	David Pugsley	Land $\frac{1}{4}$ of a mile east of.
19885	Nov. 25.	Alexander Dewar <i>et ux.</i>	Land at Bear Brook Siding 1 mile east of.
19889	Nov. 18.	Silas Williams <i>et ux.</i>	Land on south side of the south west branch of Miramichi River.
19918	April 3.	Miramichi Pulp and Paper Co.	Land at.
19924	Dec. 5.	Marcellin Beauchene <i>et ux.</i>	Land, part of Cad. Lot No. 159.
**19928	1913. Jan. 16.	Dept. of Marine and Fisheries.	Exchange of land; the Dept. of Railways and Canals obtaining 2 parcels 5,255 sq. ft. and 583 sq. ft. for one parcel 24,044 sq. ft.
†19969	1911. Dec. 30.	Joseph Theberge (Rev)	Land at.
19970	1912. Aug. 27.	Thomas H. Perley	" " " " " "
†19971	1911. March 13.	Thomas Murphy <i>et ux.</i>	" " " " " "

SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.—Continued.

RAILWAY—Continued.

District.	County.	Area.	Amount.
			\$
Halifax.....	Halifax, N.S.....	5,108 sq. ft.....	2,347 91
“.....	“.....	5,543 sq. ft.....	2,271 35
Fredericton.....	York, N.B.....	9,400 sq. ft.....	4,600 00
Moncton.....	Westmorland, N.B.....	1,100 sq. ft.....	20 00
Truro.....	Colchester, N.B.....	1,680 sq. ft.....	1 00
“.....	“.....	1,095 sq. ft.....	1 00
Moncton.....	Westmorland, N.B.....	564 sq. ft.....	110 00
Fredericton.....	York, N.B.....	1,932 sq. ft.....	3,000 00
Moncton.....	Westmorland, N.B.....	6,175 sq. ft.....	461 70
Chatham.....	Northumberland, N.B.....	1,836 sq. ft.....	1 00
Fredericton.....	York, N.B.....	1,932 sq. ft.....	400 00
Chatham.....	Northumberland, N.B.....	0.64 acre.....	253 12
“.....	“.....	2.06 acres.....	612 50
“.....	“.....	2,340 sq. ft.....	883 33
“.....	“.....	{4,580} sq. ft..... {4,750}	1,170 42
Campbellton.....	Restigouche, N.B.....		2,700 00
“.....	“.....		1,500 00
Amherst.....	Cumberland, N.S.....	2.15 acres.....	430 00
Maccan.....	“.....	0.27 acre.....	40 50
“.....	“.....	0.64 acre.....	96 00
“.....	“.....	0.87 acre.....	108 75
Barneys River Station.....	Pictou, N.S.....	0.4 acre.....	50 00
Cushman's.....	Northumberland, N.B.....	3,900 sq. ft. 1.1 acre.....	110 91
Chatham.....	“.....	{13,744} sq. ft..... {2,288}	302 50
St. Fabien.....	Rimouski, Que.....	0.17 acre.....	60 00
Chatham.....	Northumberland, N.B.....	11 sq. ft.....	10 08
“.....	“.....	{1.06} acre..... {2.95}	455 86
“.....	“.....	10,512 sq. ft.....	1,008 33

4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1913.		
19972	Jan. 6.	Philip H. Loggie <i>et ux</i>	Land in Loggieville.....
	1912.		
20076	Sept. 24.	William McDonald.....	Land at.....
	1913.		
20077	March 28.	Peleg Demmens <i>et al.</i>	Land near.....
	1912.		
20078	Nov. 30.	Peter Prendergast <i>et ux</i>	Land on east side of Campbell Road.....
20079	Oct. 3.	Thomas Flynn.....	" " " " " "
	1911.		
†20080	June 28.	Wm. B. Walsh <i>et ux</i> ...	Lot No. 41.....
	1912.		
20081	Dec. 24.	Helen McLaggan.....	Lots Nos. 43 and 43A.....
	1913.		
20084	Feb. 11.	Charles Lecomte.....	Part of Cad. Lot No. 197.....
	1912.		
20205	July 20.	Albert Fownes.....	Land at.....
20206	July 20.	Charles Waugh <i>et ux</i> ..	"
20207	Aug. 15.	Gwendolyn Crofton...	"
20208	Aug. 15.	John W. Stephens <i>et ux</i>	"
20209	Aug. 21.	Sam. Geo. Thorne <i>et ux.</i>	"
20210	Aug. 21.	Nova Scotia Steel and Coal Co., Ltd., <i>et al</i>	"
*20211	Oct. 7.	Geo. E. Fisher <i>et ux</i> ...	Parcel of land No. 44...
*20212	Oct. 8.	Wm. Wilkinson.....	Land being Lot 31.....
*20213	Dec. 18.	Andrew Loggie <i>et al.</i> ...	Land being Lot 87.....
	1913.		
20214	March 6.	Miramichi Lumber Co.	Land at.....
	1911.		
†20233	Feb. 13.	Fred. M. Tweedie <i>et ux.</i>	"

PRINCE EDWARD

19624	1912. May 16.	Charles R. Smallwood <i>et al</i> , Trustees of Estate of Lady Louisa A. Wood.	Parts of lots Nos. 60 and 61 in the 3rd Hundred and Lots Nos. 11, 12 and 13 in the 4th Hundred.
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SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.—Continued.

RAILWAY—Continued.

District.	County.	Area.	Amount.
			\$ cts.
.....	Northumberland, N.B.	2.6 acres.....	2,535 38
Hopewell.....	Pictou, N.S.	0.235 acre.....	300 00
Newport Station.....	Hants, N.S.	8,750 sq. ft.....	175 00
Halifax.....	Halifax, N.S.	4,930 sq. ft.....	2,200 00
".....	"	10,233 sq. ft.....	3,033 66
Chatham.....	Northumberland, N.B.	4.7 acres.....	529 16
".....	"	{0.15} acre.....	400 00
		{1.16}	and interest
St. Valier.....	Bellechasse, Que.	798 sq. ft.....	250 00
Sydney Mines.....	Cape Breton, N.S.	5,500 sq. ft.....	300 00
".....	"	0.33 acre.....	1,000 00
".....	"	4,500 sq. ft.	
".....	"	12,700 sq. ft.....	697 50
".....	"	4,300 sq. ft.....	232 50
".....	"	0.02 acre.....	103 33
".....	"	11.373 acres.....	6,757 60
Chatham.....	Northumberland, N.B.	3.90 acres.....	1,815 00
".....	"		with interest =
			\$2,173.80, \$175.00 be-
			ing costs.
".....	"	2.99 acres.....	522 50
".....	"		with interest = \$712,
			\$130.00 being costs.
".....	"	94,681 sq. ft.....	27,500 and in-
			terest, \$400 being
			costs.
".....	"	{27,800	
		{24,800} sq. ft	2,700 00
".....	"	{4,542}	and interest
".....	"	21,212 sq. ft.....	17,196 88

ISLAND RAILWAY

Charlottetown.....	Queens, P.E.I.	25,880 sq. ft.....	600 00
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4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and
FARRAN'S POINT

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1912.		
19791	Sept. 11.	John A. Sheets.....	Part of Lot No. 16.....
19792	Sept. 11.	Robert Sheets.....	Part of Lot No. 15.....

RIDEAU

19728	1912. Aug. 5.	Jos. H. Webster <i>et ux.</i>	Dwelling house and outbuildings erected on Canal lands at..
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TRENT

†19731	1911. March 16.	Thos. Robinson <i>et ux.</i>	The West half of Part of Lot No. 25 in 10th Con. of the Township of.
†19732	1912. Jan. 16.	Richard P. Grills <i>et ux.</i>	Part of Lot No. 9 in Con. 3, Township of.....
†19733	Jan. 16.	Thos. H. Rowe <i>et ux.</i>	Part of North half of Lot No. 15, in 11th Con. of the Township of Seymour.
†19734	Jan. 23.	Charles Nicholas Jr., <i>et ux.</i>	Part of North half of Lot No. 16 in 10th Con. of the Township of Seymour.
19919	1913. Jan. 31.	The York Construction Co., Ltd.	Part of Lot No. 107 in 1st Con. of Township of.....
19920	Jan. 31.	Thomas McAvoy <i>et ux.</i>	Part of Lot No. 22 in South Block of West side of Front St., in
19915	1912. June 19.	Maria Donahue <i>et al.</i>	Lot No. 10 on South side of Bridge Street.....
19973	1913. March 8.	Frank J. Farley <i>et ux.</i>	Parts of Lecas Island in River Trent, Part of Lot No. 3 in Con. 1, and parts of Lots Nos. 3 and 4, in Con. 2.
19974	Feb. 20.	Milo A. Hawley.....	Lot "Y" and part of Lot "E," North side of Tice or Bridge Street; and half interest in a certain brick wall.
†20086	1912. Feb. 15.	John Horsman <i>et ux.</i>	Parts of Lots Nos. 8 and 41 in Block XI on Inkerman and Balaclava Streets.
20087	1913. Feb. 13.	Ellie Todd <i>et al.</i>	Part of Lot No. 20 in South Block on west side of Front St.
20138	Feb. 19.	Daniel G. Clark.....	Part of North half of Lot No. 15 in the 11th Con. of Township of Seymour.
20216	March 13.	Patrick Cowan and Alice Cowan.	Part of North half of Lots Nos. 15 and 16, Con. XI.....
20217	March 28.	Patrick Cowan and Alice Cowan.	Part of Lot No. 17 in 10th Con. Township of Seymour.....
20218	March 31.	Rev. Geo. F. Whibbs and Jane O'Byrne.	Part of Lot No. 17 in 10th Con. and parts of North half of Lots Nos. 15 and 16 in 11th Con.

WELLAND

†*19246	1911. Sept. 11.	Dept. of Marine and Fisheries.	Part of Lot "1A" of subdivision of Lot No. 28, Con. 1.....
19842	1912. Dec. 9.	Alice E. Dickinson....	Land covered with water pts. of water lots in front of Sand Lot, in front of strip fronting Lots 1, 2 and 3 in front of Lots 4, 5 and 6 on Shore of Lake Erie.

†Too late for last year's Report.

‡Assignment of Lease.

*Judgment of the Exchequer Court.

**Order in Council.

SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.—Continued.

CANAL.

District.	County.	Area.	Amount.
Farran's Point.....	Stormont, Ont.....	0-019 acre.....	§ cts. 17 82
".....	".....	0-013 acre.....	12 18

CANAL.

Nicholsons Locks.....	Grenville, Ont.....		500 00
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CANAL.

Eldon.....	Victoria, Ont.....	3-40 acres.....	3 00 and 2-75 acres of Canal lands.
Seymour.....	Northumberland, Ont.....	21-9 acres.....	1,100 00
".....	".....	0-47 acres.....	30 00
".....	".....	1-6 acre.....	25 00
East Gwillimbury.....	York, Ont.....		125 00
Campbellford.....	Northumberland, Ont.....	0-20 acre.....	450 00
Frankford.....	Hastings, Ont.....	0-2 acre.....	25 00
Murray.....	Hastings, Ont.....	{4-10} acres.....	1 00 and
Campbellford.....	Northumberland, Ont.....	{3-74} 0-08 acre.....	exchange of land 1,800 00
".....	".....	0-23 acre.....	150 00
".....	".....	0-23 acre.....	350 00
Seymour.....	".....	5-5 acres.....	165 00
".....	".....	3-08 acres.....	111 00
".....	".....	3-70 acres.....	130 00
".....	".....	{3-70} acres.....	1 00
		{3-08}	

CANAL.

Humberstone.....	Port Colborne, Ont.....	0-525 acres.....	
Port Colborne.....	Welland, Ont.....	5-51 acres.....	7,687 03

H. F. ALWARD,
Departmental Solicitor.

LETTERS PATENT issued by the Department of Railways and Canals during the Fiscal Year ended March 31, 1915.
INTERCOLONIAL RAILWAY.

No.	Date.	Grantee.	Description.	Area.	Amount.	Remarks.
19559	1913. Jan. 7.	Atlantic Sugar Refining Co., Ltd.	Deed of land in City of St. John, N.B.	6.94 acres.....	\$ cts. 100,000 00	
CHAMBLY CANAL.						
19613	1912. Aug. 15.	Madame Alphonsine Leblanc (wife of Hormidas Riendeau)	Deed of land being portion of Lot 130, Village of Chambly Basin, Que.	2,800 sq. ft.....		
LACHINE CANAL.						
19550	1912. June 5.	The City of Montreal.	Deed of part of Cad. Lot. No. 3414, on West side of the Cote St. Paul Road, Parish of Montreal, Que.	18,871 sq. ft.....	9,435 50	
WELLAND CANAL.						
†19248	1911. Sept. 1.	City of St. Catharines	Deed of part of Lot 13, Con. 6, Township of Grantham, County of Lincoln, Ont.	13.55 acres.....	1,016 25	

†Too late for last year's Report.

H. F. ALWARD,
Departmental Solicitor.

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1912.			\$ cts.
19547	May 30..	The Halifax and Eastern Ry. Co. The Dominion of Canada Trust Corporation, Ltd.	Indemnifying and saving harmless His Majesty from all claims which Company might have re making surveys for or constructing a line of railway from Dartmouth east.	85,000 00
19556	May 31..	Benjamin Tucker, guardian of the children of late Joseph Cuthbertson.	Claim owing to the death of Joseph Cuthbertson.	1,000 00
19557	June 4..	Rebecca McDonald.....	Of all claims, etc., owing to the death of her husband, Alex. J. McDonald.	1,000 00
19559	May 20..	Hopper Brothers.....	From all claims for damages to machinery in Excelsior Factory caused by raising of water in Leper Brook through ice jam caused by railway piers.	200 00
19576	July 9..	Oscar Savary.....	Damages to Oscar Savary from injuries sustained while in employ of railway at Carmel, Que.	500 00
19626	July 10..	Eva Bellavance.....	From all claims owing to death of Absalom Lavoie.	1,000 00
†19772	Feb. 16..	Edith May Stevens <i>et al</i>	Damages consequent upon expropriation of a certain building erected on a lot on south side of Water Street, Campbellton, N.B.	400 00
19938	March 5..	Emily Grenier.....	For all claims, etc., owing to death of her husband, Xavier Letellier.	1,000 00
20094	Dec. 30..	Alice McDevitt <i>et al</i> ...	For damages to property on north side of St. George Street, City of Moncton, N.B., consequent upon construction of St. George Street Overhead bridge.	400 00
20139	Jan. 17..	Hugh H. Reid.....	From and against all claims and demands on account of injuries sustained "Derby Junction Accident."	500 00
20140	Jan. 30..	Johanna Tobin.....	" " " "	1,500 00
20141	Jan. 30..	Christopher O'Brien...	" " " "	3,000 00
20142	Dec. 17..	Joseph D. Armstrong...	" " " "	2,050 75
20143	Jan. 24..	William Irving.....	" " " "	1,000 00
20144	Feb. 3..	Wesley D. Curtis.....	" " " "	1,500 00
20145	Feb. 19..	Charles McDougall, Administrator of estate of Harvey McDougall...	" " " "	1,500 00
20146	Jan. 30..	Jane Clouston.....	" " " "	1,500 00
20147	Dec. 20..	Harry W. Steen.....	" " " "	350 00
20148	Feb. 19..	Katherine J. Harris, Administratrix estate of Willard Harris.	From and against all claims and demands, etc., incidental to injuries sustained by late Willard Harris, "Derby Junction Accident."	3,000 00
20149	Feb. 19..	James Pleadwell, Administrator of estate of late Sadie Pleadwell.	From and against all claims and demands, etc., incidental to injuries sustained by late Sadie Pleadwell, "Derby Junction Accident."	3,000 00
RIDEAU CANAL.				
†20092	Aug. 13..	Ottawa Northern and Western Railway Co., and The Canadian Pacific Railway Co.	Of all right, title, etc., in certain parcel of Canal reserve (262 sq. ft.) leased by Letters Patent No. 13624, dated Aug. 28th, 1899.	1 00

†Too late for last year's report.

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

TRENT CANAL.

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1912.			\$ cts.
19521	May 6.	Frederick Pluard, <i>et al.</i>	For damages by water to Lot No. 15 in the 9th Con. of the Tp. of Harvey, Co. of Peterborough, Ont.	176 00
19537	April 5.	Township of Harvey....	For damages by water to certain highways and public roads and ways in Township of Harvey, Co. of Peterborough, Ont.	950 00
†19543	1911. Sept. 5.	Jno. E. Curtis, <i>et ux.</i>	Damages to south west corner of Lot No. 6, Con. 3, Tp. of Alnwick, Co. of Northumberland, Ont.	160 00
19723	1912. Nov. 20.	The Corporation of the County of Hastings.	From all claims, etc., arising out of or incidental to the removal of the old bridge or the construction of the new bridge or any other work at the point in question near Frankford, Ont.	20,000 00
19773	Oct. 14.	John Scott.....	For damages consequent upon injury to a horse..	50 00
19774	Oct. 14.	Samuel Adams.....	" " " " " " " "	35 00
†19775	1911. Oct. 16.	Matilda E. M. Gainer...	For damages by water to the south half of Lot No. 1, in 9th Con. of the Tp. of Hope, County of Durham, Ont.	70 00
†19776	Feb. 13.	Mossom B. Bonnell, <i>et al</i>	For damages by water to part of Block "D" in Village of Bobcaygeon, Co. of Victoria, Ont.	200 00
19777	1912. June 22.	Sidney Garrett, <i>et al.</i>	For damages by water to the west half of Lot No. 26, 1st Con. of the Tp. of Douro, Co. of Peterborough, Ont.	250 00
†19778	1911. Nov. 13.	Andrew G. Shearer, <i>et al</i>	For damages by water to Lot No. 8 in 4th Con. and Lot No. 9 in 5th Con. of the Tp. of Harvey, Co. of Peterborough, Ont.	336 00
19779	1912. Oct. 12.	James Tindle, <i>et ux.</i>	For damages by water to the west half of Lot No. 7, Con. 5th, Tp. of Smith, Co. of Peterborough, Ont.	50 00
†19780	1911. Feb. 10.	John J. Lundy.....	For damages by water to Lot No. 3 in the 4th Con. of the Tp. of Smith, Co. of Peterborough, Ont.	153 00
†19781	Dec. 15.	Township of Smith.....	For damages by water to certain highways, roadways, streets and approach to a certain bridge in the Tp. of Smith, in the County of Peterborough, Ont.	1,500 00
†19782	Dec. 6.	Thomas Harris and Edwin Harris.	For damages by water to Cow Island in Rice Lake Tp. of South Monaghan, Co. of Northumberland, Ont.	75 00
†19783	April 22.	Janet McCracken.....	For damages by water to the west half of Lot No. 21, Con. 7, Tp. of Alnwick, Co. of Northumberland, Ont.	30 00
†19784	July 12.	Alfred Braithwaite, <i>et ux</i>	For damages by water to the west half of Lot No. 11 and to the east half of the S. 9-10 of the south half of Lot No. 10 in the 3rd Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	96 00
†19785	Sept. 6.	George Ferguson, <i>et al.</i> ..	For damages by water to Margaret's Island in Rice Lake, Tp. of Alnwick, Co. of Northumberland, Ont.	100 00
†19786	1912. Feb. 12.	William White.....	For damages by water to parts of Lots 32 and 33 in the 9th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	25 00
†19787	1910. Sept. 21.	Francis Cheyne.....	For damages by water to Lots 10 and 11 in 9th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	250 00
†19788	Aug. 26.	Thomas B. Chalk.....	For damages by water to Lot No. 35 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	120 00
†19789	1912. Feb. 21.	Mary White and Harriet White.	For damages by water to the east part of Lot No. 7 and Lots Nos. 8, 9 and 10, Block "M," Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.—Continued.

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1911.			\$ cts.
†19886	Oct. 14..	Charles G. Thomson, <i>et ux.</i>	For damages by water to Lot No. 2 in Block "A," Tp. of Otonabee, Co. of Peterborough, Ont.	120 00
19887	April 28..	Frank Cadigan.....	For damages by water to north east quarter of Lot No. 5 in the 10th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	1 00
19888	Dec. 7..	Albert E. Bottum <i>et ux.</i>	For damages by water to Island No. 2, Pigeon Lake, Tp. of Harvey, Co. of Peterborough, Ont.	200 00
19902	Dec. 14..	Mary Louisa Shannahan <i>et al.</i>	For damages by water to the south half of the north east quarter of Lot No. 5 in the 9th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	80 00
19921	1913. Jan. 24..	William H. Grylls, <i>et ux</i>	For damages by water to part of Lot No. 49, north of Portage Road, 9th Con., Tp. of Eldon, Co. of Victoria, Ont.	175 00
19922	Jan. 24..	Gabriel Switzer, <i>et ux.</i> ...	For damages by water to the north part of the west half of Lot No. 22 in the 4th Con. of the Tp. of Emily, Co. of Victoria, Ont.	20 00
19923	Jan. 24..	Albert Boynton.....	For damages by water to the west half of Lot No. 21 and to the south west quarter of Lot No. 22, in the 8th Con. of the Tp. of Eldon, Co. of Victoria, Ont.	600 00
†19975	1911. Aug. 22..	Joseph Braithwaite, <i>et ux</i>	For damages by water to the east half of Lot No. 11 in the 3rd Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	80 00
19976	July 21..	William Y. Field.....	For damages by water to part of Lots 5 and 6 in the 4th Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	75 00
19977	1912. Nov. 13..	George C. Biggar, <i>et al</i> (executors of estate of late Emily S. Shoemberger).	For damages by water to Spook, or Ghost Island, Rice Lake, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
†19978	1911. Oct. 19..	Caroline C. Ruttan.....	For damages by water to parts of north half of Lot No. 34 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	70 00
†19979	1912. Feb. 12..	John Michie, <i>et ux.</i>	For damages by water to Lots 5 and 6 in Block "I," of Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
†19980	1911. July 5..	Hilda Stewart.....	For damages by water to the east part of Margaret's Island, Rice Lake, Tp. of Alnwick, Co. of Northumberland, Ont.	100 00
†19981	1910. Sept. 19..	Catherine S. Ainlay and Joseph Ainlay.	For damages by water to the south west corner of the north half of Lot No. 34 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	60 00
†19982	1912. Mar. 30..	Francis C. Richard, <i>et ux</i>	For damages by water to part of Lot No. 4, Block "B," Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	40 00
†19983	1910. Nov. 30..	John D. Hayden, <i>et ux.</i> ...	For damages by water to Hickory, or Balsam Island, in Rice Lake, opposite Tp. of Alnwick, Co. of Northumberland, Ont.	300 00
20096	1913. Feb. 4..	Ellis B. Burrell, <i>et al.</i> ...	For damages consequent upon removal of a barn situated on Lot No. 60, Block "F," Queen Street, Campbellford, Ont.	175 00
20097	Mar. 17..	Stephen H. Thorne, <i>et ux</i>	For damages by water to Little Fothergill Island, in Pigeon Lake, Tp. of Ennismore, Co. of Peterborough, Ont.	200 00
†20113	1911. Feb. 12..	Agnes Sidney.....	For damages by water to part of Lot No. 33 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	50 00

†Too late for last year's Report.

H. F. ALWARD,
Departmental Solicitor.

PART III

REPORTS OF THE GOVERNMENT RAILWAYS MANAGING
BOARD AND OTHER OFFICIALS
FOR THE YEAR 1912-13

Government Railways Managing Board.

Report of Chief Engineer, I.C.R.

- " Engineer of Maintenance, I.C.R.
- " Superintendent of Motive Power, I.C.R.
- " Comptroller and Treasurer, I.C.R.
- " Statement of Casualties, I.C.R.
- " Comptroller and Treasurer, Windsor Branch.
- " Engineer of Maintenance, Windsor Branch.
- " Chief Engineer, P.E.I. Ry.
- " Superintendent, P.E.I. Ry.
- " Master Mechanic, P.E.I. Ry.
- " Accountant and Auditor, P.E.I. Ry.
- " Statement of Casualties, P.E.I. Ry.
- " Chairman and Secretary of Government Railways Provident Fund.

OFFICE OF GENERAL MANAGER OF GOVERNMENT RAILWAYS,

MONCTON, N.B., September 12, 1913.

HON. FRANK COCHRANE,
Minister of Railways and Canals,
Ottawa.

SIR,—The Government Railways Managing Board have the honour to submit the following report on the working of the Government Railways during the fiscal year ended March 31, 1913:—

The board was constituted as follows:

- Mr. A. W. Campbell, C.E., chairman, Ottawa.
- Mr. D. Pottinger, I.S.O., assistant chairman, Moncton.
- Mr. E. Tiffin, general traffic manager, Moncton.
- Mr. F. P. Brady, general superintendent, Moncton.
- Mr. J. B. T. Caron, general solicitor, Moncton.

The railways under the control of the board are: The Intercolonial railway, the Windsor Branch railway, and the Prince Edward Island railway.

Separate accounts are kept for each of these railways, and they will be considered separately in this report.

INTERCOLONIAL RAILWAY.

Effective November 1, 1912, a change was made in the organization. The office of Chief Engineer was abolished, and the district superintendents were given charge of all works on their respective districts. The position of right-of-way and lease agent was created.

Reports from officials are enclosed as follows:—

From Right-of-Way and Lease Agent for Chief Engineer, from the first of the year to October 31, 1912, on works charged to capital account.

The report of the Engineer of Maintenance on the repair and renewal of the permanent way buildings and works up to October 31, 1912.

Reports from Superintendents D. McDonald, E. Price, J. T. Hallisey and Y. C. Campbell, on works done on capital, and on repairs and renewals of permanent way buildings and work, from November 1, 1912, to the end of the year.

Report of the Superintendent of Motive Power, and of the Mechanical Department's Accountant, with the statements relating to the Mechanical Department.

Also the general accounts of the railway prepared by the Comptroller, as follows:—

1. Capital account.
2. Revenue account.
3. Maintenance of way and structures.
4. Maintenance of equipment.
5. Traffic expenses.
6. Transportation expenses.
7. General Expenses.
8. General stores account.
9. General balance.

10. Statement of receipts and expenses.
 11. Equipment renewal account.
 12. Rail renewal account.
 13. Fire renewal account.
 14. Statement of cash received.
 15. Statement of averages.
- Return of casualties.

The length of railway in operation during the year 1912-13 was 1,468.15 miles.

CAPITAL ACCOUNT.

The cost of the road and equipment on March 31, 1912, was \$94,745,819.64. The additions during the year were as follows:—

Additions to and furnishings for office building at Moncton.	\$	36,424	89
Additional facilities at Princess pier.		122	20
Docks and wharfs at Halifax.		351,385	06
Diversion of line at Chatham and branch to wharf.		114,927	21
General protection of highways.		8,588	58
Increase in accommodation at Halifax.		123,245	43
Increase accommodation at Campbellton.		126,290	77
Increase accommodation at Truro.		146,721	48
Increase accommodation at Stellarton.		9,000	00
Increased accommodation and facilities along the line.		68,700	03
Increase accommodation at Fredericton.		15,582	40
Increase accommodation at Ste. Flavie.		26,386	81
Increase accommodation at St. John.		34,774	71
Increase accommodation at Rivière du Loup.		5,713	16
Improve triple valves of air brakes.		7,149	93
Improvements at Loggieville (Exchequer Court award).		2,535	38
Improvements at Hampton.		4,028	03
Improvements at Sussex.		95	65
Improvements at Point Tupper.		93,000	00
Improvements at Mulgrave.		7,724	74
Locomotive and car shops with equipment and new freight yard and cut-off line at Moncton.		18,764	99
New machinery of steamer <i>Scotia</i>		1,104	00
Original construction.		206	10
Pay claim of E. A. Wallberg for work done on the Intercolonial railway under government contracts, \$45,219.50, with interest at 5 per cent from February 1, 1913, to March 31, 1913, \$359.28.		45,578	78
Pay the estate of the late Hon. W. T. Pipes, \$305.20, with interest at 5 per cent from October 6, 1905, to March 31, 1913, \$114.18, being for land taken for right-of-way to wharf at Fort Lawrence.		419	38
Pay the Halifax and Eastern Railway Company for plans, surveys, field notes, etc., taken by the government.		85,000	00
Rolling stock.		400,000	00
Safety appliances for equipment.		7,984	27

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Surveys and inspection.	\$ 32,997 23
Spur line to Wallace harbour.	967 82
Sydney Mines diversion.	128,197 32
Strengthen bridges.	50,299 94
Towards the construction of a railway from a point on the Interecolonial railway at or near Dartmouth, in the county of Halifax, <i>via</i> Musquodoboit harbour and the valley of the Musquodoboit to Deans settlement in the said county.	539,791 24
	\$97,239,527 17

Less—

To previous years' expenditure—proceeds of sale of dwelling house and shed, Moncton, and transfer of bridge, Moncton, to improvements at Mulgrave.	\$1,720 00
To amount received for concessions (ballast wharf property, St. John, granted per terms of order in council of October 22, 1912).	\$100,000 00
	\$101,720 00

Making the total cost on March 31, 1913. \$97,137,807 17

Explanations in regard to the expenditure on capital account will be found in the reports of the Right-of-Way and Lease Agent, the Superintendent of Motive Power, and the District Superintendents.

REVENUE ACCOUNT.

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

Gross earnings.	\$11,984,482 69
Working expenses.	11,984,482 69
	Nil.

There was a gain of \$777,863.74 from the operation of the railways for the year. This surplus was transferred in March to equipment renewal account, so that when the books were closed at the end of the year the net earnings showed nil.

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

In 1912-13.	\$11,984,482 69
In 1911-12.	10,593,785 84
	Increase. \$ 1,390,696 85

The earnings from passenger traffic compare as follows:—

In 1912-13.	\$ 3,483,447 32
In 1911-12.	3,017,304 63
	Increase. \$ 466,142 69

The earnings from freight traffic compare as follows:—

In 1912-13	\$8,028,760 43
In 1911-12	7,008,300 49
	Increase \$1,020,459 64

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

In 1912-13	\$ 517,273 24
In 1911-12.	568,180 72
	<hr/>
Decrease.	\$ 50,905 48

The earnings by mile of railway compare as follows:—

In 1912-13	\$ 8,162 98
In 1911-12.	7,215 74
	<hr/>
Increase.	\$ 947 24

The earnings by train mile compare as follows:—

In 1912-13.	\$ 1 47
In 1911-12	1 43

The number of passengers carried compare as follows:—

In 1912-13.	\$ 3,763,115
In 1911-12	3,416,553
	<hr/>
Increase.	\$ 346,562

There was an increase of 321,489 in the number of local passengers, and of 25,073 in the number of through passengers.

The weight of revenue producing freight compares as follows:—

	Tons.
In 1912-13	5,203,468
In 1911-12	4,536,599
	<hr/>
Increase	666,870

There was an increase in local freight of 460,884 tons, and also an increase in through freight of 205,986 tons.

A number of statements which give detailed information in regard to the traffic are appended to this report. They are as follows:—

Statement of receipts, showing the receipts monthly from passenger traffic, freight traffic, and mails and sundries.

Passenger statement, showing monthly the number of local and of through passengers carried and the mileage.

Freight statement, showing monthly the number of tons of local and through freight carried, and the mileage.

Comparative statement, showing the principal articles of freight carried during this year and the preceding year.

Descriptive statement of freight transported showing a few of the principal articles.

Statement of coal transported showing the stations from which it was sent.

Statement showing the quantity of raw and of refined sugar, of fresh and salted fish, of grain for export, and of European freight carried over the railway.

Statements of the ocean-borne passenger business at Halifax, at St. John and at Quebec, showing the number of passengers received by the Railway from each of the steamers named.

Statements of ocean-borne freight traffic at Halifax and at St. John, showing the quantity of freight imported and exported by the lines of steamers named and carried over the railway.

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WORKING EXPENSES.

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

In 1912-13	\$11,984,482 69
In 1911-12	10,591,035 84
	<hr/>
Increase	\$ 1,393,446 85

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

Per mile run by engines:—

In 1912-13	1.1658
In 1911-12	1.1248

Per mile run by trains:—

In 1912-13	1.47
In 1911-12	1.43

Working expenses per mile of railway:—

In 1912-13	\$ 8,159 91
In 1911-12	7,213 86

The Engineer of Maintenance reports that the road was never in better condition. During the year 623,058 ordinary ties and 273 sets of switch ties were put in. 160 miles of track was ballasted.

5.75 miles of additional sidings were provided at various points.

Bridges, culverts, wharfs and buildings received necessary repairs.

The fences were repaired and 45.58 miles of fences were built.

The snow fences and snow sheds were repaired.

The Superintendent of Motive Power in his report deals with the rolling stock purchased, rebuilt in shops, etc.

STORES.

The value of stores purchased was	\$4,164,646 10
The value of stores used was	4,349,486 76
The value of material sold was	368,831 88
The value of stores on hand at the end of the year was—	
Miscellaneous	592,209 31
Fuel	140,045 69
Roadway and bridge material	732,902 78
	<hr/>
	\$1,465,157 78

WINDSOR BRANCH RAILWAY.

The line extends from Windsor Junction to Windsor, N.S., and is 32 miles in length. It is under lease to the Dominion Atlantic Railway Company, which operates the line, and which has also running powers over the Intercolonial Railway between Windsor Junction and Halifax.

The Windsor Branch is maintained by the Government, and the company pays the Government one-third of the gross earnings.

The following statement of the accounts prepared by the Comptroller is enclosed:

- No. 1—Revenue account.
- No. 2—Maintenance of way and structures.
- No. 3—General Balance.
- No. 4—Statement of earnings.

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Also the report of the Engineer of Maintenance on the work done during the year, and on the condition of the Branch:

The revenue (½ earnings) was	\$ 68,246 70
The cost of maintenance was	29,970 62

Net earnings	\$ 38,276 08
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The earnings decreased and compare with those of the previous year as follows:—

Earnings 1912-13	\$ 68,246 70
Earnings 1911-12	73,176 60

Decrease	\$ 4,929 90
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There was an increase in passenger traffic, while the mail earnings remained stationary. There was a decrease in freight traffic.

The Engineer of Maintenance reports that the track, bridges, and structures have been kept in good repair.

PRINCE EDWARD ISLAND RAILWAY.

The length of railway in operation during the year 1911-12 was 267.5 miles. In November, 1912, the branch line from Harmony to Elmira was completed and road opened for traffic. The length of this branch is 9.9 miles, making the total mileage at the end of the year 1912-13 in operation 277.4 miles. The gauge is 3' 6".

Enclosed is the report of the Superintendent, who sends statements of the various accounts prepared by the Accountant and Auditor, also the report of the Mechanical Superintendent and the statements in regard to that Department, also the return of casualties which occurred during the year:—

The cost of road and equipment on March 31, 1912 was.	\$8,687,727 38
The expenditure during the year 1912-13 was	103,001 03

Making the total cost on March 31, 1913	\$8,790,728 41
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The report of the Superintendent gives the details and explanations in regard to capital expenditure:—

Gross earnings	\$ 389,474 07
The working expenses for the year were	489,972 34

Deficiency	\$ 100,498 27
----------------------	---------------

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

In 1912-13	\$ 389,474 07
In 1911-12	367,203 39

Increase	\$ 22,270 68
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The increase was in both passenger and freight traffic.

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

In 1912-13	\$ 489,972 34
In 1911-12	449,962 91

Increase	\$ 40,009 43
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The necessary work was done to maintain the permanent way and works, and rolling stock, and they are in a state of efficiency.

SESSIONAL PAPER No. 20

INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS
EMPLOYEES' PROVIDENT FUND.

The report of the fund, which has been separately furnished, shows Credit Balance on March 31, 1912.	\$ 309,234 71
During the fiscal year the contributions of the employees amounted to	85,365 23
The contributions of the Railways amounted to	85,365 23
Amounts received for refunds	2,146 00
<hr/>	
A total of	\$ 482,111 17
The total expenditure was	145,432 80
<hr/>	
Leaving a balance of	\$ 336,678 37
To which is to be added the interest	9,350 20
<hr/>	
Making a total amount to the credit of the fund on March 31, 1913	\$ 346,028 57

During the year sixty-three employees were retired and placed upon the fund, and thirty-six have died, leaving four hundred and fourteen persons on the list receiving an allowance from the fund at the end of the fiscal year. This is an increase of twenty-seven persons compared with last year.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL, *Chairman*.

F. P. BRADY, Esq.,
General Superintendent,
MONCTON, N.B.

MONCTON, N.B., July 3, 1913.

SIR,—I have the honour to submit the following report on Capital Account Expenditure for part of the fiscal year 1912-13:—

Sydney Mines diversion—

The contract work for the diversion was completed, except sidings and road crossings.

Some ballasting was done by contract, but not all completed.

The following persons were paid for land required for the right of way:—

Lots 52, 60, 63, 63B, 64, 69 and 71 Nova Scotia Steel & Coal Co.

40—Chas. Jessome.

60—S. G. Thorne.

63A—Malcolm McMillan.

65A—Mrs. G. Crofton.

65B—J. W. Stevens.

67A—Wm. Daly.

67B—Albert Fownes.

68—Chas. Waugh.

70—Mrs. M. McArthur.

Contracts were let for combined station, dwelling and freight shed at Little Bras d'Or and Florence.

Loading platforms built at Florence and Little Bras d'Or.

Oil, coal and tool houses built at Florence.

A flag station was started at Watson's Cove, being built by day labour.

Improvements at Point Tupper—

A contract was let for a 75 ft. turntable and table delivered.

A contract was let for a 10-stall addition to the engine house which was completed.

Plans and specifications prepared and contract let for a brick station, which was about 30 per cent completed.

Plans and specifications prepared for a two apartment dwelling, tenders asked, contract let and work started.

Improvements at Mulgrave—

Installation of heating plant in new station completed.

Material ordered for concrete platforms and received.

Platforms completed; work done by day labour.

Concrete foundations for overhead bridge completed, work done by day labour.

To increased accommodation at Stellarton—

Plans and specifications prepared and contract let for an addition to freight shed, which was completed and taken off the contractor's hands.

Spur line to Wallace Harbour—

Survey made, plans and specifications prepared and submitted for approval.

To increased accommodation at Truro—

Plans and specifications prepared for a brick freight house, contract let and work finished and taken off contractor's hands.

Portion of old station moved to new site to allow room for new building.

Plans and specifications were prepared for a new stone station, the contract let, and work started. About 30 per cent completed.

To increased accommodation at Halifax—

Plans and specification prepared and work started on the extension of Pier No. 7 at Richmond. Wharf extension about 90 per cent completed, and preparations made for starting rock excavation for filling.

In connection with the new terminal proposition a survey of the railway property from Deep Water Terminus to Rockingham was made and plans prepared and submitted.

Improvements at Hampton—

Preliminary plans and estimates were prepared for a new brick passenger station.

Improvements at Sussex—

Preliminary plans and estimates were prepared for a new brick passenger station.

Locomotive and Car Shops at Moncton—

Plans and specifications were prepared and tenders asked for an addition to the existing freight car repair shop. Tenders were asked for a brick building with mill construction wood roof. On 20th September the Chairman gave instructions to prepare plans for a concrete building with concrete roof, which were completed and submitted for approval.

Addition to and Furnishing for Office Building at Moncton—

The addition to the building was completed and taken off the contractor's hands and occupied by the Railway Department.

SESSIONAL PAPER No. 20

To increase accommodation at Fredericton—

The concrete platforms at the new station were completed; work done by day labour.

Diversion of line at Chatham and branch to wharf—

Material required for freight sheds at Chatham and Nelson was delivered and the work done by day labour.

Plans and specifications for new stations at Nelson and Chatham were prepared, tenders asked, contracts let and the buildings completed.

Examination and report made on ballast pit at Cushman's re ballasting for diversion.

The ballasting and lifting of track on the new line was completed. Work done by day labour.

Three sidings were put in on the new line.

To increase accommodation at Campbellton—

The concrete platforms at new station were completed. Work done by day labour.

To increase accommodation at Ste. Flavie—

Preliminary plans and estimates were prepared for a new station. Contract let for new station and construction commenced. About 25 per cent completed.

To increase accommodation at Rivière du Loup—

Plans prepared for a Trainmen's rest house and the work of construction commenced.

Surveys and inspection—

A survey was made for improving the alignment of the main line between one mile east of Little Metis and one mile east of St. Octave station, a distance of about three miles.

A survey was made for a proposed spur line to the brick works on the west side of Pugwash harbour.

A survey was made for a proposed new track from the main line near the engine house to Courtney bay at St. John, to avoid shunting across the city streets. Plans, profiles and estimates made and submitted.

Surveys made for water supplies at Matapedia, Causapsal and Assametquaghan.

To increase accommodation and facilities along the line—

Plans and specifications prepared, contract let and completed for an addition to the freight shed at Sydney Mines.

Plans and specifications prepared, contract let and work about half completed on addition to freight shed at Sydney.

Plans and specifications prepared and contract let for new station at Sayabec, construction started, and completed. Station master's dwelling completed. Freight shed repaired, painted and removed to new site.

To strengthen bridges—

Under this appropriation there were fifty-three short spans put in on the first division, 36 between the lengths of 8 and 12 feet, 12 between the lengths of 12 and 15 feet, and 5 between the lengths of 15 and 20 feet.

On the second division there were a total of ten short spans put in, 9 between the lengths of 8 and 12 feet, and one 17½ feet.

4 GEORGE V., A. 1914

Elmira Branch, P.E.I.—

The Contractors completed their work in connection with the branch line. The ballasting and track lifting was done by the Railway Department.

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

WM. B. MACKENZIE,
Chief Engineer.

LEVIS, Que., May 8, 1913.

F. P. BRADY, Esq.,
General Superintendent,
Moncton, N.B.

DEAR SIR.—I herewith submit report of work done on my Division, from the 1st November, 1912, to the 31st of March, 1913.

TRACK.

During this period, 79,084 lineal feet of 5-in., 4 $\frac{3}{4}$ -in., 4 $\frac{1}{2}$ -in and 4 $\frac{1}{4}$ -in. rails were taken up and replaced with an equal quantity of 5-in., 4 $\frac{3}{4}$ -in. and 4 $\frac{1}{2}$ -in.

TIES.

During this period, 2,433 ordinary ties and 6 sets of switch were put in track.

SWITCHES AND SEMAPHORES.

A new semaphore was placed at Tobin's, and semaphores were required at the following places:—LaDurantaye, L'Islet, Harlaka, St. Eloi, St. Pacôme, Cacouna, Ste. Luce, St. Anaclét and Carrier.

Glasses of all semaphores changed on North No. 5 division, and also all semaphores inspected and adjusted on the above division.

STATION TELEGRAPH, SIGNALS.

These were put in at LaDurantaye and Bagot.

SNOW FENCES.

Five hundred and eighty-three rods of snow fences were erected at Blake and 500 rods of portable fences at St. Alexandre.

WHARFS AND TRESTLES.

The trestle at Tobin's repaired and Princess pier at Levis repaired.

BUILDINGS AND PLATFORMS.

Repaired at the following places:—

- Sectionman's shanty, Rimouski.
- Pumphouse at St. Fabien, rebuilt.
- St. Simon station.
- Tobin's new freight shed completed.
- Building new sectionmen's shanty at Tobin's.
- Rivière-du-Loup roundhouse.
- Rivière-du-Loup old machine shop.
- Rivière-du-Loup new machine shop.

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Subway at Ste. Flavie.
Coal shed, St. Luce.
Platform, St. Anaclet.
Coal shed, Rimouski.
Station platform, St. Alexandre.
Station platform, St. Andre.
Station platform, Ste. Helene.
Turntable, Ste. Flavie.
Roundhouse, Ste. Flavie.
Station, Rimouski.
Bic station.
Trois Pistoles station.
St. Eloi station.
Tobin's station.
Station platform, Isle Verte.
Station, Rivière-du-Loup.
Baggage room Rivière-du-Loup.
Mechanical store, Rivière-du-Loup.
Old Lake road station.
St. Paschal station.
St. Arsene station.
Cacouna station.
Cattle pen at Rimouski.
Telegraph office, Rivière du Loup.
Chief despatcher's office, Rivière du Loup.
St. Andre station.
St. Philippe station.
Dessaint station.
St. Alexandre station.
Turntable at Ste. Flavie.
Agent's house at Laurier.
Laurier station.
Sectionmen's house at DeLotbinière.
St. Apollinaire station.
Scale house, Ste. Rosalie.
Station platform, Bagot.
Lumber shed at Drummondville.
Mail crane at Manseau.
Mail crane at Levergne.
Doors, Daveluyville station.
Doors, Lemieux station.
Freight shed at Drummondville.
Windows, Carmel station.
Freight shed doors, St. Germain.
Freight shed doors, Laurier.
Freight shed doors, St. Leonard.
Flanger No. 22.
Mail catcher, DeLotbinière.
Doors, Aston Junction station.
Doors, Drummondville station.
Doors and windows, Bagot station.
Doors and windows, St. Cyrille station.
Platform and freight shed at Mitchell.
Doors, Ste. Rosalie station.

Doors, St. Leonard station.
Doors, St. Cyrille station.
Windows, St. Leonard station.
Roof of stable at Ste. Monique.
And making lorry frames.
LaDurantaye station.
Ste. Louise station.
Agent's house, Ste. Anne.
Agent's house, St. Charles Junction.
And moving cattle pen at Ste. Anne.
And moving cattle pen at L'Islet.
Roof and freight shed, Levis.
Agent's house, Rivière Ouelle.
Baggage room and coal shed, Rivière Ouelle.
Gangway and cattle pen, Rivière Ouelle.
Rivière Ouelle wharf station.
St. Joseph station.
Scale in Levis baggage room.
Giroux's house, Chaudière curve, railway house.
Station platform, Chaudière Curve.
Freight shed, Levis.
Agent's house, Chaudière Junction.
W.C. at L'Islet.
Brick walls, engine house, Chaudière Junction.
Hot air pipe, engine house, Chaudière Junction.
Drain for ash pit house, Chaudière Junction.
Pit, St. Charles water crane.
Pit, L'Islet water crane.
Freight checker's office, Levis.
Smoke stacks, engine house, Chaudière Junction.
Railway house, occupied by A. B. Therrien, Chapman's property.
Doors of engine house, Chaudière Junction.
Doors of transfer shed, Chaudière Junction.
Apartments agent's house, Chaudière Curve.
Chaudière Curve station.
Crossing gates at Levis.
Superintendent's house, Levis.
Levis station.
L'Islet station.
Freight shed, St. Romuald.
Floor and doors in baggage room at Levis.
Floor of Levis freight shed.
Ste. Anne station.
Terminal buildings, Chaudière Junction.
Flanger No. 4251.
Building office for Dominion Express Co., at Rivière du Loup.
Building porch for agent's house, DeLotbinière.
Making drain box at Ste. Rosalie.
Moving car house at St. Apollinaire.
Building pantry at St. Apollinaire.
Building waiting room in shelter at St. Edward.
Building car house at Ste. Rosalie.
Making storm doors for sectionmen's house, Aston Junction.
Making desk for St. Romuald station.
Making lorry frames at Drummondville.

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- Making coal bin, St. Apollinaire station.
- Making sink stand at DeLotbinière station.
- Making electric semaphore heads.
- Making signal ladders at Drummondville.
- Extension to station platform at L'Islet.
- Putting in new spouts, station and baggage room, Levis.
- Extension to platform, Letellier station.
- Extension to platform, St. Pacôme, and putting railing at the present one.
- Building office for accounting branch in Levis station.
- Repairs to telegraph board at Levis.
- Improvements in resident engineer's office.
- Grading to make a team track alongside loading platform at L'Islet.
- Building new cattle pen at Levis.
- Laying sidewalk in subway, Chaudière Junction yard.
- Renewing doors of Harlaka station.
- Changing sink and drain pipe in Carrier station.
- Jacking up floor in Levis station.
- Making office for Dominion Express Co. in baggage room at Levis.
- Varnishing stove pipes at St. Charles Junction, St. Romuald, St. Joseph and Carrier.
- Putting in iron beams to support engine house, Chaudière Junction.
- Extension to loading platform at Ste. Anne.
- Making cupboard and letter box in baggage room at Levis for the resident engineer.
- Making cupboard in accountant's office.
- Making new push cars and repairing old ones and hand cars.
- Excavating and blasting to lay new sidings for new cattle pen, Levis.
- Changing and repairing water pipes in agent's house, Levis.
- Laying water and drain pipes for new stock pen at Levis.
- Making whistle posts.
- Making semaphore boards.
- Making sign boards.
- Making chock blocks.
- Making siding sign boards.
- Applying materials and painting the following buildings as per contract as follows:—
- Chaudière station.
- Chaudière Junction station.
- Chaudière Junction rest house.
- Levis station, exterior.
- Levis station, umbrella sheds.
- Levis freight house.
- Harlaka station.
- St. Charles Junction station.
- St. Jean, Port Joli station.
- Ste. Louise station.
- Ste. Anne station.
- New culvert underneath road at L'Isle Verte.
- Repairs to culvert, $\frac{1}{4}$ mile west of St. Charles Junction.
- Repairs to culvert, 1 mile east of Carrier.
- Repairs to culvert, $\frac{1}{2}$ mile east of Carrier.
- Repairs to pier and west abutment of Etchemin bridge just east of St. Romuald station, reinforcing abutment with concrete.
- Repairs to culvert, 3 miles east of Montmagny.

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Repairs to culvert, $\frac{1}{2}$ mile east of Montmagny.

Lifting Trois Saumon Bridge.

Raising bridge and putting in wall plate under bridge 1 mile west of St. Jean, Port Joli.

WORK DONE ON CAPITAL ACCOUNT.

General protection of highways—

Crossing bells were installed at West of Rimouski, Rivière Ouelle, Drummondville, between Mountain and Bic.

To increase accommodation at Rivière du Loup—

A rest house and a sand house were built.

To increase accommodation at Ste. Flavie—

Changing tracks, loading platform, new freight shed, new station and piling turntable tractor.

STRENGTHENING BRIDGES.

Small spans at DeLotbinière and Villeroy.

To increase accommodation and facilities along the line—

Addition to freight shed at Rimouski.

Laurier station and addition to freight shed.

Improvements to loading facilities at Bureau's siding—

Grading.

Loading platform at Bic built.

INTERCOLONIAL RAILWAY.

OFFICE OF THE SUPERINTENDENT 2ND DIVISION.

CAMPBELLTON, N.B., May 27, 1913.

Annual report for the five months ending March 31, 1913.

TRACK.

19.36 miles of 56, 58, 67 and 80 lb. rails were taken up and replaced by 67 and 80 lbs.

TIES.

5,664 ties and 5 sets of switch ties were put in track.

BALLASTING.

'Nil.'

SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following stations:—

'Nil.'

Necessary repairs were made to all semaphores, switches and telegraph signals on the division.

SIDINGS.

.09 of a mile additional siding accommodations have been provided at different points on the division.

SESSIONAL PAPER No. 20

FENCE BUILT BY OUR OWN MEN.

'Nil.'

SNOW FENCES.

There were built during this period, 10 rods of portable snow fence, and 19 rods of stationary snow fences.

WHARF AND TRESTLES.—(Repairs.)

'Nil.'

BRIDGES AND CULVERTS.—(Repairs.)

Bartibogue bridge,	Marysville bridge,
Boiestown bridge,	Mersereaus Brook bridge,
Cross Creek culverts,	Nashwaak bridge.
Doaktown culverts,	

PAINTING BRIDGES.

'Nil.'

PAINTING BUILDINGS.

Millstream, St. Alexis.

BUILDINGS AND PLATFORMS.

Necessary repairs were made to stations and dwellings at the following places:—

Assametquaghan,	Dalhousie,	Moffats,
Astle Crossing,	Eel River,	Nepisiguit Junction,
Bartibogue,	Fredericton,	Nash's Creek,
Bathurst,	Flat Lands,	New Mills,
Belledune,	Gloucester Junction,	Nigadoo,
Berry's Mills,	Green Point,	Newcastle,
Barnaby River,	Hodgins,	Petit Rocher,
Covered Bridge,	Jacquet River,	Red Pine,
Charlo,	Kent Junction,	Rogersville,
Campbellton,	Loggieville,	St. Moise,
Chatham Junction,	Lac au Saumon,	Sayabee,
Canaan,	Little Metis,	St. Alexis,
Coal Branch,	Millstream,	Superintendent's House,
Campbellton Rest House,	Matapedia,	Trainmen's Rest House.
Doaktown,	Millnikok,	
Dalhousie Junction.	Millerton,	

Necessary repairs were made to freight sheds at the following places:—
Campbellton, Canaan, Harcourt.

The following round houses and shops were repaired:—

Blackville,	Loggieville,	Newcastle.
Gibson,	Moneton,	

Stations and loading platforms were repaired at the following places:—
Taymouth.

The following new buildings were erected:—

Gibson, store.
Campbellton, Chief Despatcher's Office,
Coal bins, Campbellton.

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GENERAL.

New buffers were made and set up at different points on the division when required and repairs made when necessary.

Repairs were made to crossings on the division at various points when required.

Glass was put in, and glazing done when necessary.

Ladders for buildings and semaphores were provided where necessary throughout the division.

Necessary repairs have been made to turn-tables when required.

Necessary repairs have been made to hand cars, trolleys, baggage trucks and wheel barrows throughout the division.

Sign boards were made and put up where required.

Boxes were made for packing second hand bolts and spikes when required.

MONCTON, N.B., April 21, 1913.

E. PRICE, Esq.,
Superintendent,
Campbellton, N.B.

DEAR SIR,—I beg to submit the following report on the work done on capital account for the fiscal year ending March 31, 1913, on No. 2 Division.

CAMPBELLTON, TO INCREASE ACCOMMODATION AT.

Station platform was completed early in the season. The subway was completed, tracks lowered and temporary stringers removed.

All tracks, grading, ballasting, etc., completed, track scale put in and heated from the engine house. Heat was also connected to the car repair shop.

DIVERSION OF LINE AT CHATHAM AND BRANCH TO WHARF.

The new line was opened for operation, November 28. Line was ballasted during the fall and partly lifted. Sidings were put in at Chatham and Nelson.

At Chatham the new station was completed as well as the permanent freight shed. A temporary freight shed was fitted up until the regular shed can be used.

At Nelson a new station with dwelling apartments for the agent was built and the old station moved over and converted into a freight shed.

A freight and passenger platform was put up at Harper's road.

The filling of Walsh's Cove for a station ground was started and about one-tenth done when work was stopped for the winter.

FREDERICTON, TO INCREASE ACCOMMODATION AT.

A concrete platform was put down around and completed with the exception of 60 feet at the west end. Track work and grading completed. Nothing done in regard to freight shed.

MONCTON, LOCOMOTIVE AND CAR SHOPS WITH EQUIPMENT AND NEW FREIGHT YARD AND CUT-OFF LINE.

Plans were made and a contract entered into with Messrs. Rhodes, Curry & Co., Limited, for the construction of an addition to the freight car repair shop. No construction work done. The Canadian H. W. Johns-Manville Co., Limited, put a cork insulating roof on the passenger car repair shop for the purpose of stopping the condensation on the interior of the roof slab. A portion of this contract amounting to \$8,076.29 is chargeable to this vote.

SESSIONAL PAPER No. 20

TO INCREASE ACCOMMODATION AND FACILITIES ALONG THE LINE.

Kempt.—A new freight shed 25 feet x 40 feet was built and occupied.

Sayabec.—A new station was built and the old station moved and converted into a dwelling for the agent.

Bel River.—An addition of 20 feet was made to the freight end of the station building.

Coal Branch.—A small addition was made to the station at the rear to provide more room in the dwelling apartment.

Respectfully submitted,

FRED. CONDON,
Resident Engineer.

The following is a statement of repairs made on 3rd Division during the period November, 1912, to March, 1913, inclusive:—

TRACK.

During the period, November, 1912, to March, 1913, inclusive, 31,496 feet of 4-inch, 4½-inch, and 5-inch rails were taken up and replaced with 4½-inch and 5-inch rails.

TIES.

During the period, November, 1912, to March, 1913, inclusive, 10,279 ordinary ties and 8 sets of switch ties were put in track.

BALLASTING.

Nil.

SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following places:

Willow Park, 1.

St. John, 2.

Amherst, 1.

The following semaphores renewed and shifted to new location:

Anagance, 1

Apohaqui, 1.

Truro, 1.

The following semaphores shifted to new locations:

Penobsquis,

Bloomfield,

Quispamsis,

Rothesay,

Maccan,

Painsec Jct.,

Calhouns,

Folleigh,

Londonderry,

Westchester,

Athol,

Windsor Jct.,

Truro.

20 new switches were installed between November and March inclusive.

Necessary repairs were made to all semaphores and switches and telegraph signals on the division.

SIDINGS.

1,733 feet of siding put in during period November to March at different places and 400 feet of siding to exhibition grounds at St. John taken up.

SNOW FENCES.

511 feet of stationary snow fences were built between Maccan and Nappan.
 500 feet of portable snow fence erected at Shediac.
 4½ miles of snow fences repaired on Folleigh Mountain.
 160 rods of N. B. wire fence erected at Moncton.

WHARFS AND TRESTLES.

Necessary repairs were made to the following wharfs and trestles:—

<i>Location—</i>	<i>Wharf or trestles—</i>
D. W. T. Halifax,	Piers Nos. 2, 3, 4, 5, 7, 8, 9, and Immigration Pier.
Willow Park,	Coal pockets erected,
Springhill Jet.,	Coal trestle.
St. John,	Long wharf,
“	Ballast wharf.

BRIDGES AND CULVERTS.

During the period November to March the following bridges and culverts were repaired:—

<i>Location—</i>	<i>Bridge or culvert—</i>
East of Belmont,	Bridge (new girder and top),
Penobsquis,	Culvert.
Scoudouc,	Culvert.
New through bridge 40 feet long put in east of Folleigh.	

OVERHEAD BRIDGES.

<i>Location—</i>	<i>Overhead bridge—</i>
St. John.	Wall street and Stanley street overhead bridge.
Lakeside.	

PAINTING (BRIDGES).

Nil.

PAINTING (BUILDINGS).

<i>Location—</i>	<i>Description—</i>
Truro yard.	Small buildings.

BUILDINGS AND PLATFORMS.

Necessary repairs were made to stations, dwellings, platforms and outbuildings on the division during the period, November to March, at the following places:—

<i>Location—</i>	<i>Location—</i>
Apoahqui.	Lakeside.
Jubilee.	Fairview.
Sussex.	Model Farm.
Anagance.	Penobsquis.
Scoudouc.	Dorchester (built new building 21 x 40 feet).
Shediac.	Dartmouth.
Pt. du Chene.	Hilden.
Truro.	Halifax and Southwestern Jct.
Alton.	Brookfield.
Windsor Junction.	Milford.
Stewiacke.	Shubenacadie.
Enfield.	Prince's Lodge.
Fall River.	
Hampton.	

SESSIONAL PAPER No. 20

During this period necessary repairs were made to outside buildings such as water closets, also hand car houses, etc.

Necessary repairs were made to the following buildings and rooms during this period at St. John:—

Tower house, Island Yard.	Train shed, St. John.
Office, King street.	Yardmaster's office, St. John.
Elevator, St. John.	Shed No. 3, St. John.
Store room, St. John.	P. O. Dept. room, St. John.
Furnace room, St. John,	Wash house, St. John.
Parcel room, St. John.	Freight Shed, No. 9, St. John.
Baggage room, St. John.	

The following buildings at Richmond and Halifax were repaired:—

Brick freight shed,	North Street station,
Stock pens, Richmond,	D. W. T. Fire Hose houses,
Car-cleaning plant,	Coal shed, Richmond,
Grain elevator,	D. A. R. shed,
Dunn's house, Willow Park,	Government House, Campbell road.
Immigration building,	Government House, Richmond,
Power house, North street,	Flour shed,
Tool house, Richmond,	Shunter's rest house.

The following buildings at Moncton were repaired during the period November to March:—

Freight office,	Rest house.
General office,	Track blacksmith shop,
Pintsch gas plant,	Coal plant.
E. Tiffin's house,	

Built three small buildings for natural gas plants.

Round houses and shops were repaired during the period at the following places:—

St. John,	Willow Park,
Moncton,	Truro.

Necessary repairs were made during the period to the following loading platforms:—

Sussex,	Shediac,
Lakeside,	D. W. terminus,
Hampton,	Enfield.

Repairs were made to crossings on the division at various places where required. Glass was put in at various places where required.

Necessary repairs were made to turntables where necessary.

FOURTH DIVISION.

I beg leave to submit the following statement of work covering repairs to track, buildings, bridges, &c., chargeable to revenue between November 1, 1912, and March 31, 1913.

TRACK.

BALLAST.

3,357 cubic yards ash ballast.

NOTE.—Above ashes from Stellarton engine-house, and distributed at bad spots along Eastern extension.

TIES.

14,372 ties put in track.
5 sets switch ties.

SWITCHES.

7 sets new split switches.

FENCES.

317 rods new wire fence.
450 feet snow fence.

SIDINGS.

600 foot siding put in at Wallace.
196 foot extension to W. P. MacNeil & Co's siding, New Glasgow.
200 foot extension added to Swift's siding, Sydney.

BRIDGES.

Following bridges and culverts repaired:

	<i>Location.</i>	<i>Division.</i>
Bridge	Middle River,	Oxford & New Glasgow,
Bridge	Grand Narrows rest pier,	Cape Breton.
Bridge	Balls Creek,	Cape Breton.
Culvert	Pomquet, east,	Eastern Extension.
Culvert	Pomquet, west,	Eastern Extension.
Culvert	Heatherton, west,	Eastern Extension.
Culvert	Afton, east,	Eastern Extension.
Culvert	Trenton,	Eastern Extension.
Culvert	Loch Broom,	Oxford & New Glasgow.
Culvert	Sydney, Lombard St.,	Cape Breton.
Trestle	Dowlings,	Cape Breton.
Trestle	MacDonalds,	Cape Breton.
Wharfs	Pictou,	Oxford & New Glasgow.
Wharf foundation . . .	Mulgrave,	Eastern Extension.

PLATFORMS.

Platform	Alma, (Ox. & N.G.)	Repaired.
Platform	Valley (Eastern)	New.

BUILDINGS.

Engine house, Stellarton, slight repairs.
Station, Stellarton, slight repairs.
Car checker's office, Stellarton, slight repairs.
Brakemen's rest-house, Stellarton, slight repairs.
Station, Heatherton, slight repairs.
Station, Sydney, slight repairs.

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Engine house, Sydney, slight repairs.
 Freight shed, Sydney, slight repairs.
 Station, Sydney Mines, slight repairs.
 Station, North Sydney, slight repairs.
 Station, Grand Narrows, slight repairs.
 Station, West Bay Road, slight repairs.
 Station, River Denys, slight repairs.
 Station, Iona, slight repairs.
 Engine house, North Sydney, slight repairs.
 Rest house, Sydney, slight repairs.
 Ash pit, Sydney, slight repairs.
 Coaling plant, Sydney, slight repairs.
 Station, West River, slight repairs.
 Station, Eureka, slight repairs.
 Station, Hopewell, slight repairs.
 Station, Ferrona Jct., slight repairs.
 Station, Lyons Brook, slight repairs.
 Station, Scotsburn, slight repairs.
 Tool house, River John, slight repairs.
 Station, River John, slight repairs.
 Water sluice, Pugwash, slight repairs.
 Tool house, Sylvester, slight repairs.
 Station, Westville, slight repairs.
 Station, Malagash, slight repairs.
 Freight shed, Pictou, slight repairs.
 Ice house, Pictou, slight repairs.
 Carpenter shop, Pictou, slight repairs.
 Station, Pictou, slight repairs.
 Engine house, Pictou, slight repairs.
 Station, Sylvester, slight repairs.
 Station, Alma, slight repairs.
 Station, Denmark, slight repairs.
 Engine house, Oxford Jct., slight repairs.
 Ash pit, Oxford Jct., slight repairs.
 Water sluice, Tatamagouche, slight repairs.
 Station, Wallace, slight repairs.
 Station, Harbour au Bouche, slight repairs.
 Station, New Glasgow, slight repairs.
 Station, Merigomish, slight repairs.
 Station, Heatherton, slight repairs.
 Station, Tracadie, slight repairs.
 Station, West Merigomish, slight repairs.
 Station, Trenton, slight repairs.
 Station, Antigonish, slight repairs.
 Station, Mulgrave, slight repairs.
 Station, Heatherton, slight repairs.
 Kitchen, Avondale, addition.
 Kitchen, Heatherton, addition.
 Kitchen, South River, addition.

MISCELLANEOUS.

Cribwork, Cape Breton.

PAINTING BRIDGES AND BUILDINGS.

Nil.

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INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE.

MONCTON, N.B., May 19, 1913.

To the Canadian Government Railways Managing Board,
Moncton, N.B.

GENTLEMEN,—I beg leave to submit the following annual report for the Maintenance of Way and Structures Department for the period from April 1 to October 31, 1912.

TRACK.

During this period 43.69 miles of 4-inch, 4½-inch, 4¾-inch and 5-inch rails were taken up and replaced with 4½ and 5-inch rails.

TIES.

During this period 590,308 ordinary ties and 249 sets switch ties were put in the track.

BALLASTING.

During this period 160 miles of track was ballasted.

SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following stations:—

Petite Rocher, 1; L'Islet, 2.

113 new switches were installed during this period.

Necessary repairs were made to all semaphores and switches and telegraph signals on the system.

SIDINGS.

During this period 5.22 miles of additional siding accommodation has been provided at the different stations on the system.

FENCES BUILT BY OUR OWN MEN.

During the period 44.59 miles of woven wire fence was built at different points on the system by our own men.

Necessary repairs were made to fences on the system during this period.

SNOW FENCES.

During this period there was built 330 rods of portable snow fence.

Necessary repairs were made to all snow fences where required.

WHARFS AND TRESTLES.

Necessary repairs were made to the following wharfs and trestles during this period:—

Ashton Junction, trestle; Nicolet, trestle; Tobins, trestle; Princes Pier, wharf; Pictou, wharf; Halifax, pier No. 1; Halifax, pier No. 2; Halifax, pier No. 3; Halifax, pier No. 4; Halifax, pier No. 5; Halifax, pier No. 6; Halifax, pier No. 7; Halifax, pier No. 8; Richmond, quay wall; Point Tupper, wharf at old transfer; St. John, long wharf; St. John, breakwater at Courtenay Bay; Point du Chene, wharf; Dorchester, wharf; Antigonish, trestle; Stellarton, trestle; Gibson, wharf; Mulgrave, wharf; Point Tupper, temporary trestle for loading coal; Mill Brook, trestle; North Sydney, wharf.

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BRIDGES AND CULVERTS.

During this period the following bridges and culverts were repaired:—

Folleigh, bridge; St. Leonard, culvert; Montmagny, bridge; Montmagny, culvert; St. Romuald, bridge, St. Luce, culvert; Tobins, overhead bridge; Moncton, subway; Brownells, aboideau; Crowsens, aboideau; Morris Dump, culvert; Grand Narrows, culvert; Grand Narrows, bridge; Duncan, culvert; Daveluyville, bridge; Barnaby River, bridge; Barnaby River, culvert; Robinsons, under crossing; Memramcook, bridge; Memramcook, culvert; Mill Brook, bridge; Nicolet, culvert; Isle Verte, culvert; Dalhousie, culvert; Nipisiguit, culvert; Lutes Siding, culvert; Boundary Creek, culvert; Scoudouc, culvert; Scoudouc, bridge; Folleigh, culvert; Londonderry, culvert; Pictou Harbour, bridge; Ashton Junction, culvert; St. Anne, bridge; 'Old Lake Road, culvert; Boiestown, bridge; East Mines, culvert; Salt Springs, culvert; Upper Dorchester, culvert; Richmond, culvert; Gillis Cove, culvert; Manseau, bridge; Rivière du Loup (wharf branch), bridge; St. Pascal, bridge; Newcastle, culvert; Dickies Siding, culvert; Shediac, bridge; St. John, bridge (Stanley st.); River Philip, culvert; Springhill Junction, culvert; Athol, culvert; Sackville, culvert; Fort Lawrence, culvert; Hallawell Grant, culvert; East River, bridge; Trenton, culvert; Piedmont, culvert; Beaver Cove, bridge; St. Apollinaire, culvert; St. Leonard, culvert; St. Charles Junction, bridge; Trois Saumons, culvert; L'Islet, bridge; St. Philippe, culvert; Benjamin River, bridge; Blackville, bridge; Blackville, culvert; Middle River, bridge; Wallace, bridge; Merigomish, culvert; Avondale, culvert; Heatherton, culvert; Orangedale, culvert; Mitchell, culvert; St. Rosalie, culvert; DeLotbinière, culvert; Rivière Ouelle, bridge; Cedar Hall, culvert; Frosty Hollow, culvert; Palmer's Pond, culvert; Horns, bridge; Little River, bridge; Bayfield, culverts.

OVERHEAD BRIDGES.

During this period the following overhead bridges were repaired :

Proberts,	Overhead Bridge.
Dickies Siding,	“ “
Bathurst (West of)	“ “
Bathurst (East of)	“ “
Otty's,	“ “

BUILDINGS AND PLATFORMS.

Necessary repairs were made to stations, dwellings and out-buildings on the system during the year at the following places.

<i>Location.</i>	<i>Location.</i>	<i>Location.</i>
Amherst,	East Mines,	Maccan,
Avondale,	Elm Tree,	Merigomish,
Assametquaghan,		Millerton,
Alma,	Fairview,	Model Farm,
Antigonish,	Fredericton,	Mulgrave,
Aulac,	Folleigh,	Montmagny,
Athol,	Flat Lands,	Manseau,
Amqui,	Fairvale,	Meadowville,
Adamsville,	Fitzpatrick's Siding,	
Apohaqui,	Ferrona Jet.,	New Mills,
		Newcastle,
Bathurst,	Gibson,	Nappan,
Beresford,	Grand Narrows,	Nicolet,
Bayfield road,	Green Point,	New Glasgow,
Barney's River,	Gloucester Jet.,	North Sydney,

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<i>Location.</i>	<i>Location.</i>	<i>Location.</i>
Bartibogue,	Jubilee,	Quispamsis,
Belledune,	James River,	Quebec,
Berry's Mills,	Jacquet River,	
Browses Point,		Rivière Ouelle.
Boisdale,	Kent Jct.,	Rivière du Loup,
Bagot,	Kempt,	Rogersville,
Bic,		River John,
Bloomfield,	Levis,	Rimouski,
Beau Rivage,	Lourds,	Riverton,
Belmont,	L'Islet,	River Philip,
Barachois,	Laurier,	Red Pine,
Brown's Point,	La Durante,	Rothsay,
Boiestown,	Lemieux,	Renforth,
	Lyons Brook,	
Campbellton,	Little Metis,	St. Cyrille,
Cap St. Ignace,	Londonderry,	St. Vallier,
Cacouna,	Lac au Saumon,	St. Arsene,
Chatham Jct.,	Lakeside,	St. John,
Cross Creek,	Loch Broom,	St. Appolinaire,
College Bridge,	Loggieville,	Springhill Jct.,
Causapsca,		Sackville,
Coal Branch,	Millstream,	Shubenacadie,
Canaan,	Metapedia,	Stellarton,
Conns Mills,	Moncton,	Sydney,
Carrier,	Memramcook,	St. Anne,
Chaudiere Jct.,	Mitchell,	St. Charles,
Calhouns,	Moffatts,	St. Pascal,
Calligans,		St. Fabien,
Chaudiere Curve,	Nashes Creek.	Salt Springs,
Cedar Hall.	Nigadoo,	St. Anaclet.
	Nauwegewauk,	St. Luce,
Derby Jct.,	North Sydney Jct.,	Sayabec,
Dorchester,	Nipisiguit Jct.,	St. Moise,
DeBert,		Salisbury,
DeLotbinière,	Old Lake Road.	St. Francois,
Daveluyville,	Oxford Jct.,	Ste. Flavie,
Dalhousie,	Onslow,	St. Simon,
Dalhousie Jct.,	Oxford.	St. Octave,
Denmark,	Orangedale.	St. Jean Port Joli.
Drummondville.		St. Romuald.
	Penobsquis.	Sussex,
Glen Emma,	Painsec,	St. Eugene.
	Pictou,	St. Leonard.
Halifax,	Point Tupper.	Scotsburn,
Harbour au Bouche.	Point du Chene,	St. Helene.
Hampton,	Plumweseep,	South River,
Harlaka Jct.,	Passekeag.	St. Jean Chrysostome,
Hadlow,	Petitcodiac.	St. Germain,
Heberts,	Pugwash Jct.,	St. Eloi,
Harcourt,	Pictou Landing,	Sydney Mines.
Heppers Siding.	Petit Rocher.	St. Perpeture.
	Pomquet,	St. Joseph,
Isle Verte,		St. Andre,

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<i>Location.</i>	<i>Location.</i>	<i>Location.</i>
St. Alexandre, Shediac, Springhill,	Tatamagouche, Tracadie, Thomson, Trenton,	Waverley, Windsor Jct., West Bay Road, Westville, Wallace.
Truro, Trois Pistoles, Turgeon,	Upper Dorchester,	Wentworth.

During this period necessary repairs were made to all out-buildings such as water closets, hand car houses, coal houses, tanks, etc.

Necessary repairs were made to the following buildings, etc., this period at St. John:—

Coal pockets,
Train shed,
Sheds Nos. 1, 2, 5, 7, 8, 9, 13,
Elevator,
Coachman's shanty,
Baggage room,
Round house,
Freight building,
Station.

The following buildings at Richmond and Halifax were repaired:—

Sheds Nos. 2, 3, 4, 8, 9,
Coal Pockets,
Yard delivery office,
D. A. R. freight shed,
Grain elevator and conveyor,
North street station,
North street power house,
Station—Richmond,
Carpenter shop—Richmond.
Trainmen's shelter—Richmond.
Cattle shed—Richmond,
Train shed,
Round House (Willow Park),
Dwellings on Campbell Road,
Dunn's House,
Stock pens,
Brick freight shed,
Car cleaning plant,
Track scales,
Switchman's house.

The following buildings at Moncton were repaired during this period:—

New shops.
Ice house and platform.
Yard office.
Freight house.
Station and platform,
Cattle shed.

Car washers building.
 Engine house.
 Government cottages (Main St. and Bridge St.).
 Rest house.
 Electric plant.

Round houses and shops were repaired during this period at the following places:—

Amherst,	Point du Chene.
Campbellton,	Rivière Ouelle,
Chaudiere Jct.,	Rivière du Loup,
Dalhousie,	St. John,
Gibson,	Springhill Jct.,
Halifax,	Stellarton,
Moncton,	Sydney,
Newcastle,	Sussex,
Oxford Jct.,	Ste. Flavie,
Pictou,	Springhill.

Necessary repairs were made during this period to the following loading platforms:—

Dorchester,	Nappan,
Drummondville,	Oxford,
Fitzpatrick's,	Pictou,
Halifax	River John,
L'Islet,	Sayabec,
Londonderry,	St. Simon,
Loggieville,	Shediac,
Meadowville,	St. John.

PAINTING—(BRIDGES).

During the year the following bridges were painted.

Location of Bridge—Description of Work.

Barnaby River, double deck lattice girder painted.
 Bedford, three spans painted.
 Belmont, painted.
 Barney's River, painted.
 Breakey's Siding, 8 rolled beams painted.
 Baxter's Bridge, painted.
 Bennet's River, deck plate girder painted.
 Cross Creek, deck plate girder painted.
 Calvary River, painted.
 Cedar Swamp, 4 floor beams painted.
 Cedar Hall (East of), 1 rolled beam painted.
 Durham, deck plate girder painted.
 Dewar's Mills, painted.
 Elmsdale, painted.
 Grand Narrows, painted.
 Groom's Cove, deck plate girder painted.
 Hammond River (near Jubilee), 3 spans painted.
 Isle Verte (East of), 4 rolled beams painted.
 James River, painted.
 Jacquet River, 3 spans painted.
 Little Forks, double lattice girder painted.

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Lydia Brook, painted.
 L'Anse à Giles (East of), 8 rolled beams painted, and 1 deck plate girder painted.
 McBeans, painted.
 Nashes Creek, through plate girder painted.
 North Branch Charlo, 3 spans painted.
 Oulton's, painted.
 Penniac, 1 deck plate girder painted.
 River Inhabitants, painted.
 Rivière Ouelle, deck plate girder painted.
 Soddon River, painted.
 South Branch Charlo, 2 spans painted.
 Shubenacadie, painted.
 Sutherland's River, painted.
 South River, painted.
 St. Romuald (Under crossing), through plate girder and metal floor painted.
 St. Joseph (East of), through plate girder painted.
 St. Joseph (West of), through plate girder painted.
 St. Louise (East of), deck plate girder painted.
 St. Anne (East of), deck plate girder painted.
 St. Moise (East of), rolled beam.
 Trois Saumons (West of), 4 deck plate girders.
 Union, painted.
 West Branch Montmagny, double through plate girder painted.

PAINTING (BUILDINGS).

Location of Station, &c.—Description of Work.

Alton, station, exterior and interior.
 Alba, station, exterior.
 Alba, freight shed, exterior.
 Aulac, station, exterior.
 Aulac, freight shed, exterior.
 Adamsville, station, exterior and interior.
 Afton, station, exterior.
 Afton, out buildings, exterior.
 Bedford, station, exterior.
 Barra Glen, shelter, exterior.
 Beaver Cove, shelter, exterior.
 Brown's Point, station, exterior and interior.
 Boiesdale, station, exterior.
 Bagot, tank, exterior.
 Barnaby River, freight shed, exterior.
 Berry's Mills, station, exterior and interior.
 Barney's River, station, exterior.
 Bayfield, station, exterior.
 Bayfield, freight shed, exterior.
 Charlotte, shelter, exterior.
 Charlotte, tank, exterior.
 Causapsal, station, exterior and interior.
 Coal Branch, station, exterior.
 Coal Branch, freight shed, exterior.
 Chaudière, station and w.c., exterior.
 Chaudière, freight shed, exterior.

Chaudière Jet., station, exterior and interior.
Chaudière Jet., rest house, exterior.
Chaudière Jet., umbrella roof, exterior.
Chaudière Jet., coal and oil sheds, exterior.
Chaudière Jet., covered platform, exterior.
College Bridge, dwelling, exterior.
Dartmouth, station, interior.
DeLotbinière, tank, exterior.
DeBert, station, exterior.
Enfield, station, exterior.
Eureka, station, exterior and interior.
Elgin Road, station, exterior.
Elgin Road, freight shed, exterior.
Eel River, station, exterior.
Eel River, agent's dwelling, exterior.
Fairview, station, exterior.
Ferrona Junction, station, exterior and interior.
Flatlands, station, exterior and interior.
Flatlands, freight shed, exterior.
Folleigh, station, exterior.
Halifax, grain elevator, exterior operations.
Hopewell, station, exterior.
Hadlow, station, exterior.
Harlaka Junction, station, exterior and interior.
Harlaka Junction, freight shed, exterior.
James River, station, exterior.
Kent Junction, station, exterior.
Kent Junction, freight shed, exterior.
Leitches Creek, station, exterior.
L'Anse à Giles, station, exterior.
L'Anse à Giles, freight shed, exterior.
Lavergne, station, exterior.
Lavergne, freight shed, exterior.
Lac au Saumon, freight shed, exterior.
Lac au Saumon, station, exterior.
Lac au Saumon, coal and oil sheds, exterior.
Levis, station, exterior and interior.
Levis, umbrella roof, exterior
Levis, freight sheds, exterior.
Levis, agent's house, exterior.
Levis, superintendent's house, exterior.
Lansdowne, station, exterior.
Lansdowne, dwelling, exterior.
Little Metis, tank, exterior.
Lorne, station, exterior.
Moncton, station (2nd floor), interior.
Milford, station, exterior.
Murray's, flag station, exterior.
Montmagny, station, exterior and interior.
Millstream, station, exterior and interior.
Millstream, tank, exterior.
McKays, station, exterior.
Merigomish, station, exterior.
Merigomish, out buildings, exterior.
Mines Road, station, exterior.

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Model Farm, station, exterior.
Nauwegewauk, station, exterior.
Nappan, station, exterior.
New Glasgow, storehouse, exterior.
Orangedale, station, exterior.
Orangedale, freight shed, exterior.
Ottawa Brook, shelter, exterior.
Old Lake Road, freight shed and w.c., exterior.
Pugwash Junction, station, exterior.
Pictou Landing, station, exterior.
Petitcodiac, freight shed, exterior.
Plumweseep, comb. station and freight shed, exterior.
Passakeag, comb. station and freight shed, exterior.
Richmond, station, exterior.
Richmond, dwelling, exterior.
Richmond, shed No. 8, exterior.
Rothesay, station, exterior.
River Philip, station, exterior and interior.
Rockingham, station, exterior.
Riversdale, station and roof, exterior.
Renforth, shelter, exterior.
Rivière Ouelle, baggage room, exterior.
Rivière Ouelle, coal shed, exterior.
St. Philip de Neri, freight shed, exterior.
St. André, freight shed, exterior.
St. Valier, freight shed, exterior.
St. Pierre, tank, exterior.
Ste. Rosalie, tank, exterior.
St. George, freight shed, exterior.
St. Edward, freight shed, exterior.
Salt Springs, station, exterior.
St. Jean Chrysostome, station, exterior.
St. Jean Chrysostome, tool house, exterior.
St. Jean Chrysostome, coal shed, exterior.
Ste. Hélène, station and w.c., exterior.
Ste. Hélène, freight shed, exterior.
Ste. Hélène, tank, exterior.
Sussex, pump house, exterior.
St. Alexandre, station, exterior.
St. Alexandre, freight shed, exterior.
St. Moise, station, exterior and interior.
St. Alexis, station, exterior and interior.
Salisbury, station, exterior.
Salisbury, freight shed, exterior.
St. John, elevator conveyor and bents.
St. John, freight sheds No. 7-9, exterior.
St. John, 5 offices in freight sheds, exterior and interior.
St. John, Island Yard office, exterior.
St. John, cattle shed (I. Y.), exterior.
Sydney, umbrella roof, exterior.
St. Charles Junction, station, exterior.
St. Charles Junction, freight shed, exterior.
St. Jean Port Joli, station, exterior.
St. Jean Port Joli, freight shed, exterior.
St. Jean Port Joli, coal shed, exterior.

Ste. Louise, station, exterior.
 Ste. Louise, freight shed, exterior.
 Ste. Anne, station, exterior.
 Ste. Anne, freight shed, exterior.
 St. Apollinaire, tank, exterior.
 Trois Pistoles, station, exterior.
 Trois Pistoles, freight shed, exterior.
 Trois Pistoles, tank, exterior.
 Tracadie, station roof, exterior.
 Turgeon, combined station and freight shed, exterior.
 Trois Saumon, freight shed, exterior.
 Upper Dorchester, station, exterior.
 Valley, station, exterior.
 Windsor Junction, station, exterior.
 Wellington, station, exterior.
 Westville, station, exterior.
 Wallace Bridge, station, exterior.
 West River, station, exterior.
 Wentworth, station, exterior.
 Wentworth, freight shed, exterior.

The following buildings were built or repaired to replace buildings destroyed or damaged by fire during this period:

Station, Sydney.
 Flour shed roof, St. John.
 Station, Newcastle.
 Agent's dwelling, Gibson.
 Terminals, Point Tupper.
 Station, Millerton.
 Tank, St. Fabien.
 Coal shed and cattle pen, Trois Pistoles.
 Inspector's shanty, Halifax.
 Section shanty, Halifax.
 Power house, Willow Park.

GENERAL.

Gates and cattle guards were repaired throughout the line, where required.
 Repairs were made to crossings on the line at various places, where necessary.
 Sign boards were made and put up where required.
 Boxes were made for packing second-hand bolts and spikes, when necessary.
 Ladders for buildings and semaphores were provided when necessary throughout the line.
 Necessary repairs were made to turn-tables, where required.
 Glass was put in and glazing done where necessary.
 Semaphores, switches and telegraph signals have been painted throughout the line.
 Necessary repairs were made to hand-cars, trollies, baggage trucks and wheelbarrows, throughout the line.
 Necessary repairs were made to steam shovels, steam cranes and pile drivers, &c.
 Book cases and desks were repaired and painted.
 Ash pits were repaired, where required.
 It gives me great satisfaction, to be able to say that the road, &c., has never been in better condition than during this period.

Yours truly,

T. C. BURPEE,

Engineer of Maintenance.

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INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,

MONCTON, N.B., May 19, 1913.

To the Canadian Government Railways Managing Board,
Moncton, N.B.

GENTLEMEN,—I beg leave to submit the following report for the Engineer of Maintenance Department for the period from November 1, 1912, to April 30, 1913.

The following list of capital work was taken over and supervised regarding details, plans, estimates, specification and inspections:—

LOCATION AND DESCRIPTION OF WORK.

Chatham, freight house; Chatham, drain pipe new yard; Chatham, right of way; Chatham, ballasting; Chatham, station; Chatham, station platform; Campbellton, station; Cape Breton, survey, engineering; Fredericton, freight shed; Fredericton, station; Glebe House Cove, bridge; Halifax, coal plant; Halifax, ash plant; Halifax, remodelling Richmond yard; Halifax, freight shed Richmond; Halifax, pier No. 7 Richmond; Mulgrave, steel bridge and floor; Moncton, freight yard and cut-off; Moncton, addition to freight car repair shop; Moncton, addition and furnishing offices; Moncton, grade revisions through city; Nelson, station; Point Tupper, station; Point Tupper, apartment house; Point Tupper, sand house; Point Tupper, coal pocket; Point Tupper, turntable; Point Tupper, engine house; Rivière du Loup, sand house; Rimouski, addition to freight shed; Ste. Flavie, station; Ste. Flavie, freight shed; Stellarton, engine house; St. John, coal pockets; Sydney Mines, diversion; Truro, station; Truro, turntable; Wallace Harbour, spur line.

The following list of bridges were renewed in part chargeable to capital:—

Assametquaghan,	St. Rosalie Junction,
Bagot,	St. Simon,
Beau Rivage,	St. Fabien,
Cedar Hall,	St. Moise,
Chaudiere Junction,	Sayabec,
Daveluyville,	Villeroy,
Glencoe,	Val Brilliant,
Holmes,	West River,
Harcourt,	Lemieux,
Isle Verte,	Lac au Saumon,
Rimouski,	Mill Stream,
St. Josephs,	Moncton (St. George st.),
Sacre Cœur,	Memramcook,
St. Pauls,	Moffats.
St. Luce,	

GENERAL.

During the month of November the track blacksmith shop repaired steam shovels, ditches, rotary ploughs, cranes, ledgewood unloader, ballast cars, aprons, &c.

Repairs were also made to Point Tupper transfer and S. S. Scotia.

Statements were prepared in answer to questions of the House.

A complete history of all the employees in the M. of W. & S. Department was prepared for transfer to Divisional Superintendents.

Considerable supervision was given to buildings and grounds, bridges, trestles and culverts and docks and wharfs.

Plans and estimates were prepared in connection with the appropriation for the year 1913-1914.

Yours truly,

T. C. BURPEE,

Engineer of Maintenance.

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INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL ACCOUNTANT,

MONCTON, N.B., June 16, 1913.

SIR,—I beg to submit the following information for the annual report for the fiscal year ended March 31, 1913.

A.—Statement showing the number of locomotives and the different classes of other rolling stock on the line.

B.—Statement showing the mileage made, and the coal, oil, grease and waste consumed by locomotives.

Also a summary of the principal work done in the shops at Moncton, Halifax and Rivière du Loup.

The following rolling stock was purchased:

On Capital account,—

- 2 sleeping cars.
- 1 dining car.
- 2 first class passenger cars.

173 box cars.

50 platform cars.

20 Hart-Otis steel dump cars.

10 stock cars.

On Renewals accounts (revenue)—

23 locomotives (19 freight and 4 switching).

2 sleeping cars.

1 dining car.

5 first class passenger cars.

2 postal cars.

662 box cars.

35 refrigerator cars.

100 platform cars.

1 oil tank car.

50 Hart-Otis steel dump cars.

10 stock cars.

1 snow plough.

Nine of the freight locomotives, which are among the most modern type, replaced twenty-five (25) old small type locomotives condemned, the nine (9) having a tractive power of 343,680 lbs. or 32,862 lbs. in excess of the (25) twenty-five.

182 box cars, 100 platform cars, 1 oil tank car, 5 stock cars, and 1 snow plough, replaced the same number condemned.

The 80 Hart-Otis steel dump cars replaced 16 15-ton and 7 6-ton Hoppers, 66 20-ton coal cars, and 12 15-ton Gondolas, or 101 cars in all, condemned.

The 80 having a capacity exceeding the 101 by 1,418 tons.

The following cars were rebuilt in the shops at Moncton on renewals account (revenue):—

2 colonist cars.

3 platform cars.

One (1) of the colonist cars replaced No. 504 condemned and the three (3) platform replaced the same number condemned.

One (1) motor car was converted into a first-class and baggage car, three (3) postal cars were changed from postal and smoking to postal and express, and the two (2) postal cars were fitted with the pintsch gas lighting system.

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The following cars are under construction in the Moncton shops on renewals account (revenue):—

- 28 vans.
- 150 box cars.
- 1 Flanger.
- 20 box baggage.

The following work equipment was taken over from the Maintenance of Way Department:—

- 3 steam cranes.
- 1 ditcher.
- 1 steam derrick.
- 3 steam shovels.
- 1 portable rail sawing and boring machine.
- 1 pile driver.

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

J. J. WALKER,
Mechanical Accountant.

G. R. JOUGHINS, Esq.,
Superintendent of Motive Power, I.R.C.,
Moncton, N.B.

The following work was done in the car department during the year:—

- 3 platform and 2 colonist cars rebuilt.
- 1 motor car was converted to combined first class and baggage.
- 3 postal cars were changed from postal and smoking to postal and express.
- 2 postal cars were equipped with the Pintsch gas lighting system.

The following rolling stock received general repairs:—

- | | |
|----------------------|----------------------|
| 582 freight cars. | 79 vans. |
| 34 snow ploughs. | 6 flangers. |
| 1 pile driver. | 4 auxiliary cars. |
| 3 box baggage cars. | 17 first class cars. |
| 2 colonist cars. | 5 sleeping cars. |
| 7 postal cars. | 1 parlour car. |
| 8 second class cars. | 5 baggage cars. |
| 2 dining cars. | 1 official car. |

The following cars received medium repairs:—

- | | |
|--|------------------|
| 1 official. | 1 motor. |
| 18 colonist. | 56 first class. |
| 23 sleeping. | 10 postal |
| 24 baggage. | 29 second class. |
| 8 vans. | 9 parlour. |
| 694 freight cars. | 2 store cars. |
| 14 hopper cars had coupler clearance adjusted. | |

The following cars received light repairs:—

- | | |
|--------------|----------------------|
| 36 sleeping. | 119 first class. |
| 28 colonist. | 59 second class. |
| 34 baggage. | 11 dining. |
| 31 postal. | 1 motor. |
| 12 vans. | 2 parlour. |
| 1 auxiliary. | 13,953 freight cars. |

The following cars were burnt off, painted, lettered and varnished:—

5 sleeping.	13 first class.
2 dining	2 second class.
1 colonist.	1 baggage.

The following cars were cleaned, cut in, and varnished:—

23 sleeping.	3 dining.
8 parlour.	63 first class.
34 second class.	20 colonist.
17 postal	29 baggage.
4 box baggage.	2 auxiliary.

The following rolling stock was painted, lettered, varnished, &c.:—

17 vans.	124 engines and tenders.
9 snow ploughs.	42 refrigerator.
1 well boring car.	9 flangers.
106 box cars.	1 steam shovel.
2 ash cars.	89 flat cars.
18 Hart-Otis steel dump cars.	1 Hart convertible.

1,185 freight cars were relettered and touched up.

A large number of articles were painted and lettered, such as ladders, wheel barrows, gangways, freight trucks, baggage trucks, window sashes, doors, smoke stacks, safes, sign boards, desks, chairs, stools, stepping boxes, tool and outfit boxes, &c., &c.

A large amount of work was done on the new wing of the General Office building, and the old part of the same building was cleaned and renovated.

Cabinet Shop.

The following articles were made:—

6 card racks.	20 packing cases.
6 outfit boxes.	36 pictures and mirror frames.
4 passenger car doors.	8 vestibule doors and frames.
43 window sashes.	70 car seats, bottoms, backs and rests.
23 candle boxes.	19 meat and bread boards.
61 panels.	141 car step ends.
73 hammer handles.	1 car platform.
28 four tread car steps.	68 large cases, for General Offices vaults.
1 ice chest.	24 sash openers.
5 letter cabinets.	14 large filing cases for General Offices.
12 ladders.	5 pigeon-holed cases, single for General Offices.
5 nest of drawers, small.	44 shelves, for General Offices.
2 nest drawers, large for General Offices.	3 car berths.
4 pigeon-holed cases, double for General Offices.	40 desk sashes.
5 filing boards.	3 tool chests.
5 large partitions for General Offices.	1 large walnut lounge.
7 panel doors.	10 wardrobes, large for General Offices.
12 skirt boards.	6 van desks.
43 stepping boxes.	6 head boards.
6 telephone boxes.	17 large travelling ladders.
1 van door.	14 high benches.
8 window reflectors.	9 wash basin fronts.
3 large bookcases.	
12 hopper tops.	

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3 stools.	5 tables.
9 sliding doors.	5 window screens.
2 sets of screen doors and jams.	5 large assorting tables.
4 large pulleys.	5 large desks.
2 large foot rests.	5 large bulletin boards .

The following articles were repaired:—

8 office doors.	1 car side door.
7 stools.	3 car racks.
7 cabinets.	6 ticket cases.
28 desks.	71 chairs.
3 desk tops.	16 closet partitions.
2 kitchen lockers.	4 book cases.
2 packing grates.	3 tables.
2 ladders.	1 wringer.
1 office safe rebuilt.	1 large timetable rack.
10 wash basin tops.	

There was also a large amount of work done on the fittings for the two colonist cars rebuilt, for converting three postal and smoking cars into postal and express, and for converting the motor car into combined first class and baggage car, also in equipping sleeping cars with new steam pipes and pillow boxes.

Freight Car Repair Shop.

- 204 new roofs were applied to freight cars.
- 253 freight cars were fitted with the uncoupling device.
- 97 new freight car trucks were built.
- 3 sterlingworth trucks were re-enforced.
- 45 cars were lined for potatoes.

Upholstering Shop.

18 first class cars received heavy repairs, such as renewing the upholstery, blinds, carpets, mattresses, &c.

7 first class cars received medium repairs, as follows:—Seats and backs washed, mattresses air blown, seats, backs and blinds partly renewed and repaired.

52 first class cars received light repairs, as follows:—Seats, backs, mattresses, carpets, wicker chairs air blown, and patching and repairs inside.

- 192 cab seats and backs were made.
- 1,014 cab curtains were made.
- 224 van cushions were made.
- 72 hose bags were made.
- 28 mattresses and pillows were made.

A large number of small jobs were also done repairing office chairs, and desks, vestibule curtains, seats and backs, window blinds, &c.

Woodworking Mill.

- 551 brake beams were made.
- 1,387 buffer blocks were made.
- 1,522 draft timbers were made.
- 488 truck sides were made.
- 461 truck bolsters were made.
- 704 spring boards were made.
- 94 pilots were made.
- 3,304,248 feet of lumber milled.
- 1,348 stores orders for articles for outside stores and other departments were completed.

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The following is a report of the work done in Locomotive Department at Moncton, during the year.

Erecting shop—

- 15 locomotives were partly rebuilt.
- 75 locomotives received general repairs.
- 34 locomotives received heavy repairs.
- 40 locomotives received light repairs.

Blacksmith shop—

2,307,053 lbs. iron forgings were made which includes, 1,218,244 lbs. bolts and 246,800 lbs. nuts. 966,398 lbs. steel forgings were made.

Boiler shop—

- 29,451 tubes were applied.
- 24,050 tubes were cleaned.
- 28,611 tubes were pieced.
- 56 side sheets were made.
- 28 door sheets were made.
- 28 tube sheets were made.
- 76 fire boxes were patched.
- 11 tender frames were made and 101 repaired.
- 154 locomotive smoke stacks were made and 40 long stacks.
- 24 oil pans were made.
- 67 ash pans were repaired and 31 made.
- 3 tender tanks were made.
- 96 tender tanks were repaired.
- 2,256 wheels were rivetted.
- 9 tender bolsters were made and 96 repaired.
- 85 sterlingworth trucks were repaired.
- 14 tenders were rebuilt.
- 59 front ends were made.
- 175 ash pan slides were made.
- 10,500 copper ferrules were made.
- 1,241 patch bolts were applied.
- 2,303 lbs. rivets were made.
- 96 petitcoats were made.
- 50 smoke box door liners were made.
- 1 snow plow was ironed.
- 15 steel cabs were applied.
- 30 ash buckets were made.
- 40 coal buckets were made.
- 84 boilers were tested.
- 3 water service boilers were repaired and tested.
- 200 scrapers were made.
- 1 crane boom was rebuilt.

Pattern shop—

The following patterns were made and repaired:

- 183 for cast iron were made, 104 repaired and 15 altered.
- 64 for steel were made, 87 repaired and 23 altered.
- 82 for brass castings were made and 76 repaired.
- 19 for malleable were made and 28 repaired.

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Brass foundry—

The following was the output of this shop:

- 433,357 lbs. brass bearings.
- 63,751 lbs. brass castings.
- 55,701 lbs. antimonial lead.
- 21,192 lbs. babbitt metal.
- 307 lbs. metallie packing.

Brass turning shop—

- 280 air gauges, 900 air hammers, and 275 air pumps were repaired.
- 450 lubricators were repaired.
- 550 beading tools were repaired.
- 55 brake cams were made.
- 225 brake cam nuts were made, 475 screws were made.
- 36 bell ringers were made.
- 100 sets of dies were made.
- 400 cylinder cocks were made.
- 12 blow-off cocks were made.
- 94 gauge glass cocks were made.
- 72 try cocks were made.
- 30 tender cocks were made.
- 290 engine brasses were made.
- 100 flag staff casings were made.
- 125 hydraulic jacks and 60 bottle jacks were repaired.
- 200 heater regulators were repaired.
- 500 injectors were repaired.
- 50 injector check valves were made.
- 800 oil cups were made.
- 175 pumps governors were made.
- 200 reamers were made.
- 12 steam chest release valves and 24 nipples were made.
- 600 steam gauges were repaired.
- 200 taps were made.
- 150 tube cutters were made.
- 150 wheel defect gauges were made.

In addition to the above there was a large amount of work done for the cars in the car shops and on orders for outside points, as well as for all the pump governors, heater regulators, air and brake cylinders, engine valves and boiler mountings for all the engines that went through the shops.

Tin and copper shop—

- 10,115 W. A. B. Couplings were fitted to new air hose.
- 4,968 couplings were fitted to signal and steam hose.
- 18,074 bushes were lined.
- 1,031 bushes were relined.
- 195 headlights and 250 reflectors were repaired.
- 28 tank delivery pipes were made and 42 repaired.
- 1,073 switch lamps were repaired and painted.
- 142 tail lamps were repaired and painted.
- 108 signal lamps were repaired and painted.
- 22 station lamps were repaired and painted.
- 56 hand lamps were repaired.
- 19 cab lamps were made.

- 464 perforated plates were made.
- 272 oilers were made and 247 repaired.
- 21 oil pumps and 6 oil tanks were repaired.
- 30 valve oil pots were made.
- 700 tin oil cup covers were made.
- 36 water cans were made and 120 repaired.
- 180 steam gauge lamps were made and 90 repaired.
- 26 water gauge lamps were made and 34 repaired.
- 47 shop lamps were made and 200 repaired.
- 101 lamp fronts were made.
- 17 coal boxes were made.
- 156 stove bases were made.
- 4 sinks were made.
- 6 ice boxes were made.
- 61 drip pans were made.
- 80 gauge glass shields were made.
- 4,000 sets valve stem packing and 3,600 sets metallic packing were made.
- 56 corner plates were made.
- 203 economy heaters were repaired.
- 110 pipe oil cups were made.

Repairs, alterations, renewals were made to copper pipes, steam pumps, lubricators, copper joints on steam chests, domes and cylinder covers, driving and truck boxes, and Westinghouse air brake pipes.

Lagging was all removed, repaired and replaced on 161 engines.

118 tenders were equipped with train line pipes for signal air and steam, and all water pipes were overhauled and repaired.

Repairs were made to wash basins, taps, water closets, lamps, brass work, piping, &c., on 201 passenger and baggage cars, 60 parlour, sleeping and dining cars, and 1 official car.

General repairs were given to the piping, sinks, &c., on 3 auxiliary cars, 28 vans, 26 refrigerator cars, 8 shanty cars, 1 bridge car, 2 tool cars, 43 potato cars, 1 milk car, and 1 store car.

Extensive repairs were made to the heating and plumbing system in the General Offices Building at Moncton, and the Yard Office.

Traffic Manager's Cottage, car cleaning building, rest room, Moncton Station; Car Mileage Office, Nelson Station; New Shops and Offices, Springhill Jet. Station; Campbellton Station; Yard Scales, Amherst Station; Roundhouse, Moncton; Assistant Chairman's Cottage, Loggieville Station; Sackville Station; Sussex Station; Chatham Jet. Station; Newcastle Station; Hampton Station; Point Du Chene Roundhouse.

New water service pipes were put in at Canaan, Coal Branch, Mulgrave, Bartibogue and Dorchester Stations and Janitor's Cottage, Moncton.

New heating system was installed in the General Offices Building, also all the pipe fitting and plumbing.

Repairs were made to all the gutters on the new shops and other buildings at the new works.

New closets were installed at Newcastle station.

All the stoves and pipes were repaired and put up in the different stations between St. John and Halifax, Indiantown, Dalhousie and Dartmouth Branches, Loggieville and Fredericton, Moncton and Campbellton.

The steam pipes at the Pintsch Gas Plant were overhauled and repaired, also the heating pipes in the Track Blacksmith shop.

Sand Drier at Amherst was rebuilt and a large amount of work was done on piping for the S.S. *Scotia*.

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The card racks for time clocks were repaired and a number of holders were added.

70 sheets of galvanized car roofing were repaired for the Car Department and 68 covers were made for copper cans and kettles of dining cars.

Four low down closets were installed in Moncton Station and the old one removed.

The old conductor pipes were removed from the Freight House at Moncton and new pipes put on.

And a large amount of work done in connection with the changing of the piping of the Ice House extension.

Tender Shop—

- 104 wooden cabs were repaired.
- 45 cab doors were made and 229 sashes were made.
- 3 tender tanks were lengthened, 55 received general and 60 heavy repairs.
- 222 valves were repaired.
- 200 valve spindles were repaired.
- 211 running boards were made and 106 were repaired.
- 49 front beams and 29 back beams were made.
- 807 side curtains were made.
- 254 cab seats were made.
- 118 headlight bases were made and 48 were repaired.
- 650 hammer handles were made.
- 2,404 sledge handles were made.
- 60 wrench handles were made.
- 115 mallets were made.
- 251 switch lamp and semaphore bottoms were made.
- 99 outfit boxes were repaired.
- 130 tool and shipping boxes were made.
- 36 tender truck frames were made.
- 198 tender trucks were repaired.
- 12 wheel barrows were made and 63 were repaired.
- 59 tender frames were repaired and 7 were made.
- 13 quadrants were made.
- 3 tender frames were lengthened.
- 23 back castings and 10 buffer beams were made.
- 14 front castings and 17 centre castings were made.
- 12 tender steps were made and 40 repaired.
- 60 drop curtains were made.
- 1,420 pump laggings were made.
- 8 hand carts were made.
- 164 covering boards were made.
- 26 ladders were made and 9 repaired.
- 131 tender journal boxes were applied.
- 29 transoms were made.
- 90 tender cab floors were laid.
- 12 valve spindles were made.
- 28 foot boards were made.

Machine Shop—

- 195 new driving tires were applied and 772 were turned.
- 206 new engine truck tires were applied and 472 were turned.
- 438 new tender tires were applied and 3,793 car and tender tires turned.
- 19 trailer truck tires were turned and 190 tires were shimmed.

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- 988 new car tires were applied and 976 were turned and fitted.
- 258 driving journals were turned up and 395 hubs were faced.
- 5 crossheads were made and 241 were replaned.
- 182 cylinder heads were made.
- 55 piston rods were made and 96 trued up.
- 17 cylinders and half saddles were made.
- 16 engine truck centres were made.
- 42 guide bars and 123 guide blocks were made.
- 889 driving wedges were made.
- 6 locomotive frames were machined.
- 272 pop valves and 131 whistles were repaired.
- 26 steam chests were made.
- 17 steam chest covers were repaired.
- 24 gas retorts were machined.
- 19 cylinder bushings were bored out and fitted.
- 70 engine truck boxes were made.
- 641 wedges were replaned.
- 11 tender axles, 35 driving axles, and 4 car axles were fitted.
- 5 trailer axles and 11 engine truck axles were fitted.
- 7,483 new and second-hand axles were turned.
- 70 smoke box doors and rings were made.
- 34 crank pins were made.
- 50,300 stay bolts were threaded and 12,500 were made.
- 1,161,750 bolts were threaded including forged and turned bolts.
- 19,490 studs were made.
- 277,360 nuts were tapped and 190,385 faced.
- 182 cylinder heads and 5 crossheads were made and 4 rebored.
- 175 driving boxes were planed and fitted.
- 8 engine truck housings were made.
- 43 housings were made for passenger cars.
- 51 eccentric pulleys were made.
- 41 dome covers were machined.
- 14,966 chilled wheels were bored and pressed on axles.
- 16,778 chilled wheels were pressed off axles.
- 54 steel tired wheels were bored and pressed on axles.
- 2 engine trucks extended.
- 1 engine truck bolster made.
- 154 driving brasses slotted.
- 4 driving wheels centres were made.
- 56 grease boxes were made.
- 27 retaining rings were made.
- 39 fulcrum bushings were made and fitted.
- 1,144 tender tires were turned.
- 6 side rods were milled, planed and slotted.
- 95 eccentric straps were made.
- 5 engine truck frames were made.
- 2 spectacle plates were made.
- 24 equalizing rods were made.
- 5 cylinders were bushed.
- 72 equalizing bushes were made.
- 13 knowels pumps were repaired.
- 4 cheek plates were made and fitted to hubs.
- 120 driving brasses were planed.
- 22 eccentrics were made complete.

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Air compressors at the roundhouse Moncton and the Pintsch gas plant received general repairs.

Coaling crane at St. John received general repairs.

Ash handling plant for Halifax was made.

Pintsch gas engine at Moncton was repaired.

Two air compressors were rebuilt.

2 coaling cranes received general repairs.

2 coal handling plants were made, 1 for St. John and 1 for Halifax.

Motion shop—

- 4 links were made.
- 204 link-pins, blocks and bushes repaired.
- 25 link hangers were made and 91 repaired.
- 45 link blocks were made.
- 134 eccentric rods were made and 350 repaired and pins fitted.
- 130 equalizing bars were repaired.
- 78 reversing shafts were turned up and pins and bushes fitted.
- 41 reversing shaft boxes were made.
- 163 reversing shaft boxes were repaired.
- 110 reversing liners were overhauled and pins and bushes fitted.
- 100 reversing reach rods were repaired and pins fitted.
- 22 new valves were made.
- 186 valves faced and yokes fitted.
- 131 valve rod keys were made.
- 90 valve stems were fitted to yokes.
- 55 valve heads were faced.
- 52 valve division rings were made.
- 404 valve packings machined and fitted.
- 57 valve guide boxes were bushed.
- 90 throttle rods were repaired and 39 ends fitted.
- 86 throttle glands were bushed.
- 97 throttle levers were fitted with quadrants, springs and pins.
- 220 big end brasses were machined and fitted.
- 41 old big end brasses were machined and fitted.
- 199 small end brasses were machined and fitted.
- 184 main rod liners were made and fitted.
- 221 big end keys were made.
- 621 side rod bolts and 640 nuts were made.
- 627 side rod brasses were made and fitted.
- 552 knuckle joint pins and bushes were made.
- 190 crossheads were trued up and keys fitted.
- 139 crosshead pins were made.
- 50 piston rods machined and keys fitted.
- 42 rocker boxes were made and 194 lined.
- 194 rocker box bushes were fitted.
- 317 hub plates were applied.
- 293 driving box brasses were made and applied.
- 298 driving box brasses were relined and applied.
- 91 driving boxes were made.
- 460 driving boxes were bored and fitted to axles.
- 242 spring guards were machined and applied.
- 203 eccentric straps were made and 133 rebored and fitted.
- 62 eccentric pulleys were made and 177 bored and refitted.
- 5 rocker arms were made and 50 turned.

- 30 elvin grease spring plates were applied.
- 35 valve bushes were fitted to steam chests.
- 8 new ends were applied to valve rods.
- 128 eccentric keys were made.
- 10 passover valves were made.
- 80 knuckle pin nuts were made.
- 54 crank pin caps and nuts were made.
- 130 crank pin washers were faced.
- 144 eccentric feathers were machined.
- 18 eccentric rod jaws were made.
- 5 reach rod jaws were made.
- 30 valve yoke stems were trued up.
- 92 reversing lever springs were made.
- Blacksmith shop transferred from Maintenance Department in December.
- 168 split switch points with caps and bolts were made.
- 59 spring frogs were made.
- 90 rigid frogs were made.
- 5 hand cars were made and 24 repaired.
- 56 double head rods were made.
- 76 slide plates were made.
- 239 rail cutters were repaired.
- 6 rail tongs made.
- 33 switch stands were made and 3 repaired.
- 20 head chairs were made.
- 14 iron knees were made.
- 520 lbs. screw bolts were made and applied.
- 74 rails cut and delivered.
- 83 hinges were made.
- 50 fastenings were made.
- 856 guard rail bolts were made.
- 75 guard rails castings were machined.
- 32 hooks and links were made.
- 80 claw bars were made.
- 63 spiking hammers were repaired.
- 57 picks were made and 142 repaired.
- 10 drills were made and 54 repaired.
- 38 ratchets were repaired.
- 1 pump was repaired.
- 14 chisels were made and 32 repaired.
- 4 adze were repaired and 3 made.
- 7 axes were repaired.
- 1 sledge was made.
- 39 wrenches were made.
- 8 semaphore wenches were made.
- 98 rail braces were machined.
- 37 sets of switch gear were made.
- 2 diamond crossings were made.
- 158 pairs bar fish plates were made.
- 19 steel stone points were made.
- 126 guard rails were made.
- 14 jacks were repaired.
- 1 stumping machine was made.
- 370 connecting rods were made.
- 4 iron transfer houses were made.
- 37 anchors for concrete work were made.

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Rotary plow No. 2 received general repairs.

Ten machines, including steam shovels, ditcher, pile drive, rail sawing machine, cranes, etc., received a general repair.

The following special work was also done:—

Tube cleaner in the boiler shop was repaired with new wheels which were made in the shop here.

Hydrauligraphs were installed on the wheel presses.

Hot water tank was built for machine shop and set up.

Rotary scrubber in the gas plant was equipped with two new shafts and received a general repair.

All the machinery in this plant was thoroughly overhauled and put in shape.

Concrete base installed in the blacksmith shop for steam hammer, and hammer installed.

A crane was installed complete in the brass shop with foundation.

All the tubes in the boilers at the power house were examined, the boilers were also examined and the tubes were renewed.

A lot of work was done on the elevator at the general offices.

Two new pistons were applied to the gas engines in the power house.

A pipe line was installed in the freight car shop.

Changes were made in the valve gear and alterations were made in the gas engines in connection with the using of the natural gas.

A track bolt furnace was installed in the blacksmith shop with foundation complete.

Some changes were made to the boilers in boiler room to fit them for the use of natural gas, also the furnaces in the blacksmith shop and in the track blacksmith shop.

All the sewers in the blacksmith shop were lifted and pipes renewed.

The heating system in the basement of the stores building was overhauled.

All the travelling overhead cranes in the shop were given a general repair and all parts renewed where necessary.

The following special work was also done:—

MONCTON.

1,402 freight cars had the F-36 triple valve removed and were equipped with the new style, K 1 triple.

Of the 384 fire extinguishers bought last year, 100 were put in place in passenger cars while the cars were in the shops for repairs.

Of the 135 emergency tool boxes made last year, 52 were placed in passenger cars, while the cars were in the shops for repairs, in addition to the 58 placed in cars last year.

A 11-in. Westinghouse air brake pump, an air receiver and 1,500 feet of piping with 33-in. hose connections were installed in the car cleaning yard at Moncton for blowing dirt out of cars and testing air brakes on cars.

Safety appliances, as called for by the Railway Commission, were fitted to 150 passenger cars, and 654 to freight cars.

A turbine vacuum plant driven by a 10 h.p. electric motor, and 1,500 feet of piping with 33-in. hose connections, were installed in Moncton car cleaning yard for cleaning car cushions and carpets without removal from cars.

CAMPBELLTON.

A cross-compound steam two stage air compressor was purchased and installed at Campbellton engine house.

ST. JOHN.

A turbine vacuum plant driven by a 10 h.p. electric motor, and 1,000 feet of piping with 25 in. hose connections, were installed in car cleaning yard for cleaning car cushions and carpets without removal from cars.

POINT TUPPER.

A 150 h.p. horizontal return tubular boiler, a second hand duplex air compressor, after receiving a general repair in Moncton shops, and air reservoir, a closed feed water heater, a feed pump and receiver, a water pump, and about 11,000 feet of various sizes of pipe up to 5-in. including steam, air, water and heating pipes, were installed in the new roundhouse at Point Tupper.

SS. 'SCOTIA.'

A 28-in. x 52-in. extension gap lathe, and a 24-in. vertical drilling machine, were purchased and installed on SS. *Scotia*.

Turntable tractors were purchased and installed on the turntables at Sydney, Point Tupper, Mulgrave, Stellarton, Truro, Halifax, St. John and Ste. Flavie.

ELECTRICAL DEPARTMENT.

Installed 46 signal bells at highway crossings on Intercolonial railway in Quebec, New Brunswick and Nova Scotia.

Wired new station at Ste. Flavie for electric lighting, also installed semaphore wires.

Installation of electric light system in new station at Truro partially completed. When old building was being moved had to change wires in order to keep building lighted.

Wired (in conduit and moulding) old portion of general offices at Moncton for electric lighting, also rewired for call bells. Wired for lights in addition to general offices building and installed call bells.

Installed electric light fixtures in new station at Mulgrave.

Installed lighting, semaphore and telephone wires at Point Tupper (replacing wires destroyed by fire).

Wired new station at Chatham for electric lights.

Change poles, wires, &c., at Richmond due to change in tracks.

Installed two crossing signal bells at highway crossing at Charlottetown.

New telegraph lines from Harmony to Elmira.

New freight shed at Truro wired for electric lights.

Installed electric lights at scale box at Campbellton.

Wired vacuum plant at St. John for motor drive and electric light.

Wired vacuum plant at Moncton for motor drive and electric light.

Wired new engine house at Point Tupper for electric light.

Operated Pintsch gas plant for lighting cars.

Operated steam plant for heating cars on storage siding.

Railway telephones, electric semaphores, batteries, &c., at stations on the Intercolonial railway kept in working condition.

Operated electric light plants at St. John, Halifax, Stellarton and Campbellton, for supplying current for power and for lighting of railway premises.

Operated electric plant Rivière du Loup for power.

Electric light and bell equipment on cars, maintained in good working order.

Alarm bells at highway crossings, maintained in good order.

Electric light equipment in stations, freight sheds, offices, shops, engine houses, &c., kept in repair and necessary lamps installed to keep up the service.

Wired new six stall engine house at Stellarton for electric lights.

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Wired old station at Stewiacke for electric lights.

Wired coaling plants at St. John for electric lights.

94 headlight armatures rewired and commutators turned down.

65 headlight lamps, all old parts, renewed, dipped, painted and tested.

24 engine cabs, repiped, rewired, hand rail wired and connected up.

14 D.C. armatures rewired with new coils and commutators turned down.

26 A.C. armatures rewired with new coils and repaired.

8 magnet brake coils for cranes, rewound and repaired.

26 solenoid coils for headlight lamps rewound.

24 top and bottom field coils rewound and covers renewed.

1,200 extension cords and guards repaired for all departments.

400 new extension cords and guards were made.

8 new Benjamin clusters wired and placed outside car repair shop.

8 posts put in for same and line of wire and cross-arms put up, also twelve cross-arms put up inside car repair shop and wire and switches put up for same.

1 Benjamin cluster rewired and installed with pole line and switch, between car repair shop and blacksmith shop.

2 lights installed in lumber yard office, which was wired and piped for above lights and fitted with drop cords and lamps. An outside line was run from the planing mill for this service.

4 lights installed for old engines north of the paint shop, which are used for heating.

3 lights installed in closet of paint shop after fire, which was wired and piped for same.

12 desk lights installed in draughting office, piped and wired for same.

16 desk lamps buffed, wired and parts renewed, for the mechanical offices.

4 lights placed in a cluster were installed in timekeeper's office, which was rewired.

Piped and changed wiring in gas house for twelve lights.

32 lights, piped and put wire and condulets for extension cord under bench in the erecting shop.

Rewired and moved motor in cabinet shop to brass room for drill.

Wired for motor and starter, also piped, on miller, in machine shop.

Wired and piped for motor and starter in machine shop, on axle key cutting machine.

Wired and piped for motor and starter in blacksmith shop on track bolt machine.

Wired and piped, also installed new motor on large shears in blacksmith shop.

Ran D.C. line with cross arms in boiler shop for electric drills. Piped walls and put connecting boxes on same.

Piped wall and wired for extension lamps and connecting boxes in boiler and tender shops.

Piped and wired for valve setting motor for each pit.

Put switches and guard boxes on each line in erecting shop and ran line for same.

Wired motor and put two through switches and extension leads on same for valve setting machine, machine shop.

Piped for motor and starter, and wired for asbestos grinding machine, erecting shop.

Piped and wired for motor and starter in car repair shop after office fire, placed new starter and frame for same.

Repaired and placed two copper-hewitt lamps in brass moulding shop.

Wired and placed 19 lights on lathes in machine shop, with extension and drop cords.

Repaired and replugged all pipe in mechanical offices and switches.

Repaired and renewed all lamps in mechanical offices.

Repaired and replugged all pipe in general store and basement.

4 GEORGE V., A. 1914

Repaired all drop cords and renewed all lamps, also repiped office in car repair shop, also two arc lamps installed.

Repaired all drop cords and renewed all lamps in paint and upholstering shops.

Repaired all drop cords and renewed all lamps in cabinet shop.

Repaired and renewed all leads and parts of copper-hewitt lamps in erecting, blacksmith, machine, brass and bolt shops (95 lamps).

Renewed thirty-six tilters for copper-hewitt lamps.

Renewed fifty-four tubes for copper-hewitt lamps.

1,000 lamps, Tungsten and carbon, renewed in all the shops.

250 locking guards renewed in shops.

150 Tungsten lamps renewed in mechanical offices.

2 Lights installed, wired and line run for gas meter house fitted same with drop and extension cords.

General repairs made to all motors with bushings and brushes for cranes in shops (six cranes).

General repairs to controllers, new finger points and new castings for different cranes in shops.

Renewed trolley shoes several times on cranes in shops.

Replaced eight trolley wires on different cranes.

Renewed eight brake wires several times on the four cranes in erecting shops.

Six steel cables renewed on different cranes.

Repaired and spliced twelve cables on different cranes.

Inspected steel cables once a week, on every crane in shops.

Repiped, wired, new casting and new resistance on electric hoist in machine shop.

Rewired and repaired several times the electric hoist in boiler shop.

On outside lighting, straightened poles, put new guy wires and painted goose-necks and hoods.

Piped and wired for one light between erecting and boiler shops.

Placed line of 3-inch pipe and of duck and cable between car repair shop and planing mill. Also 2-inch pipe line and wire for same.

Ran 3-inch pipe line and cable temporarily, between car repair shop and planing mill for power.

Renewed and repaired bells, batteries and wires in mechanical offices.

Renewed battery for signal gong between erecting shop and power house.

Renewed batteries between gas house and power house.

General repairs made on the transfer table, new brushes, controller, points, trolley wheels renewed and painted.

The blue print machine in the draughting office was cleaned and given general repairs.

Renewed brushes and bushings on several D. C. motors and had commutators turned down.

Renewed fingers, casting, and points on several D.C. starters.

Repaired several resistance boxes.

Renewed bushings and housings, switches and fingers on A. C. motor starters in machine shop.

Repaired all motors and starters in car repair shop, with new bushings and fingers, also rewired in several cases.

Repairs made to ignition set on armatures in power house.

Lights renewed and wires repaired in boiler room.

WATER SERVICE.

This service has been maintained in efficient condition during the year over the whole line.

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RIVIERE DU LOUP SHOPS.

The following regular work was done during the year:—

- 23 Locomotives received general, 1 heavy, 18 light, and 55 specific repairs.
 - 613 new tubes were applied and 6,454 pieced.
 - 22 fire boxes were patched.
 - 87 boilers were tested.
 - 89 driving tires were turned off.
 - 63 engine truck tires were turned off.
 - 131 tender truck tires were turned off.
 - 21 pilots were made.
 - 20,318 bolts were forged.
 - 33,743 bolts were screwed.
 - 3,471 studs were screwed.
 - 57 engines and tenders were painted.
 - 44,503 lbs. brass casting were finished.
 - 2,701 sets metallic piston rod and 3,331 sets valve stem packing were made.
 - 37,543 lbs. iron forgings were made.
 - 439 driving springs were repaired.
 - 125 engine truck springs were repaired.
 - 75 tender truck springs were repaired.
 - 8 driving springs were made.
 - 18 tender truck springs were made.
- A large number of cars received light repairs during the year, and a number of jobs were done for other departments of the railway.

HALIFAX SHOPS.

The following regular work was done during the year:—

- 5 locomotives received medium repairs.
 - 163 locomotives received specific repairs.
 - 23 boilers were tested.
 - 5 sets driving tires were turned off.
 - 5 sets engine truck tires were turned off.
 - 1,350 bolts were forged.
 - 12,235 bolts were screwed.
 - 1,115 studs were screwed.
 - 5 engines and tenders were painted.
 - 203 sets metallic piston rod packing were made.
 - 189 sets valve stem packing were made.
- A large number of freight cars received light repairs and a number of jobs were done for outside departments of the railway.

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"A"—INTERCOLONIAL

STATEMENT showing the number of Locomotives and the different classes

	Locomotives.	Sleeping cars.	Parlour cars.	Dining cars.	Colonist cars.	First class passenger cars.	Second class passenger cars.	Postal cars.	Baggage cars.	Box baggage cars.	Air brake instruction cars.	Steam motor cars.	Box cars.
On hand serviceable and repairing March 31, 1912..	392	41	9	12	53	139	89	34	69	6	1	2	7003
To be replaced on March 31, 1912.						1	16						92
Total equipment, March 31, 1912.	392	41	9	12	53	140	99	34	69	6	1	2	7095
Purchased during the year on capital account.		2		1		2							173
Purchased during the year on renewals account.	14	2		1		5		2					480
Built in the shops at Moncton on renewals account.					1								
Converted in the shops at Moncton from steam motor to 1st class and baggage.						1					1		
Purchased during the year on renewals account to replace 16-15 ton hoppers, 7-6 ton hoppers, 66-20 ton coal and 12-15 ton gondolas condemned. The 80-50 ton Hart-Otis cars having a capacity exceeding the 101 small cars by 1,418 tons.													
Deduct 25 hoppers, 16-15 ton and 7-6 ton, 66-20 ton coal and 12-15 ton gondolas replaced by the 80 Hart-Otis cars.													
Purchased during the year on renewals account to replace 25 old small type locomotives condemned. Deduct 25 old small type locomotives replaced by 9, 4 switching and 5 consolidation. The 9 having a tractive power of 343,680 lbs. against 310,818 of the 25.	9												
Transferred from Maintenance of Way Department.	25												
Total equipment, March 31, 1913.	390	45	9	14	54	148	99	36	69	6	1	1	7748
To be replaced at March 31, 1912, as above.						1	10						92
Condemned and destroyed during the year.	25				1			1	1				90
Total condemned and destroyed March 31, 1913.	25				1	1	11		1				182
Deduct 25 locomotives and 101 small cars as shown above.	25												
Purchased on renewals account to replace.													182
Rebuilt in Moncton shops on renewals account to replace.		7			1								
To be replaced March 31, 1913.						1	11		1				
Add serviceable and repairing.	390	45	9	14	54	147	88	36	68	6	1	1	7748
Total equipment March 31, 1913.	390	45	9	14	54	148	99	36	69	6	1	1	7748

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RAILWAY OF CANADA.

of other Rolling Stock on the line on March 31, 1912, and March 31, 1913.

	Refrigerator cars.	Platform cars.	Pulpwood cars.	Oil tank cars.	Hopper cars.	Gondola cars.	Coal cars (20 tons).	Hart-Otis steel dump cars.	Stock cars.	Hart convertible dump cars.	Auxiliary cars.	Vans.	Stores supply cars.	Pintsch gas cars.	Total cars.	Common snow ploughs.	Wing ploughs.	Rotary steam ploughs.	Double track ploughs.	Double end ploughs.	Flangers.	Total ploughs and flangers.	Steam cranes.	Ballast plough cars.	Well boring cars.	Ditchers.	Steam derricks.	Steam shovels.	Portable rail sawing and boring machines.	Pile drivers.				
144	2949	50	54	654	5	415	176	146	199	23	111	1	1	12386	50						117	15												
...	108	2	1	9	12	27	...	2	1	...	8	...	...	273	1	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...
144	3057	52	55	663	17	442	176	148	200	23	119	1	1	12659	51	22	2	2	2	141	119	15	2	1	...	...	...	...	...	...
...	50	...	...	...	...	...	20	10	...	...	...	...	...	258	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35	...	...	...	...	...	...	...	5	...	...	...	...	...	530	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	80	...	...	...	...	...	...	...	80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	101	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	
...
179	3197	52	55	640	5	376	276	163	200	23	119	1	1	13427	51	22	2	2	141	119	18	2	1	1	1	3	...	...	...	...	...
...	108	2	1	9	12	27	...	2	1	...	8	...	...	273	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
...	99	1	...	14	...	39	...	3	...	...	1	...	...	250	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	207	3	1	23	12	66	...	5	1	...	9	...	...	523	2	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
...
...	100	...	1	23	12	66	...	5	...	...	...	...	...	101	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	3	...	...	...	...	...	...	...	...	...	...	...	...	288	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	4
...	104	3	...	...	...	...	...	...	1	...	9	...	...	130	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
179	3003	49	55	640	5	376	276	163	199	23	110	1	1	13297	50	22	2	2	140	117	18	2	1	1	1	3	...	...	...	...	...	...
179	3107	52	55	640	5	376	276	163	200	23	119	1	1	13427	51	22	2	2	141	119	18	2	1	1	1	3	...	...	...	...	...	...	...

" B "

INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT of Mileage and Coal, Oil, Grease and Waste consumed by Locomotives for the year ended March 31, 1913.

Months	Consumption.						Average Consumption per 100 miles.				
	Locomotive Mileage.	Tons of Coal	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Wool waste.	Pounds of Grease.	Pounds of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Wool waste.	Pounds of Grease.
1912.											
April	845,257	50,144	12,222	25,357	918	3,468	13,288	1.44	3.00	.11	.41
May	830,762	46,701	12,246	25,456	967	3,470	12,592	1.47	3.06	.12	.41
June	819,211	45,122	12,041	24,785	839	3,161	12,338	1.47	3.03	.10	.39
July	846,592	45,362	12,266	24,701	853	3,643	12,000	1.45	2.92	.10	.43
August	848,900	47,744	12,412	24,632	750	2,852	12,598	1.46	2.90	.09	.34
September	813,467	46,078	11,711	22,723	712	3,807	12,688	1.44	2.79	.09	.47
October	848,194	49,351	12,177	23,314	629	3,917	13,033	1.44	2.75	.07	.46
November	855,140	52,460	13,630	24,828	554	4,501	13,730	1.59	2.90	.06	.53
December	910,094	60,047	13,510	26,652	783	4,298	14,779	1.48	2.93	.09	.47
1913.											
January	932,889	62,743	14,015	26,873	674	3,611	15,065	1.50	2.88	.07	.39
February	811,938	58,058	12,665	24,355	827	4,084	16,017	1.56	3.00	.10	.50
March	916,925	65,567	14,864	28,646	775	4,751	16,018	1.60	3.12	.08	.52
Total	10,279,369	629,377	153,759	301,322	9,271	45,563	13,715	1.50	2.92	.09	.44

WINDSOR BRANCH RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,
MONCTON, N.B., 19th May, 1913.

To Canadian Government Railways Managing Board,
Moncton, N.B.

GENTLEMEN,—I beg leave to submit the following annual report for the Maintenance of the Windsor Branch Railway for the period from April 1st, to October 31st, 1912.

TRACK.

During this period 91,9669 feet of 56-lb. and 58-lb. rails were taken out of track and the same quantity of 67-lb. relayed.

TIES.

During this period 17,060 ordinary ties and 7 sets of switch ties were renewed.

BALLAST.

During this period 980 cu. yds. of ballasting was done.

SWITCHES AND SEMAPHORES.

14 new switches were installed during this period.
Necessary repairs were made to all switches and semaphores along the line.

FENCES.

During this period 700 rods of woven wire fence was erected along the line.
Necessary repairs were made to all existing fences along the line.

WHARFS AND TRESTLES.

Necessary repairs were made to all wharfs and trestles on line.

BRIDGES AND CULVERTS.

During this period the following bridges and culverts were repaired on the branch.

<i>Location.</i>	<i>Bridge or Culvert.</i>
Wilkins Siding,	Bridge,
Daly's,	Bridge,
Sharpe,	Bridge,
Stillwater,	Bridge,
Newport,	Reservoir bridge,
Stillwater,	Culvert,
Glassey's,	Culvert,
Ste. Croix,	Bridge,
Pences Lake,	Culvert.

BUILDINGS AND PLATFORMS.

During this period the following buildings and platforms were repaired on line:—

<i>Location.</i>	<i>Building or Platform.</i>
Beaver Bank,	Platform,
Dartmouth,	Engine house,
Ellerhouse,	Platform,
Hartville,	Station,
“	Platform,
Mt. Uniacke,	Station,
“ “	Coal house,
Newport,	Freight shed,
“	Platform,
Stillwater,	Platform,
Windsor Jct.,	Platform,
Windsor,	Engine house,
“	Tool house,
“	Hay shed,
“	Platform.

During this period Waverly station and freight shed exteriors were painted and the floors of Mt. Uniacke station painted.

Necessary repairs were made to hand-cars, trollies; and the track on the Windsor branch, with bridges and structures, have been kept in good repair during the year.

Yours truly,

T. C. BURPEE,
Engineer of Maintenance.

INTERCOLONIAL RAILWAY AND
WINDSOR BRANCH.

STATEMENTS OF COMPTROLLER AND TREASURER

No. 1.—INTERCOLONIAL RAILWAY.
CAPITAL ACCOUNT.—Year ended March 31, 1913.

1912.	Dr.	\$ cts.	1912.	Cr.	\$ cts.
March 31.	To cost of Intercolonial Railway to date.		March 31	By Dominion of Canada.	94,745,819 64
	Strengthening bridges.....	50,299 94			
	Increase accommodation at Halifax.....	123,245 43			
	Locomotive and car shops with equipment and new freight yard and cut off line at Moncton	18,764 99			
	Sydney Mines diversion.....	128,197 32			
	Division of line at Chatham and branch to wharf.....	114,927 21			
	Increase accommodation at Campbellton.....	126,290 77			
	Additions to and furnishings for office build- ings at Moncton.....	36,424 89			
	Increase accommodation at Truro.....	146,721 48			
	General protection of highways.....	8,588 58			
	Increase accommodation at Stellarton.....	9,000 00			
	Increase accommodation and facilities along the line.....	68,700 03			
	Increase accommodation at Fredericton.....	15,582 40			
	Improvements at Mulgrave.....	7,724 74			
	Rolling stock.....	400,000 00			
	Spur line to Wallace Harbour.....	967 82			
	Improvements at Point Tupper.....	93,000 00			
	Improvements at Sussex.....	95 65			
	Improvements at Hampton.....	4,028 03			
	Increase accommodation at Ste. Flavie.....	26,386 81			
	Improve triple valves of air brakes.....	7,149 93			
	New machinery of steamer <i>Scotia</i>	1,104 00			
	Surveys and inspection.....	32,997 23			
	Increase accommodation at St. John.....	34,774 71			
	Safety appliances for equipment.....	7,984 27			
	Docks and Wharfs at Halifax.....	351,385 06			
	Pay the Halifax and Eastern Railway Company for plans, surveys, field notes, etc., taken by the Government.....	85,000 00			
	Increase accommodation at Riviere du Loup.....	5,713 16			
	Additional facilities at Princess Pier.....	122 20			
	Towards the construction of a railway from a point on the Intercolonial Railway at or near Dartmouth in the County of Halifax via Musquodoboit Harbour and the Valley of the Musquodoboit to Dean's Settlement in the said County.....	539,791 24			
	Original construction.....	206 10			

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Improvements at Loggerville (Exchequer Court Award).....	2,535 38		
Pay claim of E. A. Wallberg for work done on the Intercolonial Railway under Government contracts, \$45,219.50, with interest at 5 per cent. from February 1, 1913, to March 31, 1913, \$359.28.....	45,578 78		
Pay the Estate of the late Hon. W. F. Pipes, \$365.20, with interest at 5 per cent. from October 6, 1905, to March 31, 1913, \$114.18, being for land taken for right-of-way to wharf at Fort Lawrence.....	419 38	2,493,707 53	
Less to Previous Years Expenditure—Proceeds of sale of dwelling house and shed, Moncton, and transfer of bridge, Moncton, to improvements at Mulgrave.....	1,720 00		1913.
Amount received for concessions (Ballast wharf property, St. John) granted per terms of Order-in-Council of October 22, 1912.....	100,000 00	101,720 00	March 31. By Dominion of Canada.....
		97,137,807 17	2,391,987 53
			97,137,807 17

E. & O. E.

Moncton, N.B.

S. L. SHANNON,

Comptroller and Treasurer.

No. 2.—INTERCOLONIAL RAILWAY.

Revenue Account.

Year ended March 31st, 1913.

Working expenses.	\$ cts.	\$ cts.	\$ cts.	Earnings.	\$ cts.
Maintenance of Way and Structures.....		2,058,458 08		Passenger earnings	3,438,447 32
Maintenance of Equipment	2,263,809 06			Freight earnings..	8,028,760 13
Add surplus for year transferred to Renewal of Equipment and debited to this account.....	777,863 74	3,041,672 80		Mail and Express earnings.....	470,866 13
				Miscellaneous Earnings.....	46,409 11
Traffic expenses.....		230,481 05			
Transportation expenses....		6,378,894 67			
General expenses.....		270,476 09	11,979,982 69		
Balance.....	782,363 74				
Less surplus transferred to Renewal of Equipment Account.....	777,863 74		4,500 00		
			11,984,482 69		11,984,482 69

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

No. 3.—INTERCOLONIAL RAILWAY.

Maintenance of Way and Structures.

Year ended March 31, 1913.

	cts.
No. 1. Superintendence.....	72,740 88
" 2. Ballast.....	66,198 85
" 3. Ties.....	243,239 11
" 4. Rails.....	180,056 97
" 5. Other Track Material.....	111,919 32
" 6. Roadway and Track.....	738,407 32
" 7. Removal of Snow, Sand and Ice.....	95,873 97
" 9. Bridges, Trestles and Culverts.....	79,798 20
" 10. Over and Under Grade Crossings.....	1,767 68
" 11. Grade Crossings, Fences, Cattle Guards and Signs.....	59,427 24
" 12. Snow and Sand Fences, and Snow Sheds.....	7,612 14
" 13. Signals and Interlocking Plants.....	7,663 03
" 14. Telegraph and Telephone Lines.....	1,159 31
" 16. Buildings, Fixtures and Grounds.....	327,751 20
" 17. Docks and Wharfs.....	14,108 55
" 18. Roadway Tools and Supplies.....	22,155 22
" 22. Injuries to persons.....	585 96
" 23. Stationery and Printing.....	6,139 58
" 25. Other Expenses.....	841 33
" 26. Maintaining Joint Tracks, Yards and other Facilities—Dr.....	29,227 36
	Cr.
" 27. Maintaining Joint Tracks, Yards and other Facilities—Cr.....	2,066,664 22
	8,206 14
	2,058,458 08

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

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No. 4.—INTERCOLONIAL RAILWAY.

Maintenance of Equipment.

Year ended March 31, 1913.

	\$	cts.
No. 28. Superintendence.....	60,892	92
" 29. Steam Locomotives—Repairs.....	788,952	68
" 30. " " —Renewals.....	479,050	54
" 35. Passenger Train Cars—Repairs.....	296,939	26
" 36. " " " —Renewals.....	239,525	21
" 38. Freight Train Cars—Repairs.....	655,273	20
" 39. " " " —Renewals.....	359,287	99
" 44. Floating Equipment—Repairs.....	18,079	01
" 45. " " —Renewals.....		5 00
" 47. Shop Machinery and Tools.....	49,404	76
" 49. Injuries to Persons.....	1,187	09
" 50. Stationery and Printing.....	10,826	43
" 51. Maintaining Joint Equipment at Terminals. Dr.....	6,478	14
" 52. Other Expenses.....	38,542	86
" 53. Work Equipment—Repairs.....	35,957	71
" 54. " " —Renewals.....	1,270	00
	3,041,672	80

E. & O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 5.—INTERCOLONIAL RAILWAY.

Traffic Expenses.

Year ended March 31, 1913.

	\$	cts.
No. 57. Superintendence.....	\$ 66,430	69
" 58. Outside Agencies.....	85,494	16
" 59. Advertising.....	39,786	66
" 60. Stationery and Printing.....	35,036	43
" 61. Traffic Associations.....	2,843	86
" 65. Other Expenses.....	895	25
	\$ 230,481	05

E. & O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

4 GEORGE V., A. 1914

No. 6.—INTERCOLONIAL RAILWAY.

Transportation Expenses.

Year ended 31st March, 1913.

	\$	cts.
No. 66. Superintendence.....	88,448	15
" 67. Despatching trains.....	172,837	82
" 68. Station employees.....	775,314	27
" 69. Weighing and car service associations.....	1,708	19
" 72. Station supplies and expenses.....	107,708	70
" 73. Yardmasters and their clerks.....	44,960	55
" 74. Yard conductors and brakemen.....	191,297	43
" 75. Yard switch and signal tenders.....	15,166	12
" 76. Yard supplies and expenses.....	21,438	00
" 77. Yard enginemen.....	145,710	24
" 78. Enginehouse expenses—yard.....	39,313	93
" 79. Fuel for yard locomotives.....	225,947	51
" 80. Water for yard locomotives.....	13,080	60
" 81. Lubricants for yard locomotives.....	3,360	47
" 82. Other supplies for yard locomotives.....	2,345	45
" 83. Operating joint yards and terminals—Dr.....	123,193	93
" 86. Road enginemen.....	641,478	84
" 87. Enginehouse expenses—road.....	281,490	62
" 88. Fuel for road locomotives.....	1,994,892	16
" 89. Water for road locomotives.....	67,126	04
" 90. Lubricants for road locomotives.....	29,598	99
" 91. Other supplies for road locomotives.....	17,771	75
" 94. Road trainmen.....	875,657	13
" 95. Train supplies and expenses.....	215,078	56
" 96. Interlocking, block and other signals—operation.....	9,709	31
" 97. Crossing flagmen and gatemen.....	15,708	15
" 98. Drawbridge operation.....	3,432	13
" 99. Clearing wrecks.....	28,454	27
" 100. Telegraph and telephone—operation.....	13,476	37
" 101. Operating floating equipment.....	50,737	12
" 103. Stationery and printing.....	63,687	74
" 105. Other expenses.....	40,807	31
" 106. Loss and damage—freight.....	56,927	84
" 107. Loss and damage—baggage.....	606	66
" 108. Damage to property.....	13,637	10
" 109. Damage to stock on right of way.....	5,518	63
" 110. Injuries to persons.....	27,882	84
" 111. Operating joint tracks—Dr.....	12,437	06
Cr.	\$ 6,438,297	89
" 84. Operating joint yards and terminals—Cr.....	59,403	22
	\$ 6,378,894	67

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

No. 7.—INTERCOLONIAL RAILWAY.

General Expenses.

Year ended March 31, 1913.

	\$	cts.
No. 113. Salaries and Expenses of General Officers.....	27,401	88
" 114. Salaries and Expenses of Clerks and Attendants.....	106,711	50
" 115. General Office Supplies and Expenses.....	5,484	52
" 116. Law Expenses.....	17,098	00
" 118. Relief Department Expenses.....	9,400	00
" 119. Pensions.....	80,506	83
" 120. Stationery and Printing.....	18,615	61
" 121. Other Expenses.....	5,258	25
	270,476	09

E. & O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller and Treasurer.

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No. 8.—INTERCOLONIAL RAILWAY OF CANADA.

GENERAL Stores Account. Year ended March 31, 1913.

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.
To balance, March 31, 1912			1,379,710	59			
Purchases during year ended March 31, 1913	4,164,646	10			By issues during year ended March 31, 1913	4,349,486	76
Charges from other Departments	570,473	79			Sales, material, fuel, &c.	55,641	95
Labour	46,317	73			Sales, old material	313,189	93
Staff	22,328	21	4,803,765	83	Balance—		
					Ordinary stores, including fuel	732,255	00
					Roadway and bridge material	732,902	78
			6,153,476	42			
						1,463,157	78
						6,183,476	42

S. I. SHANNON,

Comptroller and Treasurer.

C. F. BURNS,

Auditor of Disbursements.

No. 9.—INTERCOLONIAL RAILWAY.
General Balance.—Year ended March 31, 1913.

Dr.		Cr.		By	
cts.	cts.	cts.	cts.	cts.	cts.
Cash.....	43 05	By Dominion of Canada.....	2,573,116 20	\$	cts.
General Stores.....	1,465,157 78	Intercolonial & Prince Edward Island Railways			
Station Agents.....	224,176 61	—Employees Provident Fund.....	346,028 57		
Receiver General—Provident Fund—Account.....	973,542 93	Freight in Transit—Account.....	10,196 94		
Auditors Suspense Account.....	80,700 32	Rail Renewal Account.....	228,926 52		
Cash in Transit Account.....	8,388 37	Fire Renewal Account (Buildings, Fixtures and			
Commissionary Account.....	22,836 48	grounds).....	102,763 17		
Expenditures for Road and Equipment—Sus-		Equipment Renewal Account.....	1,339 77		
pense Account—Campbellton.....	1,800 00				
Unclaimed Freight.....	677 27	Individuals and Companies Ledger:—			
Expenditures for Road and Equipment—Sus-		Amburst Malleable Iron Co.....	40 42		
pense Account—Surveys and Inspection.....	2,080 28	Atlantic Lumber Co.....	104 17		
Expenditures for Road and Equipment—Sus-		Beersville Ry. & Coal Co.....	216 20		
pense Account—Point Tupper.....	11,948 06	A. Belanger.....	251 40		
Expenditures, Road and Equipment—Suspense		J. H. Brownell.....	149 72		
Account—Pugwash to Pugwash Harbour.....	206 40	Canadian Express Co.....	5,351 43		
		Chatham Ry.....	07		
Individuals and Companies Ledger:		Chappell Brothers.....	25 00		
Acadia Coal Company.....	28 64	Canadian Oil Co's.....	30 14		
Alabama & Vicksburg Ry.....	5 13	J. & A. Culligan.....	10 20		
Atlantic Coast Line.....	254 37	Colonial Granite Co.....	81 00		
Armour Car Lines.....	85 57	Cornwall and York Cotton Mills Co.....	154 78		
H. & A. Allan.....	472 20	Credit Foncier, Canadian.....	113 25		
Atlantic and Lake Superior Ry.....	1,333 67	Canada Cement Co.....	2,246 57		
Atlanta, Birmingham and Atlantic Ry.....	36 92	John J. Campbell.....	331 45		
American Refrigerator Transportation Co.....	2 64	Coldbrook Realty and Development Co.....	1,238 62		
Archieison, Topeka and Santa Fe Ry.....	182 57	Colonial Coal Co.....	1,772 67		
Ann Arbor Ry.....	22 39	Dubs & Co.....	98 63		
Alabama Great Southern Ry.....	77 47	G. Dumont.....	27 00		
Armstrong Refrigerator Line.....	9 07	W. H. Duffy.....	288 85		
P. S. Arehbold.....	3 46	Edmunds Co.....	1,190 18		
Steamship "Amelia".....	0 70	T. E. Fernald & Co.....	223 50		
Austin Lumber Co.....	273 46	Finch, Pruytt & Co.....	11,541 30		
J. Abrams & Sons.....	120 20	Grand Lake Lumber Co.....	383 00		
Boston and Maine Ry.....	1,323 06	General storekeeper.....	209 72		
Baltimore and Ohio Ry.....	569 24	H. J. Garson & Co.....	4,953 16		
Boston and Albany Ry.....	14 80	L. Goodspeed & Son.....	216 44		
Bangor and Aroostook Ry.....	45 49	Abner Gordon.....	161 79		
Buffalo, Rochester and Pittsburg Ry.....	112 17	General average account.....	987 34		
Buffalo and Susquehanna Ry.....	28 02	Halifax station Labour.....	416 68		
Bessemer and Lake Erie Ry.....	4 79	Charles and Davidson Hill.....	359 81		
Bathurst Lumber Co.....	91 60	T. A. Hurley.....	168 09		
Brown Machine Co.....	333 64	Havelock Mineral Springs Company.....	303 72		
Caracas Ry.....	14,277 57	Imperial Oil Co.....	132 88		
				\$	3,262,371 57

Central Vermont Ry.....	764 26	Imperial Oil Co. (siding account, New Glasgow).....	340 43
Coal and Coke Ry.....	29 69	Imperial Oil Co. (siding account, Campbellton).....	368 39
Cumberland Ry. and Coal Co.....	120 63	J. A. Kirkpatrick.....	248 50
Canada Iron Corporation.....	3 60	Le B. Drury Lockhart.....	343 20
Canadian Northern Ry. System.....	3,367 20	W. S. Loggée & Co.....	187 77
Cincinnati, Hamilton and Dayton Ry.....	83 41	Joseph Lecours.....	112 55
Cleveland, Cincinnati, Chicago and St. Louis Ry.....	464 89	J. A. Likely.....	1,022 64
Canada Atlantic and Plant Steamship Line.....	0 36	Thomas Lahey.....	99 07
Chicago, Milwaukee and St. Paul Ry.....	222 26	La Cie Manufacture de Monagny.....	100 39
Chicago, St. Paul, Minneapolis & Omaha Ry.....	52 33	La Cie Industrielle de Rimonski.....	489 42
Cincinnati Northern Ry.....	3 17	P. Lyall & Sons Construction Co.....	343 07
Chicago and North Western Ry.....	199 57	Nap. Mercier.....	25 50
Canadian Pacific Ry. Vel. Co.....	720 13	By William H. Miller.....	287 00
G. S. Campbell & Co.....	11 96	Miramichi Lumber Co.....	177 50
Canadian Ry. News Co.....	28 50	Mapleleaf Lumber Co.....	138 27
Chicago & Alton Ry.....	85 59	D. H. McKay.....	439 63
Cincinnati, New Orleans & Texas Pacific Ry.....	166 08	W. A. McKay & Co.....	60 07
Chicago, Burlington & Quincy Ry.....	201 68	McLean Milling Co.....	138 00
Chicago Refrigerator Despatch Line.....	8 02	Dan McNeil & Sons.....	577 08
Central Ry. of New Jersey.....	177 17	H. E. McArthur.....	513 97
Chesapeake & Ohio Ry.....	174 01	Hugh D. McKenzie Co.....	223 10
Choctaw, Oklahoma & Gulf Ry.....	11 55	J. M. Mettrath.....	6 76
Colorado Southern Ry.....	9 69	New Brunswick Telephone Co.....	364 24
Cudahy Refrigerator Line.....	1 43	Nova Scotia Carriage & Motor Car Co.....	215 61
Chicago & Eastern Illinois Ry.....	79 62	Portland Rolling Mills.....	163 15
Canadian Locomotive Co.....	132 38	James R. Porter.....	5 00
City of Montreal.....	112 50	Prairie Brothers (Incorporated).....	139 15
Central of Ontario Ry.....	9 09	Quebec Construction Co.....	51 44
Chicago, New York & Boston Refrigerator Ry.....	0 21	Rhodes, Curry & Co.....	22 54
Chicago, Indianapolis & Louisville Ry.....	231 49	Reed Co., (limited).....	274 66
Chicago, Cincinnati & Louisville Ry.....	1 26	Sessequen Brothers.....	2 73
Chicago, Indiana & Southern Ry.....	47 23	John Simon.....	6,801 12
Colchester Coal & Ry. Co.....	369 35	Savoie & Co.....	426 62
Cumberland Valley Ry.....	0 46	Enoch Steeves.....	231 25
Chicago Rock Island & Pacific Ry.....	611 67	St. John Station Labour.....	144 14
Chicago Great Western Ry.....	154 82	James Stevenson.....	159 82
J. H. Corbett.....	163 67	Charles P. Stephen.....	78 50
Chicago, Peoria & St. Louis Ry.....	13 84	Steel Co., of Canada.....	3,280 17
Cold Blast Transportation Company.....	9 07	Stephen Brothers.....	293 14
Colorado Southern, New Orleans & Pacific Ry.....	9 07	Swift & Co., (Siding account).....	265 30
Copper Range Ry.....	45 13	Edward Sinclair Lumber Company.....	477 80
Central of Georgia Ry.....	31 80	J. B. Snowball Co.....	68 04
Frank A. Cutting Co.....	3 30	B. L. Tucker.....	184 69
Charleston & Western Carolina Ry.....	4 04	Town of New Glasgow.....	131 00
Canada & Gulf Terminal Ry.....	5,043 78	S. F. Vaughan & Co.....	891 00
Cudahy & Milwaukee Refrigerator Line.....	6 06	Alex. Watson.....	356 00
Cornwall & Lebanon Ry.....	0 35	York & Sunbury Milling Company.....	132 45
Canada Car & Foundry Co.....	10,700 07		
Carried forward.....	44,404 03	Carried forward.....	55,284 77
	2,794,357 55		3,317,405 94

No. 9.—INTERCOLONIAL RAILWAY.—Continued.

General Balance.

Year ended March 31, 1913.—Continued.

To		Dit.		By		Ct.		%		cts.	
				\$	cts.	\$	cts.	\$	cts.	\$	cts.
Brought forward.....		Brought forward.....		44,404	03	2,794,557	55	3,317,605 94			
Canadian Pacific Ry	Geo. Cogger	33,211	15	By Individuals & Companies—Suspense Ledger—							
Cleveland, Akron & Cincinnati Ry		9	07	General Storekeeper							
Chicago, Milwaukee & Gary Ry		0	44	Canada & Gulf Terminal Ry							
Carrollton, Clinchfield & Ohio Ry		22	38	Canadian Car & Foundry Co.							
Chicago River & Indiana Ry		0	73	James H. Corbett							
Colorado Midland Ry		2	40	Dominion Iron & Steel Co.							
Dominion Tar & Chemical Co.		2	81	M. P. & J. T. Davis							
Dept. of Justice		17	64	James Fleming							
Dept. of Public Works		2,530	49	Reid McManus							
Dept. of Marine & Fisheries		594	18	J. W. McManus & Co							
Dept. of Militia & Defence		422	45	New Brunswick Coal & Ry. Company							
Dominion Atlantic Ry		4,785	74	Sessenwein Brothers							
Dominion Coal Co.		478	34	John Simon							
Dominion Iron & Steel Co.		2,848	69	Windsor Branch Ry							
Delaware & Hudson Ry		187	11	Traffic Ledger—							
Delaware, Lackawanna & Western Ry.		223	82	Atchison, Topoka & Santa Fe Ry							
Duluth, South Shore & Atlantic Ry.		23	33	Boston & Maine Ry.							
Dominion Express Co.		348	00	Boston & Albany Ry							
Dept. of Interior		14	10	Canadian Pacific Ry							
Dept. of Railways & Canals, (Stores Account),		194	52	Charlottetown Steam Navigation Co							
Detroit & Mackinac Ry		2	18	Chicago, Rock Island & Pacific Ry							
Detroit, Toledo & Ironton Ry.		0	81	Chicago, Burlington & Quincy Ry							
Denver & Rio Grande Ry.		12	36	Chicago & North Western Ry							
Alfred Dickie Lumber Co.		86	45	Chicago, Milwaukee & St. Paul Ry							
Detroit & Toledo Shore Line		2	79	Cincinnati, Hamilton & Dayton Ry							
T. A. S. DeWolfe & Son		161	35	Wm. Chubbertson							
Delaware & Eastern Ry		17	23	Duluth, South Shore & Atlantic Ry							
Eastern Steamship Co		502	98	Dominion Atlantic Ry							
Elgin, Joliet & Eastern Ry		26	73	Great Northern Ry Line							
Captain J. A. Farquhar		14	49	Grand Trunk Pacific Ry							
Furness, Withy & Co.		9	60	Halifax & South Western Ry							
Fort Smith & Western Ry		40	07	Interprovincial Nav. Co							
Fort Worth & Denver City Ry		24	61	Lehigh Valley Ry							
James Fleming		14	68	Lake Shore & Michigan Southern Ry.							
Grand Trunk Ry		703	00	Maine Central Ry							
Galena Signal Oil Co		24,673	39	Minneapolis, St. Paul & Sault Ste Marie Ry.							
Green Bay & Western Ry		129	60	Northern Pacific Ry							
Galveston, Harrisburg & San Antonio Ry.		72		New England Navigation Co							
		12	72	New York Central & Hudson River Ry							
				5,706 64							

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Gulf Colorado & Santa Fe Ry.	11 55	New York, New Haven & Hartford Ry.	7 05 89
Great Northern Ry Line	153 24	Northern New Brunswick & Seaboard Ry.	79 27
Georgia Southern and Florida Ry.	1 21	Pennsylvania R. R.	29 55
Graham & Co.	58 43	Pere Marquette Ry.	49 61
Grand Trunk Ry.—Suspense.	98 75	Pittsburg & Lake Erie Ry.	1 63
Grand Rapids & Indiana Ry.	38 57	Quebec Central Ry.	75 33
Georgia Ry.	6 05	Raymond & Whitcombe Co.	1 95
Gulf & Ship Island Ry.	28 07	Southern Pacific Co. (Pacific System).	72 83
Gulf, Texas & Western Ry.	25	Salisbury & Albert Ry.	20 92
Halifax & South Western Ry.	117,965 22	Tenimiscouata Ry.	72 37
Hampton & St. Martins Ry.	251 80	Teniskawing & Northern Ontario Ry.	454 67
Hocking Valley Ry.	54 76	Wabash Ry.	259 73
Houston & Texas Central Ry.	1 46	Car Service Ledger:—	
Hoods Quarry Co.	81 78	Aberdeen & Roekfish Ry.	30
Hone & Rivet	249 05	Arkansas South Eastern Ry.	1 40
Inverness Ry. & Coal Co.	137 45	Coudersport & Port Allegheny Ry.	22 05
Intercolonial Coal & Mining Co.	20 80	Cumberland & Pennsylvania Ry.	30
Illinois Central Ry.	889 99	Grafton & Upton Ry.	2 45
International & Great Northern Ry.	51 01	Georges Valley Ry.	5 80
International Engineering Works	6 00	Greenville, Spartanburg & Anderson Ry.	6 05
A. G. Jones & Co.	6 52	Kanawaha & West Virginia Ry.	1 80
Kent Northern Ry.	6,068 18	Kansas Southern & Gulf Ry.	90
Kanawaha & Michigan Ry.	1 62	Paris & Mount Pleasant Ry.	60
Kansas City Southern Ry.	68 90	Thousand Islands Ry.	4 25
Kansas City, Mexico & Orient Ry.	38 93	Tennessee Central Ry.	35
D. G. Kirk.	8,048 71	Union Pacific Ry.	20
Lotbiniere & Megantic Ry.	2 15	Rents Ledger:—	
Londonderry Iron & Mining Co.	21,370 37	Dos. LeBlanc.	20
Lehigh Valley Ry.	813 73	Moncton Tramways, Electricity & Gas Co.	1 00
Louisiana Western Ry.	3 47	Caldor, Fraser & Co.	1 00
Louisville & Nashville Ry.	143 13	Levi Thompson.	1 00
Lake Shore & Michigan Southern Ry.	405 24	Emile Patrel.	98
Long Island Ry.	11 55	Douglas Hannah.	1 48
Lake Erie & Western Ry.	35 48	T. B. Cochrane.	1 00
R. S. Lowe.	96 10	Moncton Tramways, Electricity & Gas Co.	17 75
Lotbiniere Lumber Co.	3 25	Dominion Express Co.	1 50
Libby, McNeil & Libby.	2 29	George Lovett.	1 00
Louisiana Ry. & Nav. Co.	4 00	Rhodes Curry & Co.	1 00
Loss & Damage Freight—Suspense Account.	3,196 80		
Louisville, Henderson & St. Louis Ry.	48		
Moncton & Buctouche Ry.	501 33		
Michigan Central Ry.	450 78		
Maine Central Ry.	119 10		
John Murphy.	11 45		
Montmagny Light & Power Co.	756 09		
Thos. Malcolm.	1,978 47		
Missouri Pacific Ry.	198 54		
Minneapolis St. Paul & Sault Ste. Marie Ry.	70 85		
	281,247 52	Carried forward	3,356,468 70
			27 91
			46 45
			33,081 76

No. 9.—INTERCOLONIAL RAILWAY.—Continued.
 GENERAL BALANCE. Year ended March 31, 1913.—Continued.

Dr.	cts.	cts.	cts.	Cts.	cts.	cts.
Brought forward.....	281,297	52	2,794,557	55		
Missouri, Kansas & Texas Ry.	154	34				
Metropolitan Steamship Co.	31	88				
Miramichi Quarry Co.	1	75				
Morgan's Louisiana & Texas Ry.	30	82				
Mather Stock Car Co.	21	75				
Minneapolis & St. Louis Ry.	198	73				
Murdock Shultz.	1	05				
Morris Co. Refrigerator Line.	2	02				
Mobile & Ohio Ry.	99	67				
Midland Valley Ry.	9	22				
Milwaukee Refrigerator Transit Co.		35				
H. W. Munsell & Co.	18	08				
Millerton Station	333	73				
Morrill Refrigerator Line.	4	67				
Manister & Northern Eastern Ry.	1	64				
Montour Ry.		56				
Missouri Oklahoma & Gulf Ry.	28	93				
Moncton Construction Co.	1,901	41				
Montana, Wyoming & Southern Ry.	9	40				
McLean's Holt & Co.	203	00				
H. F. McDougall.	8	46				
Reid McManus.	10	69				
W. P. McNeil & Co.	620	76				
Nelson McDougall.	75	00				
W. J. McBeath.	1	50				
New Brunswick Coal & Railway Co.	88	09				
New York Central & Hudson River Ry.	1,787	58				
Newfoundland Ry.	278	85				
New York, New Haven & Hartford Ry.	123	83				
New York, Chicago & St. Louis Ry.	133	77				
Nova Scotia Steel & Coal Co.	558	95				
New Brunswick & Prince Edward Island Ry.	5,083	01				
Northern Pacific Ry.	206	65				
National Dispatch Great Eastern Line	237	13				
Northern Central Railway	18	69				
Northern & Western Railway.	213	82				
New York, Philadelphia & Norfolk Railway.	1	23				
New Orleans & North Eastern Railway.	43	76				
New York, Ontario & Western Railway.	20	45				
North West Mounted Police.	37	38				
Brought forward.....			3,356,468	70		

Nova Scotia Construction Co	362 69	
National Labour Congress	446 40	
New Orleans Great Northern Railway	1 06	
Norfolk Southern Railway	12 89	
Norwood & St Lawrence Railway	222 16	
Northern New Brunswick & Seaboard Railway	385 15	
New Brunswick Cold Storage Co.	119 75	
Nashville, Chattanooga, & St. Louis Railway	47 98	
New Orleans, Mobile & Chicago Railway	8 78	
New Orleans, Texas & Mexico Railway	1 40	
Nova Scotia Car Works	39 50	
Newburgh & South Shore Railway	0 66	
National Railways of Mexico	24 36	
Oregon-Washington Railway & Navigation Co.	19 25	
Ocean Charges on Freight, Halifax	12,444 88	
Opelonas Gulf & North Eastern Railway	2 60	
Post Office Department	74,803 24	
Prince Edward Island Railway	1,163 78	
Pictou Station Labour	200 00	
Pullman Co.	2 30	
Pennsylvania Railway	388 47	
Price Brothers	1,336 02	
Pittsburgh, Cincinnati, Chicago & St. Louis Ry	47 94	
Pennsylvania Co.	153 99	
Pere Marquette Railway	722 43	
Pittsburgh & Lake Erie Railway	422 77	
Philadelphia & Reading Railway	219 85	
Philadelphia, Baltimore & Washington Ry	7 45	
Pickford & Black	162 99	
Peoria & Eastern Ry.	22 05	
Pittsburgh, Shewmut & Northern Ry	13 77	
P. Puddington	40 92	
Pacific Fruit Express	12 17	
Quebec Central Ry.	1,350 36	
Quebec, Montreal & Southern Ry	207 07	
Quebec & Lake St. John Ry.	59 52	
Quebec Contracting Co.	701 40	
Rutland Ry.	16 47	
Charles D. Ruddock	15 00	
Ryan & MacDonnell	2,736 29	
Rockingham Station	3 00	
Railway Automatic Car Co.	61 40	
Richmond, Fredericksburg & Potomac Ry	4 54	
E. R. Reid	5 00	
Swift Refrigerator Line	13 34	
Sherbrooke Tank Line	6 75	
Sackville Station	65 97	
Salisbury & Harvey Ry.	69,450 21	
Carried forward	462,752 07	2,794,557 55
.....		3,356,468 70

No. 9.—INTERCOLONIAL RAILWAY.—Continued.
 GENERAL BALANCE. Year ended March 31, 1913.—Continued.

Dr.	\$	cts.	CR.	\$	cts.
Brought forward.....	462,752	07		2,794,557	55
Southern Pacific Ry.....	185	24			
Southern Ry.....	392	00			
St. Lawrence & Adirondack Ry.....	0	08			
Seaboard Air Line.....	65	42			
St. Louis & San Francisco Ry.....	208	94			
San Pedro, Los Angeles & Salt Lake Ry.....	7	15			
St. Louis Southwestern Ry.....	101	66			
St. Joseph & Grand Island Ry.....	4	30			
St. Monique Station.....	10	00			
Saunderson Manufacturing Co.....	47	10			
Santa Fe Refrigerator Dispatch.....	8	44			
Sussex Station.....	25	00			
San Antonio & Arkansas Pass Ry.....	3	12			
Sandusky Grain Co.....	1	30			
St. Paul & Kansas City Short Line.....	0	99			
C. E. Smith.....	386	34			
Susquehanna & New York Railway.....	1	41			
Tennessee Ry.....	87	61			
Texas & Pacific Ry.....	62	98			
Toronto, Hamilton & Buffalo Ry.....	10	52			
Trois Pistoles Pulp & Paper Co.....	73	82			
Transcontinental Ry. Commissioners.....	2,504	10			
Toledo, St. Louis & Western Ry.....	69	71			
Toledo & Ohio Central Ry.....	36	01			
Toledo, Peoria & Western Ry.....	9	37			
Texas & New Orleans Ry.....	7	33			
D. Trimblay.....	123	29			
F. M. Tweedie.....	49	90			
Toronto Construction Co.....	429	75			
Trunkamking & Northern Ontario Ry.....	1	00			
Trinity & Brazos Valley Ry.....	24	76			
Tremont & Gulf Ry.....	17	51			
Terminal Ry. Association of St. Louis.....	8	54			
Three Rivers Steamship Co.....	52	23			
Town of St. Leonard Jet.....	216	90			
Vandalia Ry.....	15	65			
Union Refrigerator Transit Co.....	7	79			
Vicksburg, Shreveport & Pacific Ry.....	6	43			
Union Pacific Ry.....	40	34			
Union Ry.....	44				
Virginian Ry.....	7	51			
Brought forward.....				3,356,468	70

Virginia & South Western Ry.....	1 63		
Uranium Steamship Co.....	111 05		
Wabash Ry.....	180 83		
Western Union Telegraph Co.....	2,717 44		
A. N. Whitman & Son.....	150 00		
E. A. Wallberg.....	2 97		
Wallace Stone Quarry Co.....	71 46		
Wilson & Son.....	8 28		
Western Maryland Ry.....	17 90		
Wisconsin Central Ry.....	21 80		
Wheeling & Lake Erie Ry.....	30 35		
Western Refrigerator Despatch.....	79		
Wyoming & North Western Ry.....	1 19		
West Jersey & Seashore Ry.....	1 19		
Western Ry of Alabama.....	13 91		
White City Refrigerator Despatch.....	3 67		
York & Carleton Ry.....	33 60		
		471,432 11	
Individuals & Companies Ledger Suspense—			
Thos. Bell & Co.....	1 80		
Dominion Atlantic Ry.....	49 37		
Halifax & South Western Ry.....	82 54		
Thos. Malcolm.....	17 58		
National Transcontinental Ry, Commissioners.....	318 30		
Nova Scotia Steel and Coal Co.....	3 93		
Prince Edward Island Ry.....	0 01		
Quebec Contracting Co.....	3 58		
		477 31	
To Traffic Ledger—			
H. & A. Allen.....	4,396 63		
Acadia Coal Co.....	11 70		
Canadian Northern Ry.....	6,191 11		
Cape Breton Ry.....	34 98		
Cumberland Ry. & Coal Co.....	617 57		
Central Ontario Ry.....	28 72		
Dominion Steamship Co.....	114 69		
Dept. of Marine & Fisheries.....	25 38		
Dominion Coal Co.....	20,374 66		
Dept. of Labor & Commerce, U.S.A.....	15 25		
T. A. DeWolfe & Son.....	5 00		
Dominion Iron & Steel Co.....	50 92		
Furness Whithly & Co.....	21 15		
Grand Trunk Ry.....	24,749 92		
General Transatlantique Co.....	72 99		
A. G. Jones & Co.....	9 50		
Mackay Brothers.....	0 48		
		58,720 65	
			3,266,466 97
			Carried forward.....
			3,356,468 70

GENERAL BALANCE. Year ended March 31, 1913.—Continued.
No. 9.—INTERCOLONIAL RAILWAY.—Continued.

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.
Brought forward.....	58,720	65	3,266,466	97	Brought forward.....	3,356,468	70
To National Transcontinental Ry.....	36	97					
Reid Newfoundland Ry.....	15,395	30					
Robert Reford Co.....	39	00					
Salvation Army.....	1,223	51					
Uranium Steamship Co.....	5,554	62					
Car Services Ledger:—			81,010	65			
Acadia Coal Co.....	37	00					
Albany & Hudson Ry.....	4	25					
Ashland & Western Ry.....	22	55					
Atlantic & Western Ry.....	1	35					
Buffalo & Susquehanna Ry.....	4	20					
Chicago, Peoria & St. Louis Ry.....	0	50					
Chicago, Cincinnati & Louisville Ry.....	137	25					
Cincinnati, Bluffton & Chicago Ry.....	13	60					
Chicago, Kalamazoo & Saginaw Ry.....	5	25					
Chicago & Wabash Valley Ry.....	4	25					
Dominion Atlantic Ry.....	10	00					
Delaware & Northern Ry.....	1	40					
Durham & South Carolina Ry.....	0	45					
Georgia & Florida Ry.....	6	30					
Gulf Line Ry.....	10	25					
International Ry of New Brunswick.....	265	60					
Jamestown, Chautauqua & Lake Erie Ry.....	73	45					
Kansas City, Mexico & Orient Ry.....	6	90					
Kalamazoo, Lake Shore & Chicago Ry.....	5	70					
Lafayette & Megantic Ry.....	13	60					
Missouri River & Bonne Terre Ry.....	10	20					
New Orleans Great Northern Ry.....	12	60					
National Transcontinental Ry.....	434	00					
North & South Carolina Ry.....	4	90					
Northern New Brunswick & Seaboard Ry.....	98	55					
Piedmont Ry.....	6	05					
Pittsburg & Susquehanna Ry.....	4	05					
Register & Glenville Ry.....	1	75					
Randolph & Cumberland Ry.....	0	60					
Savannah & Statesboro Ry.....	0	60					
Shattagut & Rice Belt Ry.....	1	40					
Texas & Pacific Ry.....	15	40					
Teniskaming & Northern Ontario Ry.....	95	55					
Trinity & Brazos Valley Ry.....	44	65					

	1,373 02	3,348,850 64
Rents Ledger —		
Texas State Ry	1 40	
Virginia Carolina Ry	3 65	
Unadilla Valley Ry	07	
White River Ry	13 95	
Canadian Express Co.	16 66	
Charles A. Elder	03	
Stoohart Mercantile Co.	48 00	
Miramichi Steam Navigation Co	60 00	
G. T. Cornish	42 00	
Jessie E. Harper	1 00	
Newfoundland Ry.	991 66	
Maritime Telegraph & Telephone Co.	1 00	
Corporation of Steamery of Rimonski	1 00	
New Brunswick Telephone Co.	1 00	
Oliver McGinnis	17	
New Brunswick Telephone Co.	2 00	
R. McDonald	5 67	
J. H. McLeod	9 90	
Sackville Concrete Co	5 00	
Canadian Express Co	12 50	
New Brunswick Telephone Co	1 00	
Dominion Express Co	28 17	
Imperial Oil Co	5 00	
Hiram S. McLean	5 00	
Nathaniel W. Pushie	10 00	
Miramichi Lumber Co	25 00	
James Comeau	20 80	
Imperial Oil Co	6 00	
Geo. A. Mason	5 00	
J. D. Volekman	1 00	
Arthur S. Comeau	10 00	
Town of Fraserville	1 00	
C. B. McMillen	5 00	
Canada Ry News Co	06	
James Dunn	8 00	
Joseph Clarke	5 67	
William Barrie	49 00	
Canadian Pacific Ry	62 50	
"	608 30	
Steamer "Granville"	25 00	
Acadia Telephone Co	3 00	
Fred. Tobin	30 00	
T. Walsh	30 00	
Mrs. Ryan	30 00	
Canadian Express Co	0 48	
James Campbell	14 00	
Carried forward	2,185 67	3,348,850 64
Carried forward		3,356,468 70

No. 9.—INTERCOLONIAL RAILWAY.—Continued.
 GENERAL BALANCE. Year ended March 31, 1913.—Continued.

Dit.	\$	cts.	%	cts.	%	cts.	%	cts.	%
Brought forward.....			3,348,850 64						
By Maritime Telegraph and Telephone Co.....		1 00							
Town of Shediac.....		2 00							
James Casey.....		5 00							
Town of Campbellton.....		1 00							
Herbert B. Sleeves.....		1 00							
Wood & McConnell.....		1 00							
Charles E. Roy.....		5 00							
Canadian Express Co.....		50 00							
H. A. Patton.....		1 00							
Maritime Coal Ry. and Power Co.....		1 00							
Department of Public Works of Canada.....		2 00							
Canadian Express Co.....		12 50							
C. Vellieux.....		32 00							
N. Lamontagne.....		7 50							
Dame C. E. Carrier.....		240 00							
Oliver Gingras.....		60 00							
Misses Camire.....		12 00							
Maurice Camire.....		11 00							
Mrs. J. Atkinson.....		100 00							
Joseph Doucet.....		5 00							
Mrs. L. Roberge.....		104 00							
James Cloutier.....		40 00							
Frank Cloutier.....		4 50							
Miramichi Steam Navigation Co.....		150 00							
Dominion Express Co.....		24 00							
A. Bégin.....		195 00							
Dominion Express Co.....		24 00							
Jean Lamonthie.....		49 50							
Dominion Express Co.....		24 00							
Canadian Express Co.....		6 25							
Malcolm Sanson.....		6 00							
Louis Boisvert.....		6 00							
Emile St. Laurent.....		209 00							
Peter Bernier.....		8 00							
David Rouleau.....		24 00							
Arthur Lamontagne.....		8 00							
Joseph Côté.....		12 00							
Joseph H. Higgins.....		5 00							
J. A. R. Weir.....		10 00							
J. C. Spencer.....		1 00							
Brought forward.....			3,356,468 70						

C. W. White.....	3 75
W. K. Graham.....	1 00
C. E. McCready.....	1 00
Mrs. Agnes Weir.....	5 00
J. Titus & Co.....	2 00
Thos. Sharp.....	1 00
A. B. Copp.....	3 00
Robert O'Leary.....	1 00
Loggie Brothers.....	3 00
Henry O'Leary.....	3 00
George Clouthier.....	10 00
Thos. Robinson.....	1 00
Mrs. Desmond.....	3 00
Estate E. J. Smith.....	1 00
Estate Wm. J. Williams.....	3 00
Malcolm Patterson.....	3 00
James Shannon.....	0 25
Mrs. Stubbs.....	2 00
J. Camerou.....	0 25
John R. Stewart.....	1 00
William Young.....	8 00
Frost & Wood.....	1 00
Charles Richards.....	3 00
Spencer Brothers & Turner.....	1 00
Estate D. S. Harper.....	2 00
Estate Patrick McCourt.....	1 00
Adam Mahar.....	0 25
George Mann.....	0 25
Benjamin Smith.....	0 25
J. M. Dube.....	1 00
Price Brothers.....	2 00
James E. Kelly.....	4 00
Dr. F. O. Steeves.....	1 00
S. H. White & Co.....	10 00
King Brothers.....	200 00
John Roach.....	1 00
N. Pushie.....	11 25
N. Pushie.....	7 37
M. McLean.....	15 00
Geo. Lightle.....	1 00
James A. Kirkpatrick.....	1 00
John C. Gass.....	15 00
G. & G. Flewelling.....	1 00
Spencer Brothers & Turner.....	1 00
A. & R. Loggie.....	1 00
I. Matheson & Co.....	1 00
Alex Belanger.....	1 00
George Stone.....	10 00
Carried forward.....	4,023 54
	3,348,850 64

Carried forward.....

3,356,468 70

Frangois Gagnon.....	1 00	
Town of Sackville.....	1 00	
George L. McLean.....	1 00	
Town of Lewis.....	1 00	
John W. Logan.....	5 00	
Robert Douglas.....	4 00	
Antigonish & Sherbrooke Telephone Co.....	0 50	
Thos. S. Donaldson.....	1 00	
Dartmouth Ferry Commission.....	1 00	
Commissioners of the Transcontinental Ry.....	1 00	
James H. Adams.....	1 00	
Robert Finlay.....	2 00	
George Cooper and James Cunningham.....	15 00	
Louison Lumber Co.....	1 00	
Robert Crawford.....	3 00	
Stephen Brothers.....	1 00	
B. N. T. Underhill.....	3 00	
Imperial Oil Co.....	1 00	
	2 00	
	2 00	
Colonial Coal Co.....	5 00	
H. McC. Hart.....	15 00	
Estate Thos. Belanger.....	2 00	
Dartmouth Ferry Commission.....	1 00	
H. M. Kent.....	5 00	
Samuel Melanson.....	5 00	
Doucett Brothers.....	5 00	
City of Sydney.....	1 00	
Swedish-Canadian Lumber Co.....	5 00	
Richard O'Leary and W. S. Montgomery.....	1 00	
New Brunswick Telephone Co.....	3 00	
Shediac Electric Light and Power Co.....	2 00	
Colonial Coal Co.....	1 00	
Town of Newcastle.....	1 00	
New Brunswick Paper & Pulp Co.....	1 00	
Henry Fields.....	1 00	
New Brunswick Telephone Co.....	3 00	
Alphonse Dallaire.....	1 00	
Charles A. Vanwic.....	3 00	
G. W. Shanklin.....	1 00	
St. Maurice Light & Power Co.....	1 00	
New Brunswick Telephone Co.....	3 00	
Benjamin Titus.....	1 00	
Mrs. Alice Spain.....	1 00	
Dr. William A. Wilson.....	1 00	
Stimoon Fortin.....	1 00	
Reverend Harry Harrison.....	3 00	
Payzant Card Co.....	5 00	
		4,402 50
		3,358,253 14
		3,356,468 70

Carried forward.....

Carried forward.....

No. 9.—INTERCOLONIAL RAILWAY.—Continued.

GENERAL BALANCE. Year ended March 31, 1913.—Concluded.

Dr.	\$	cts.	\$	cts.	\$	cts.
Brought forward.....			3,353,233	14		
To Advances:—						
H. M. Stevens.....		5		06		
Sir G. Falconbridge.....	1,500	00				
A. R. Smith.....	20	00				
Hon. J. Bureau.....	150	00				
T. P. Owens.....	550	00				
R. A. Lawlor.....	250	00				
L. G. Denvers.....	200	00				
A. M. McLellan.....	16	65				
Adolphe Bazin.....	23	85				
T. W. Butler.....	500	00				
			3,215	56		
			3,356,468	70		
Brought forward.....						3,356,468 70

E. & O.E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller & Treasurer.

SESSIONAL PAPER No. 20

No. 10.—INTERCOLONIAL RAILWAY.

Year ended March 31, 1913. STATEMENT OF Receipts and Expenses.

Expenses.	\$	cts.	Receipts.	\$	cts.
Maintenance of way and structures.....	1,848,458	08	Received from Parliamentary appropriations on account of Intercolonial Railway Working Expenses through the Department of Railways and Canals.....	11,979,982	69
Traffic expenses.....	3,041,672	80	Balance at credit of Equipment Renewal Account at April 1, 1912.....	765,950	44
Transportation expenses.....	6,250,481	05	Cash received for sale of old rolling stock.....	28,757	83
General expenses.....	6,378,894	67	Amount paid for rolling stock and charged Equipment Renewal Account.....	8,043	89
Amount expended for renewal of rolling stock.....	270,476	09	Amount of surplus in Road Stock account transferred to Equipment Renewal Account.....	132,539	41
Amount expended for renewal of buildings, &c.....	453,751	80	Balance at credit of Rail Renewal Account, at April 1, 1912.....	160,784	80
Balance:—			Unclaimed wages credited to Rail Renewal Account.....	2	98
Equipment renewal account.....	1,839	77	Balance at credit of Fire Renewal Account at April 1, 1912.....	56,269	40
Rail renewal account.....	228,926	52			
Fire Renewal Account.....	102,763	17			
				13,132,131	44
				16,132,131	44

MONCTON, N.B.
E. & O.F.

Comptroller & Treasurer.
S. L. SHANNON,

No. 11.—INTERCOLONIAL RAILWAY.

Equipment Renewal Account.

On the 1st April, 1912, there was a balance to the credit of the Equipment Renewal Account of.....		\$ 765,950 44
During the year ended 31st March, 1913, there was credited to the Equipment Renewal Account on account of charges to working expenses.....		1,077,863 74
Cash received for sale of old rolling stock.....		28,757 83
Amount paid for rolling stock charged Equipment Renewal Account and subsequently transferred to rolling stock capital.....		8,043 89
Surplus in road stock.....		132,339 41
		2 012,955 31
There has been charged during the year against the above amount :—		
24 Locomotives were paid for in full.....	\$ 509,734 47	
On account of four more locomotives a progress estimate was paid of Leaving a balance due on these four locomotives of \$22,780 which was paid during the fiscal year 1913-14.	44,220 00	
A balance was also paid in the year ended 31st March, 1913, on a final estimate for three locomotives delivered during previous year of	2,000 00	
Cost of inspection of locomotives paid during the year ended 31st March, 1913.....	2,078 18	
698 box cars.....	794,657 60	
100 platform cars.....	90,625 00	
35 refrigerator cars.....	65,570 00	
80 steel coal cars.....	122,695 00	
1 tank car.....	2,695 00	
10 stock cars.....	10,950 00	
Cost of inspection of these cars paid during the year ended 31st March, 1913.....	3,811 91	
Air brake material supplied contractors for the construction of the above mentioned cars, and cars now under construction.....	77,154 71	
Balance of cost of one refrigerator car constructed in Moncton shops during the previous year.....	516 64	
Balance of cost of 36 platform cars constructed in Moncton shops during the previous year.....	9,293 65	
Amount expended in Moncton shops on 10 vans under construction	9,966 65	
Material supplied for 50 box cars constructed in Moncton shops during the previous year.....	25,376 89	
Material and labour supplied for 50 box cars under construction in Moncton shops.....	27,030 61	
1 snow plow.....	4,910 00	
1 dining car.....	25,050 00	
2 sleeping cars.....	54,800 00	
2 postal cars.....	18,492 77	
5 first class cars.....	77,750 00	
Balance paid for 3 first class cars delivered during previous year.....	800 00	
Freight charges on cars delivered during the previous year and returned for alteration.....	111 60	
Material supplied for 3 baggage cars now under construction, in the year 1913-14.....	360 00	
Amount transferred from capital account, being difference in cost of 1 dining car and 2 sleeping cars and the amounts estimated in capital account vote for same.....	9,752 30	
Amount paid for silverware for 1 dining car.....	1,059 86	
Cost of inspection of these cars during the year ended 31st March, 1913.....	2,579 11	
Balance of cost of 1 combined passenger and baggage car constructed in Moncton shops.....	553 82	
Balance of cost of 1 milk car constructed in Moncton shops.....	91 20	
Amount expended for changing 3 motor cars to first class cars.....	915 73	
Amount expended on 3 colonist cars under construction in Moncton shops.....	14,812 42	
Air brake material supplied from Moncton shops.....	1,200 42	
		2,011,615 54
Leaving a credit balance to the credit of Equipment Renewal Account on the 31st March, 1913.....		1,339 77

No. 12.—INTERCOLONIAL RAILWAY.

Rail Renewal Account.

On April 1, 1912, there was a balance to the credit of the Rail Renewal account of	\$160,784 80
During the year ended March 31, 1913, there was credited to Rail Renewal Account on account of charges to working expenses.	150,000 00
Unclaimed wages credited to Rail Renewal Account.....	2 98
	<hr/>
	\$310,787 78
There has been charged during the year against the above amount	81,861 26
	<hr/>
Leaving a credit balance to the credit of Rail Renewal Account on March 31, 1913	\$228,926 52
	<hr/>

E. & O. E.,
 MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 13.—INTERCOLONIAL RAILWAY.

Fire Renewal Account.

On April 1, 1912, there was a balance to the credit of Fire Renewal Account of	\$ 56,269 40
During the year ended March 31, 1913, there was credited to Fire Renewal Account an account of charges to working expenses.	60,000 00
	<hr/>
	\$116,269 40
There has been charged during the year against the above amount	13,506 23
	<hr/>
Leaving a credit balance to the credit of Fire Renewal Account on March 31, 1913	\$102,763 17
	<hr/>

E. & O. E.,
 MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 14.—INTERCOLONIAL RAILWAY.

Statement of Cash Received, Year ended March 31, 1913.

To Balance on hand at April 1, 1912.....			
Amounts received during the year ended March 31, 1913, and credited as follows:—		\$ 2 33	
Station agents.....	\$9,310,760 79		
Traffic ledger.....	2,853,393 89		
Car service ledger.....	242,513 87		
Individuals and companies ledger.....	1,608,350 22		
Rents ledger.....	20,486 99		
General ledger.....	30,833 32		
		14,066,339 08	
			14,066,341 41
By amounts deposited to the credit of the Honourable Receiver General of Canada during the year ended March 31, 1913.....			\$14,066,298 36
Leaving a balance on hand on March 31, 1913. Made up as follows:—			43 05
Vouchers.....	\$ 41 92		
Discount.....	47		
Change.....	66		
			14,066,341 41

E. & O. E.,
MONCTON, N.B.

S. I. SHANNON,
Comptroller and Treasurer.

INTERCOLONIAL RAILWAY.

STATEMENT of Averages, year ending March 31, 1913.

Mileage of railway	1,468.15
Engine mileage	10,279.369
Total train mileage	8,147.819
Total car mileage	115,787.028
Ratio of earnings to gross earnings—	Per Cent.
Revenue from transportation	99.16
Revenue from operations other than transportation.....	.84
Gross earnings per mile of railway.....dollars.	8,162.98
“ engine mile	1.17
“ train mile	1.47
“ car mile	10.35
Ratio of expenses to gross earnings—	Per Cent.
Maintenance of Way and Structures	17.17
Maintenance of equipment	25.38
Traffic expenses	1.92
Transportation Expenses.....	53.23
General expenses	2.26
Expenses per train mile—	
Maintenance of way and structures.....cents.	25.26
Maintenance of equipment	37.33
Traffic expenses	2.83
Transportation expenses	78.29
General expenses	3.32
Total per train mile.....	147.03
Expenses per mile of railway—	
Maintenance of way and structures	dollars. 1,402.07
Maintenance of equipment	“ 2,071.77
Traffic expenses	“ 156.99
Transportation expenses	“ 4,344.85
General expenses	“ 184.23
Total per mile of railway	8,159.91
Locomotive and car repairs per locomotive and car—	
Locomotives	dollars 2,062.62
Passenger cars	“ 623.93
Freight cars	“ 52.85

C. F. BURNS,
Auditor of Disbursements.

S. L. SHANNON,
Comptroller and Treasurer.

No. 1.—WINDSOR BRANCH RAILWAY.

Revenue Account, Year ended March 31, 1913.

Expenditure.	\$ cts.	Earnings.	\$ cts.
Maintenance of way and structures.....	29,970 62	Passenger earnings.....	18,622 99
Balance	38,276 08	Freight earnings.....	48,471 87
	68,246 70	Mail earnings.....	1,151 84
			68,246 70

E & O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 2.—WINDSOR BRANCH RAILWAY.

Maintenance of Way and Structures, Year ended March 31, 1913.

	\$ cts.
Superintendence	1,861 42
Ballast.....	285 10
Ties	4,789 09
Rails	2,659 41
Other track material.....	2,205 33
Roadway and track.....	11,110 73
Removal of snow, sand and ice	312 00
Bridges, trestles and culverts.....	1,222 50
Grade crossings, fences, cattle guards and signs.....	1,482 40
Signals and interlocking plants.....	2 89
Buildings, fixtures and grounds.....	3,680 95
Roadway, tools and supplies.....	201 99
Stationery.....	19 59
Other expenses.....	137 22
	29,970 62

E. and O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller & Treasurer.

No. 3.—WINDSOR BRANCH RAILWAY.

GENERAL Balance. Year ended March 31, 1913.

DR.	\$ cts.	CR.	\$ cts.
To stores department	8,331 09	By Dominion account	8,331 09

E. and O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

No. 4.—WINDSOR BRANCH RAILWAY.

Months.	Passenger Earnings.	Freight Earnings.	Mail Earnings.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1912—				
April	1,451 09	2,686 82	95 68	4,233 59
May	1,124 17	2,503 95	95 68	3,723 80
June	1,606 80	2,250 28	95 68	3,952 76
July	1,885 34	2,511 27	96 91	4,493 52
August	2,372 07	2,525 69	96 91	4,994 67
September	2,731 32	5,037 10	96 90	7,865 32
October	2,014 84	7,776 39	96 91	9,888 14
November	790 62	6,248 11	96 90	7,135 63
December	1,829 60	4,110 19	96 91	6,036 70
1913—				
January	892 79	4,645 06	94 45	5,632 30
February	743 40	4,237 51	94 45	5,075 36
March	1,180 95	3,939 50	94 46	5,214 91
	18,622 99	48,471 87	1,151 84	68,246 70

E. and O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller and Treasurer.

4 GEORGE V., A. 1914

INTERCOLONIAL

STATEMENT of Casualties for

Date.	Time of Day.	No. of Train.	Description of train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1912.							
April 9	14·50		Shunter.....	J. Doiron.	G. Lutes.....	131	Sayabec Yard.....
" 13	19·10	Special.	Freight.....	W. Brownrigg...	J. Jones.....	1094	Two miles west of Riversdale.
" 15	19·00	72	G.T.R.....	A. McLean.....	H. Taylor.....	2524	Near St. Romauld Sta.
" 16	13·40	Special.	Freight.....	E. Mitchell.....	A. Jarest.....	92	Drummondville Bridge.
" 17	19·12		Shunter.....		A. Probert..	803	Stellarton Yard....
" 22	13·30	Special.	Freight.....	J. W. Coles.....	W. Gross.....	154	Amherst Yard. . .
" 27	5 00		Shunter		T. W. Henry.....	107	Campbellton Sta... Near St. Romauld
" 28	20·10	Special.	Immigrant..	E. Johnson.....	L. Starrett...	313	Main Street Crossing, Amherst
May 2	16·50						Truro.....
" 2	17·20	224	Mixed.....	J. J. Fraser.....	R. L. Smith.....	1074	Near Bridgeville Station.
" 7	5·50		Shunter		C. Tobin.....	57	Sydney Yard.....
" 7	8·00		"		C. Coleman.....	821	Richmond Yard....
" 7	13·15				L. Dutil.....	443	Chaudiere Curve...
" 8	19·55	12	Freight. . .	G. L. Nixon . . .	W. Gunning.....	17	Cemetery Crossing, near St. John.
" 10	16·30		Shunter		W. Atkinson.....	1012	North Sydney.....
" 20	7·00		"	J. E. Rioux.....	J. Albert.....	99	Montmagny.....
" 25		146	Passenger	N. St. Pierre.....	Jas. Houston.....	606	Near St. Lambert..
" 28	19·40	304	Mixed . . .	R. Henry.....	J. Cameron.....	1063	Near Blackville....
" 28	7·34	150	Passenger	J. Rioux.....	J. Mills.....	434	St. Romuald.....
" 28	19·42	19	"	J. Martin.....	J. Collison.....	645	Lorways Crossings, Sydney.
June 9	23·25						Cashins Cut.....
" 11	5·30						Near Main Street, Amherst.
" 11	6·20		Shunter	C. Fournier.....	A. J. McDonald..		Kempt.....
June 19	15·10		Shunter	R. G. Duff.....	C. Cool.....	119	Bathurst.....
" 21	11·40	Freight,	Special.. .	S. McPherson...	L. McLean.....	1011	Rory's Siding.....
" 22	10·10	34	Passenger..	T. W. Johnson...	J. W. Nairn.....	418	Near Oxford.....
" 22	13·32	3	G.T.R.Pass.	H. Gendron . .	F. Johnson.....	2202	¼ mile w. of Lewis..
" 25	7·03	19	Passenger..	J. Gillespie.....	J. Clarke.....	402	Young St. crossing, Halifax.
" 29	21·50	419	"	R. H. Wilkins... .	W. Atkinson.....	1012	Near Sydney Mines
July 6	13·33	63	"	C. D. Phillips... .	W. Levitt.....	1063	Near Richmond . . .
" 10	13·00	34	"	John Berry . . .	Jas. Clarke.....	406	Grand Lake.....

SESSIONAL PAPER No. 20

RAILWAY—Continued.

the Year ended March 31, 1913.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
J. B. Sirois.....	Brakeman.....	Got hand caught while coupling cars.	Fingers smashed..	
A. G. McKenzie....	".....	Cars left track.....	Slightly injured...	
J. Gerrier.....	Fireman.....		Fatal. "	Accidental.
Damase Roberge....	Neither.....	Struck by train while walking on track.	Fatal.	"
Joseph Tessier....	".....	While walking on track under the influence of liquor was struck by train.	Fatal.	"
Mrs. Mary A. Gillis.	Car Cleaner.....	Working inside of car which was struck by train.	Badly shaken up..	
Andrew Downey....	Neither.....	Struck by train while walking on track.	Cut about head...	
A. Murphy.....	Yardman.....	Caught while coupling cars..	Slightly injured...	
Albert Collins....	Passenger.....	Jumped from train.....	Arm badly crushed	
John Finlayson....	Carpenter.....	Coupler fell on hand.....	Hand injured.....	
Daniel Thompson..	Neither.....	While driving over crossing struck by train.	Slightly injured...	
J. McPhee.....	Brakeman.....	Fell off engine.....	Cut about head...	
William Moore....	".....	Fell between cars.....	Both legs cut off..	
Jacques T. Bourasse.	Clerk.....	While attempting to get on engine fell under wheels.	Fatal.....	"
John Hughes.....	Neither.....	Attempted to board train in motion and fell beneath cars.	Fatal.....	Ry exonerated.
John Andrews....	".....	Knocked from car which was struck by engine.	Badly shaken up..	
J. P. Dionne.....	Brakeman.....	Jumped from cars.....	Leg broken.....	
Joseph Marcotte....	Passenger.....	Fell from train while under influence of liquor.	Badly shaken up..	
D. Hanson.....	Brakeman.....	Fell from car.....	Slightly injured...	
Emile Richard....	Fireman.....	While leaning out of cab of engine was struck by mail catcher.	Injured about head	
Stephen Fulton....	Neither.....	Attempting to get on moving train.	Slightly injured...	
Dan A. Nicholson..	".....	Remains found on track....	Fatal.....	"
Percy Cook.....	".....	Supposed to have been struck by train.	".....	Accidental.
Arsene Gauthier....	Brakeman.....	While coupling cars got hand caught.	Hand injured.....	
William Payne....	Brakeman.....	Got hand caught while coupling cars.	Hand jammed....	
W. S. McLeod.....	".....	Got foot caught while coupling cars.	Foot badly crushed.	
Harold Betts.....	Neither.....	Supposed to have been struck by train.	Fatal.....	No inquest.
Joseph Bacon.....	".....	Struck by train while walking on track.	".....	Accidental.
Jas. McNally.....	".....	Struck by train while attempting to cross track.	Badly injured.	
Peter Père.....	".....	Struck by train while walking along track.	Fatal.....	No blame attached to employees.
Gerald Curren....	".....	Struck by train on crossing..	Seriously injured.	
Jas. Clarke.....	Engineman.....	Train jumped track.....	Fatal.....	Railway exonerated from blame.
Peter McGill.....	Fireman.....	".....	".....	
Jas. M. Irwin.....	Tramp.....	".....	".....	
A. McKim.....	Baggagemaster.....	".....	Arm broken.	
W. C. Johnson....	Express messenger..	".....	Slightly injured.	

4 GEORGE V., A. 1914

INTERCOLONIAL

STATEMENT of Casualties for

Date.	Time of Day.	No. of Train	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1912.							
July 10	16:30		Shunter		H. Comeau	1024	Ballast Wharf, Halifax.
" 12	16:45		"		J. Scott	817	Riv. du Loup yard.
" 15	15:10	64	Passenger	J. D. McDonald	J. McLellan	1083	Young St. crossing, Halifax.
" 26	14:35	44	Way-freight	A. LeBel	A. Allard	641	Sacré Cœur
		Special	Freight	H. LeBel	N. Therriault	617	
					L. Boulenger	604	
" 26	22:40	9	Passenger	J. D. McDonald	D. Youlds	634	Truro
Aug. 3	11:00		Special	T. G. Stratton	J. J. Witzell	71	Moncton
" 5			Way-freight	F. Dixon	D. McQuarrie	6	Dalhousie Jct.
" 6	6:50		Special	C. Dixon	A. Chapman	73	Newcastle yard
" 7	12:35		"	J. Boyle	J. King	122	West of Harlaka Jct
Aug. 10	3:30						Norton
" 15	8:00		Shunter				Ste. Flavie Yard
" 15	22:00						Newcastle
" 16	20:46	200	Passenger	F. Coté	J. Cloutier	413	Ste. Hyacinthe
" 17	14:33	199	Passenger	R. Hunter	W. Cross	438	Lutz St., Moncton.
" 17	11:00	34	Passenger	J. Bouthiette	Geo. Findlay	432	Drummondville
" 19	20:07	68	Passenger	C. D. Phillips	H. R. Hale	1083	Richmond
" 20	18:10	Special	Way-freight	D. Heins	T. Townsend	71	Bathurst
" 20	18:00		Work	Jos. Ahearn	J. McEachern	111	Beresford
" 22	16:22	3	Passenger	J. R. McManus	Wm. Furze	635	Petitcodiac

SESSIONAL PAPER No. 20

RAILWAY—Continued.

the Year ended March 31, 1913.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
W. A. Kinnie.....	Traveller.....	Train jumped track.....	Arm broken and hand badly crush'd and bruised about body.	
Thos. Keith.....	Mail clerk.....	".....	Bruised about body.	
Chas. LeBel.....	News agent.....	".....	Ankle sprain'd	
John Berry.....	Conductor.....	".....	Slightly inj'r'd	
Walter Campbell....	Brakeman.....	Fell from footboard of engine....	Leg injured.	
Wm. Beake.....	Passenger.....	Attempted to get on moving train.	Left foot badly crushed.	
Ern. W. Brown.....	Neither.....	Struck by train at crossing.....	Fatal.....	No inquest.
Louis Beljile.....	Passenger.....	Freight train pitched into rear of No. 44 train	".....	Negligence of employes of special train.
Louis Benville.....	Brakeman.....	".....	".....	
Ferd. Roulean.....	".....	".....	Badly injured.	
E. Coté.....	".....	".....	Badly shaken up.	
Alfred LeBel.....	Conductor.....	".....	Badly shaken up.	
Omer D'Anjou.....	Passenger.....	".....	Slightly inj'r'd	
Wm. Dennis.....	".....	Train collided with cars.....	Slightly shaken up.	
Vernon C. Trites....	Brakeman.....	While coupling engine to train..	Hand jammed.	
C. G. Scurr.....	".....	Fell while unloading freight....	Badly shaken up.	
J. McDermott.....	Fireman.....	Collision.....	Injured about face and back	
G. Baker.....	Neither.....	Supposed to have been struck by some train.	Fatal.....	Accidental.
Fred McKinnon....	Baggagemaster.....	Supposed to have been struck by some train.....	Fatal.....	Accidental.
Albert Michaud....	Brakeman.....	While coupling cars.....	Thumb crushed.	
John Doughney....	Employee.....	Fell off box car.....	Fatal.....	No inquest.
Miss Exhilde Averd.	Passenger.....	While getting off train.....	Ankle sprain'd.	
Mrs. J. Edington...	Neither.....	Struck by train while walking along track.....	Fatal.....	Employees exonerated from blame.
Mrs. Arthur Trinque.	Passenger.....	While alighting from train....	Slightly injured.....	
H. R. Hale.....	Engineman.....	Collision.....	Fatal.....	No inquest.
Jos. R. Campbell...	Passenger.....	.....	Slightly injured.	
Mrs. A. Hanes.....	Passenger.....	.....	Slightly injured.	
Mrs. Taylor.....	Passenger.....	.....	Slightly injured.	
Wilfred A. Drisdell.	Passenger.....	Fell off train.....	Hand cut off..	
Léon Boudrean... ..	Employee.....	Fell from car.....	Arm broken.	
Harry McFarlane...	Neither.....	Struck by train while driving over crossing.....	Fatal.....	No inquest.
Marshall Bannister.	Neither.....	.....	Badly injured.	

4 GEORGE V., A. 1914

INTERCOLONIAL

STATEMENT of Casualties for

Date.	Time of day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1912.							
Aug. 27	7:30	18	Passenger ..	W. A. Munn	T. W. Hennessy ..	420	Stellarton
" 27	9:20	Special	Freight	W. J. Atkinson ..	J. Rioux	45	Pt. Levi
" 31	13:15	.....	Freight	E. S. Vye	H. Cameron	1046	Newcastle Yard ..
" 31	20:45	.....	.....	.....	J. C. McKay	53	Stellarton Yard ..
" 31	20:20	.....	.....	.....	W. N. Ingram	635	Gilbert's Lane Cross- ing, St. John
Sept. 3	22:30	17	Passenger ..	J. J. McNeil	D. Duncan	436 2	miles west of Hopewell
" 4	22:40	.....	Shunter .....	.....	Jas. Coleman	1007	St. John Yard
Sept. 6	16:15	.....	Way-freight	F. Dixon	A. Cook	89	Barnaby River
" 7	.....	.....	Shunter .....	.....	J. Williams	1007	Sullivan's Siding, St. John
" 7	11:10	Special	Freight	F. A. Fowlie	A. Robbins	148	Oxford Junction ..
" 10	10:30	.....	Way-freight	D. Hains	J. Stewart	483 3	miles east of Bar- naby River
" 10	14:00	150	Passenger ..	A. Demers	A. Levesque	427	Trois Pistoles
" 14	10:00	.....	Shunter .....	.....	Samuel Watson ..	814	Main St. Crossing, Moncton
" 17	.....	.....	.....	.....	.....	.....	Chaudiere Bridge ..
" 18	23:45	.....	.....	.....	.....	.....	Pictou
" 21	18:45	176	Freight	N. Pushie	W. Chisholm	88	1½ miles east of Har- bour au Bouche ..
" 27	21:00	199	Passenger ..	H. Aubin	J. McDavie	433	Little Metis
" 28	7:30	Special	Freight	A. McKenzie	J. S. McKee	46	Harcourt
Oct. 3	10:30	.....	Shunter	R. G. Duff	C. Cool	119	Bathurst
" 4	16:25	3	Passenger ..	C. B. Clarke	G. A. Stone	627	Petitcodiac
" 4	15:30	Special	Freight	E. Hewitt	L. Turnpinst	62	Acadia Yard, West- ville
" 7	9:43	33	Passenger ..	J. Michaud	D. Charrier	410	Public crossing west of St. André
" 20	18:00	.....	.....	.....	.....	.....	Moncton Shops
" 21	10:15	.....	.....	.....	.....	.....	Cumming's Pit, River Denis
" 21	15:00	Special	Freight	J. Deschamplain ..	J. McNaughton ..	10	McKinnon's Brook Bridge
Oct. 22	23:00	102	Mixed	R. J. McNeil	J. Gallivan	65	Rivers Denys
" 29	17:00	.....	Shunter .....	.....	W. F. Smallwood ..	811	Moncton Yard
Nov. 4	13:05	50	Freight	A. Harris	J. Parent	611	Cap St. Ignace
" 4	18:23	67	Passenger ..	C. D. Phillips	Jos. Elliott	634	Young St. Crossing, Halifax
" 9	12:45	Special	Freight	R. G. Duff	C. Cool	156	Belledune

SESSIONAL PAPER No. 20

RAILWAY—Continued.

the Year ended March 31, 1913.

Name of person injured	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Miss Jessie McDonald	Neither	Fell while getting off car steps	Slightly injured.	
J. L. Hebreux	Brakeman	While jill-poking cars, stick broke	Slightly injured.	
Duncan Allanach	Brakeman	Tripped and fell while coupling cars	Back badly injured.	
Minnie McDonald	Neither	Struck on head by lump of coal	Head injured.	
Eloi Lirette	Neither	Struck by engine	Fatal	Accidental.
Gordon Mulloy	Passenger	Fell off train while under influence of liquor	Slightly injured.	
Jas. Gould	Neither	Run over by engine	Fatal	Accidental.
F. P. Appleby	Brakeman	Fell while unloading freight	Hand injured	
Wm. Sandbrook	Neither	Engine struck car on which he was unloading iron	Fingers badly crushed	
W. J. Richards	Brakeman	While uncoupling cars	Fingers jammed	
John Garlash	Neither	Struck by train while lying alongside track	Fingers injured	
Arsene Ouellet	"	Struck by train while driving over crossing	Fatal	No inquest.
Joseph Gagnon	"	"	Badly injured	
Mrs. John O'Rourke	"	Struck by engine while crossing track	Fatal	Ry. employees exonerated.
Jos. Dugas	"	Supposed to have fainted and fallen off bridge	Fatal	Accidental.
Laughlin McInnis	"	Walked off end of wharf into harbour	Fatal	No inquest.
W. Kerr	Brakeman	Fell off train	Badly injured about head	
E. Dubé	Neither	Struck by train while driving over crossing	Fatal	Accidental.
Crawford Bailey	"	Attempted to cross track in front of train	Slightly injured.	
W. R. Gilker	Brakeman	Stepped on piece of iron	Foot badly sprained	
Miss L. Perry	Neither	Struck by train while attempting to cross track	Fatal	No inquest.
J. W. Mackay	Brakeman	Foot caught in switch frame when attempting to get on engine	Leg and arm badly injured	
J. B. Lapointe	Neither	Struck by train while driving over crossing	Seriously injured.	
Stephen H. Berry	Labourer	Struck knee against machine	Knee badly injured	
Philip McLeod	Employee	While moving cars, fell	Left leg broken	
Miss Emelienne Chrétien	Neither	Stumbled and fell off bridge in trying to cross over it ahead of train	Badly injured	
Robt. Johnson	Passenger	Got caught when cars left track	Badly injured.	
M. Purdy	Brakeman	While coupling cars	Hand crushed.	
C. Turgeon	Brakeman	While attempting to get on train	Left leg cut off.	
Thos. Betts	Neither	Struck by train while attempting to cross track	Badly injured.	
J. Dempsey	Brakeman	While coupling cars	Finger smashed.	

4 GEORGE V., A. 1914

INTERCOLONIAL

STATEMENT of Casualties for

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	Number of Engine.	Place of Accident.
1912.							
Nov. 13	19:20	Special	Freight	A. A. McNeil	J. McRury	83	Sydney
" 15	19:30	17	Passenger	J. R. Fisher	J. Wall	401	Young St. Crossing, Truro
" 16	11:00						Pictou
" 20	6:45		Freight	John Cochrane	M. J. Taylor	426	Sunny Brae Stn.
" 21	11:00						Pictou
" 21	14:00		Shunter	John Kelly	A. Dunbar	620	Mulgrave Yard
" 26	6:43	133	Passenger	J. B. Crockett	G. B. Story	636	Robinson St. Moncton
" 29	16:47	Special	Freight	A. Plourde	J. A. Michaud	110	L'Islet
Dec. 1	5:55		Shunter			825	Halifax
" 3	9:34	145	Passenger	N. St. Pierre	Jas. Houston	619	Public crossing East of St. Bruno
" 9	4:00	39	Way-freight	J. Swetnam	A. J. Russell	113	Newcastle Yard
" 13	14:55	104	Freight	J. H. Pushie	Wm. McDonald	64	2½ mil. West of Alba.
" 15	12:35	33	Passenger	A. Bégin	J. Miller	431	St. Joseph Stn.
Dec. 16	3:18	148	Way-freight	T. Dussault	A. Bégin	87	Mitchell
" 19	22:00	33	Passenger	P. Sirois	W. Mountain	147	
" 19	13:30		Freight	J. A. Bouchard	R. L. Mitchell	442	Southwark Yard
" 19	13:30		Freight	G. A. Mackay	H. Cummings	44	Trenton
" 20	6:35	34	Passenger	T. C. Ayer	O. McGinity	419	Regersville
" 20	22:00		Shunter		P. O'Leary	811	Main Street, Moncton
" 26	11:40		Shunter	J. Rioux	F. Cloutier	45	St. Romuald
" 26	3:00		Shunter		J. Kean	96	Ste. Flavie Yard
" 27	20:50		Shunter		R. Hamilton	823	Truro Yard
" 31	15:30						Round House, Halifax
1913.							
Jan. 1	23:00	329	Passenger	P. Keenan	H. Belyea	1053	Fredericton Station.
" 9	5:36						St. John
" 10	7:30		Light engine			1006	Riv. du Loup Yard.
" 10	14:00	Special	Freight	G. A. McKay	H. Cummings	146	Trenton
" 13	17:50	Special	Freight	J. Brownell	J. L. Kennedy	152	Memramcook
" 14	1:45	Special	Freight	W. Lacombe	J. Hudon	110	L'Islet
				N. Grondin	E. LeBel	614	
Jan. 15	14:35	137	Passenger	H. G. Thompson	W. H. Anderson	1047	St. John Yard
" 21	14:30						Moncton Shops
" 25	12:10	Special	Freight	E. Johnson	G. Gaxley	1096	Dartmouth

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RAILWAY—Continued.

the Year ended March 31, 1913.

Name of person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Archie Jeudry..	Neither..	Supposed to have been struck by train.	Fatal ..	Accidental.
Mrs. Grent.....	Passenger.....	Jumped from moving train..	Slightly injured.	
Warren Jollymore..	Checker.....	Boiler plate fell on leg.....	Leg injured.	
John Northrup.....	Employee.....	Struck by train.....	Fatal ..	Speed train excessive approaching Stn.
J. C. Profitt.....	Employee.....	Tripped and fell while unloading freight.....	Slightly injured.	
Joseph Smith.....	Brakeman.....	While coupling cars.....	Foot crushed.	
Thos. Best.....	Neither.....	Struck by train while walking on track.....	Badly injured.	
A. Plourde.....	Conductor.....	While getting down side of car, ladder broke.....	Badly shaken up.	
G. F. Neary.....	Brakeman.....	Slipped and fell while getting off engine.....	Back and legs injured.	
Arthur Collins.....	Neither.....	Supposed to have been struck by train.....	Fatal ..	Employees exonerated from blame
W. P. McInnis.....	Fireman.....	Lump of coal fell on his head.	Head injured.	
Wm. McDonald.....	Driver.....	Train left track.....	Ankle sprained.	
Patrick Barrigan.....	Neither.....	Struck by train while walking on track.....	Fatal ..	Accidental.
W. Mountain.....	Engineer.....	Collision.....	Slightly injured.	
A. Demers.....	Fireman.....		Slightly injured.	
J. A. Bouchard.....	Conductor.....	Supposed to have been struck by shunting engine.....	Fatal ..	Accidental.
Percy Crane.....	Neither.....	Engine struck steam shovel under which he was working	Badly injured.	
John D. Brock.....	Passenger.....	Struck by a truck which was hit by train.....	Slightly injured.	
H. H. Archibald.....	Employee (not on duty).....	Jumped from 33 train and was struck by shunter.....		No inquest.
R. Begin.....	Brakeman.....	Car left track.....	Slightly injured.	
Albert Michaud.....	Yardman.....	While uncoupling hose.....	Right leg scalded.	
S. Horton.....	Brakeman.....	Got foot caught under wheels.	Foot badly crushed	
Peter McRae.....	Carpenter.....	While working at planer.....	Thumb and finger cut off.	
Garnett Love.....	Neither.....	Attempted to get on moving train.....	Fatal ..	No blame attached to railway or employees.
Geo. Crawford.....	Fire Builder.....	Walked into ash pit.....	Leg injured.	
Aurele Dumont.....	Brakeman.....	While coupling cars.....	Left foot crushed.	
S. Sweeney.....	Neither.....	Fell under wheels of engine..	Leg badly crushed.	
M. Crockett.....	Brakeman.....	Fell while unloading freight.	Badly shaken up.	
J. Hudson.....	Engineer.....	Freight Special collided with engine on main line.....	Fatal ..	Accidental.
J. E. Roy.....	Fireman.....		Badly injured.	
A. Rioux.....	Brakeman.....		Badly injured.	
E. LeBel.....	Conductor.....		Injured about head	
A. Saindon.....	Fireman.....		Badly injured.	
A. Jean.....	Brakeman.....		Slightly injured.	
Chas. Gauvin.....	Brakeman.....		Slightly injured.	
Horace Rivard.....	Brakeman.....		Slightly injured.	
Clement Leonard.....	Neither.....	Struck by train while attempting to cross track.	Badly injured.....	
Frank Killam.....	Fitter.....	Plate fell on foot.....	Badly bruised....	
Edward Burke.....	Brakeman.....	Fell from box car.....	Both ankles badly sprained.	

4 GEORGE V., A. 1914

INTERCOLONIAL

STATEMENT of Casualties for

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1913.							
Jan. 26.		Special	Freight	D. Sweeney	A. Cook	8	Kent Jet
" 28.	7.43	147	"	P. Tardiff	A. Gidette	643	Bolœil Stn.
" 28.	5.40	Special	"	J. W. Coles	E. Rushton	24	East Mines
" 28.	16.00						Moncton Shops
" 29.	15.00		Shunter		R. Hamilton	833	Truro Yard
Feb. 1.	1.30		"		P. McInnis	54	Deep Water Terminus, Halifax.
" 3.	11.30	Special	Freight	G. A. McKay	H. Cummings	63	Trenton
" 9.	1.45		Shunter		D. Stewart	76	Truro
" 10.	7.00		"		G. Cuthbertson	801	St. John Yard
" 11.	6.00		"			813	Ste. Flavie
" 11.	9.00	71	G.T.R. Spl.	L. Smith	R. Emond	2438	Chandiere Jet
" 21.	10.16		Shunter		J. Jones	65	Pt. Tupper Yd.
" 25.	17.30	39	Freight	W. W. Irving	A. Russell	13	Two miles West of Dalhousie Jet.
Mar. 1.	10.30						Moncton Shops
" 1.	10.50	34	Passenger	A. Legace	W. E. Turner	442	East of Drummondville.
" 3.	16.10	42	Freight	R. W. Orchard	E. Shirley	50	Lac au Saumon
" 6.	8.00	43	Shunter		J. O. Gagnon		Ste. Flavie Yard
Mar. 7	18.15		Light engine		J. D. McKay	627	Moncton Yard
" 10	7.50		Shunter		M. Flavin	825	Halifax
" 10							Near Gayton crossing
" 13	4.30	Immigrant Special		T. G. Stratton	J. Tweedie	623	Dalhousie Jet
" 19	6.20	Special	Freight	J. St. Pierre	G. Mann	202	St. Alexis
" 20	24.50	"	"	J. McLaughlin	G. W. Conway	102	Stellarton
" 23	2.30	"	Auxiliary		G. Wortman	11	Bell Siding, Moncton
" 27	14.50	Special	Freight	J. R. McManus	L. Bradshaw	24	Amherst
" 28	12.20	"	"	D. McKinnon	D. McDonald	65	Sydney River crossing
" 28	8.30	"	"	J. W. Horseman	C. Nickerson	213	Newcastle
" 29	18.35	34	Passenger	F. Laliberte	A. Berube	431	St. Eloi
" 29	21.50	Special	Freight	Z. Berube	Ed. Shirley	416	Millstream
" 30	14.00	"	"	P. Therriault	Ed. Thomas	90	
				C. Proulx	G. Boudreau	98	Chandiere Yard

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RAILWAY—Continued.

the Year ended March 31, 1913.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
C. G. Scurr.....	Brakeman.....	Knocked off van when train collided with car.	Slightly injured...	
John Fournier.....	Neither.....	Struck by train.....	Fatal.....	Accidental.
Hiram Rufuse.....	Brakeman.....	Tripped and fell while going over train.	Knee injured.....	
Calix White.....	Fitter.....	Wrench which he was using slipped from hand.	Breast injured....	
Walter McNutt.....	Brakeman.....	While getting on engine fell under wheels.	Fatal.....	No inquest.
Norman Graham.....	Neither.....	Struck by engine while sleeping alongside of track.	Foot cut off.....	
Sam'l. Matheson.....	Brakeman.....	While coupling cars.....	Fingers crushed...	
S. B. Lane.....	Foreman shunter.....	While uncoupling cars.....	Arm slightly inj'rd	
L. A. Phillips.....	Brakeman.....	While coupling cars.....	Hand badly crush'd	
J. B. Beaulieu.....	Yardman.....	Struck by a projecting truss rod of a car.	Injured about head	
Eustache Tardif.....	Neither.....	Struck by a train while walking along track.	Fatal.....	No inquest.
J. P. McNeill.....	Brakeman.....	Fell off engine under wheels	Right arm crushed and head injured	
Donat LeBlanc.....	Neither.....	Attempting to get on moving train.	Fatal.....	No inquest.
Vincent Backler.....	Machine hand.....	Coat caught in machine....	Arm badly injured.	
Victor Bery.....	Neither.....	Sleeping alongside track while under influence of liquor.	Badly injured....	
J. A. Ouellet.....	Brakeman.....	While unloading freight....	Foot injured.....	
Geo. Levasseur.....	Yard foreman.....	Got caught while uncoupling cars.	Slightly injured....	
James McKay.....	Driver.....	Collided with cars being shunted by stunting engine.....	Fatal.....	Ry. exonerated from blame.
Ross McPherson.....	Fireman.....	.....	Seriously injured.	
Jas. Ryan.....	Brakeman.....	While coupling cars.....	Foot badly injured.	
Mrs. D. Goodell.....	Neither.....	Supposed to have been struck by train.....	Fatal.....	No inquest
Rueben Zahner.....	Passenger.....	Train left track.....	Slightly injured.	
M. Michaud.....	Brakeman.....	Jumped off train and fell.....	Cut about face.	
J. A. McDonald.....	".....	Struck by brake lever.....	Injured about face.	
Blair J. White.....	".....	Got hand caught while coupling cars.....	Hand injured.	
Willard Hanson.....	".....	While unloading freight.....	Hand slightly injured.	
G. Taylor.....	Neither.....	Train struck team.....	Slightly injured.	
W. Hannon.....	Brakeman.....	Fell from box car.....	Slightly injured.	
J. Rossignol.....	Baggageman.....	Baggage car caught on fire....	Hand badly burned	
J. Nadeau.....	Brakeman.....	.....	" " "
L. Cantin.....	".....	.....	" " "
L. E. Benville.....	".....	Collision.....	Slightly injured.	
P. Guay.....	Fireman.....	While working at ash pan trap.	Arm badly crushed.	

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,

CHARLOTTETOWN, P.E.I., May 30, 1913.

SIR,—I have the honour to submit the following report of the working of the Prince Edward Island railway, for the fiscal year ending March 31, 1913.

I also enclose the report of the mechanical superintendent, and the following statements prepared by the accountant and auditor, and the mechanical accountant and storekeeper.

- No. 1. Capital.
 2. Revenue.
 3. Maintenance of way and structures.
 4. Maintenance of equipment.
 5. Traffic expenses.
 6. Transportation expenses.
 7. General expenses.
 8. General stores.
 9. General balance.
 10. Statement of averages.
 Statement of receipts.
 Passenger statement.
 Freight statement.
 Descriptive statement of freight transported.

A. Statement showing the number of locomotives and the various classes of cars.

B. Statement showing the mileage made, and the coal, oil and waste consumed by locomotives.

The mileage of the railway in operation on March 31, 1912, was 267.5 miles. The Elmira branch was opened for traffic on November 25, 1912, the mileage of which is 9.9, making the total mileage of railway in operation on March 31, 1913, 277.4 miles.

CAPITAL ACCOUNT.

The expenditure to March 31, 1912, was \$8,687,727 38

The additions during the year were as follows:—

Branch line, Harmony to Elmira	66,146 15
Increased accommodation, Summerside	6,051 67
To increase accommodation and facilities along the line	8,549 21
Original construction	199 50
Car ferry, &c.	8,276 20
Claims, E. A. Wallberg	13,778 30

Making the total on March 31, 1913. \$8,790,728 41

Branch line, Harmony to Elmira.—This branch line was completed and the road opened for traffic in the month of November last. The outlook for business on this line is none too bright, and its operation will more than likely tend to increase a deficit.

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Increased accommodation, Summerside.—This was material purchased for and labour done to the railway wharf. Piles were driven and covered with heavy hardwood plank on the sides, and considerable repairs were made to top of the wharf.

To increase accommodation and facilities along the line.—This amount was voted for buildings erected in 1911-12 and carried in expense account, which was charged out to capital account in the year just closed.

Original construction.—This was for solicitors' taxed costs in connection with the expropriation of lands which belonged to the estate of the late Lady Louisa Wood—\$49.50—and damages paid to the heirs of the late Dr. P. A. McIntyre as compensation in full for closing of crossing at Souris, \$150.

Car ferry.—This amount was for vouchers made out at Ottawa for engineering work done in connection with proposed car ferry between Cape Traverse and Cape Tormentine.

Claims E. A. Wallberg.—Vouchers were made out by the Department at Ottawa in favour of Mr. E. A. Wallberg on account of building contracts.

REVENUE ACCOUNT.

The revenue has again been in excess of all previous years, marking a steady advance in agriculture and other industries, as well as an increase in the number of visitors, who contributed to the increase of passenger traffic.

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

Gross earnings.	\$ 389,474 07
Working expenses.	489,972 34
	<hr/>
Difference.	\$ 100,498 27

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

In 1911-12.	\$ 367,203 39
1912-13.	389,474 07
	<hr/>
Increase.	\$ 22,270 68

The earnings from passenger traffic compare as follows:—

In 1911-12.	\$ 153,284 42
1912-13.	171,348 57
	<hr/>
Increase.	\$ 18,064 15

The earnings from freight traffic compare as follows:—

In 1911-12.	\$ 176,861 68
1912-13.	180,347 31
	<hr/>
Increase.	\$ 3,485 63

The earnings from mails and sundries compare as follows:—

In 1911-12.	\$ 37,057 29
1912-13.	37,778 19
	<hr/>
Increase.	\$ 720 90

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The number of passengers carried compare as follows:—

	Number.
In 1911-12.	388,076
1912-13.	433,888
	<hr/>
Increase.	45,812

The weight of freight carried compares as follows:—

	Tons.
In 1911-12.	120,218
1912-13.	122,784
	<hr/>
Increase.	2,566

WORKING EXPENSES.

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

In 1911-12.	\$ 449,962 91
1912-13.	489,972 34
	<hr/>
Increase.	\$ 40,009 43

The averages compare with the previous year as follows:—

Per Mile run by Locomotives.

	Cents.
In 1911-12.	103.84
1912-13.	110.72

Per Mile run by Trains.

In 1911-12.	127.43
1912-13.	135.46

Expenditure per Mile of Railway.

In 1911-12.	\$ 1,685 25
1912-13.	1,814 71

TRACK.

54,597 railway ties in main line track, 3,527 culled ties in sidings, and 37 sets switch ties and 30 head-blocks and frames were renewed.

1,500 feet of 50-lb. steel rails were laid in main line of the Vernon section, 1,448 feet 50-lb. steel rails in main line of Vernon River section, and 300 feet 56-lb. steel rails in main line at Kensington, replacing other rails.

Twenty-four new frogs were placed in main line to replace worn frogs.

SIDINGS.

At Tignish 200 feet of 50-lb. steel rails were laid to replace iron rails.

At Alberton 1,800 feet of 50-lb. steel rails were laid in putting in a through siding to Alberton ballast pit, and 600 feet of new spur siding was placed in ballast pit.

SESSIONAL PAPER No. 20

At Summerside a siding, 380 feet long, was constructed, and 1,000 feet of 50-lb. steel rails laid on sidings to replace iron rails.

At Charlottetown a new siding, 500 feet in length, was laid with 50-lb. steel rails, and 600 feet of 50-lb. steel rails laid on sidings in replacing other rails.

At Lake Verde a new siding, 404 feet long, was laid with 50-lb. steel rails.

At Brackley Point a new siding, 200 feet long, was laid with 56-lb. steel rails.

At Perth ballast pit a new siding was laid with 56-lb. steel rails, which is 1,000 feet in length.

FENCING.

53,567 feet new Page wire fence was erected on cedar posts. 3,398 feet permanent snow-fence, and 3,420 feet portable snow-fence were built. Temporary snow-fences were erected with brush and other material, a large quantity having been used for this purpose.

All fences were repaired where necessary.

One hundred farm gates, which were made by our carpenters, were placed where new gates were necessary.

BALLASTING.

Twelve miles of track were ballasted with sand ballast and two and a quarter miles with cinders, during the summer.

BRIDGES.

At Harmony new ties and rail wall plates were placed on bridge.

At Souris a new overhead bridge, 50 feet long, 13 feet wide, and 18 feet high, was built across the wharf track, with hemlock and other timber.

At Mount Stewart the stonework of bridge was painted.

All other bridges requiring repairs received them.

CULVERTS.

At Elmsdale a new concrete pipe culvert, 20 feet long, 15 inches in diameter, was put in to replace a wooden one which was worn out.

At Piusville a new concrete pipe culvert, 28 feet long, 18 inches in diameter, was put in to replace a wooden one worn out.

At New Annan a new concrete pipe culvert, 30 feet long, 20 inches in diameter, was put in to replace a wooden one.

At St. Teresa a new concrete pipe culvert, 30 feet long, 18 inches in diameter, was put in to replace a wooden one.

At Hopefield the stone culvert was repaired and extended.

Five new wooden culverts were built.

Thirty-nine wooden culverts were repaired with timber, and all other culverts requiring repairs were attended to.

Thirty-one cattle-guards were rebuilt with hemlock timber, hard pine stringers, and hemlock mud sills.

WHARFS AND BREASTWORKS.

At Summerside creosoted piles and hardwood piles were driven in wharf, and wharf faced with 3½-inch hardwood plank a distance of 300 feet and to a depth of 10 feet. Covering of wharf was repaired where it was found necessary to do so.

At Georgetown the wharf was repaired with 10-inch x 12-inch hemlock timber, and new fenders placed on it.

At Mount Stewart the wharf was covered with 3-inch hemlock plank.

BUILDINGS AND PLATFORMS.

Tignish.—A new concrete foundation was constructed for turntable, and a second-hand turntable from the Intercolonial railway placed in position. Engine-house and coal shed were repaired. Agent's dwelling was papered and painted, and the ceilings of it whitened.

Deblois.—Station windows were repaired.

St. Louis.—Station windows were repaired.

Alma.—Station doors and windows were repaired.

Alberton.—Coal shed and section tool-house received repairs.

Elmsdale.—Station doors and windows were repaired.

Piusville.—Station doors and windows were repaired.

Bloomfield.—A new foundation was placed under the station, and an addition 15 feet by 22 feet built to freight-house. Waiting room and office were sheathed, and new floors laid in them. The exterior of station was painted.

Howlan.—The interior and exterior of station were painted, and repairs made to doors and windows.

O'Leary.—The ceiling of dining room in agent's dwelling was sheathed, and the room painted.

Coleman.—Exterior of station was repaired.

West Devon.—Station was repaired on the outside.

Conway.—Doors and windows were repaired, and interior and exterior of station painted.

Port Hill.—A new addition was built to agent's dwelling. General repairs were made to inside of dwelling, which was also papered and painted. The exterior of station was painted.

Miscouche.—A new foundation was built under the station. Waiting room and office were sheathed, and new floors placed in them. Station and agent's dwelling were painted on the outside.

Summerside.—A new concrete foundation was constructed for scales, and an ash-pit placed in yard. Roof of water tank was repaired. Inside of baggage-room was sheathed. A new telegraph table was provided for office. Station was repaired where necessary and all other buildings received repairs.

Travellers' Rest.—Station platform was repaired, and the interior and exterior of station painted.

New Annan.—Station platform was repaired. Interior and exterior of station were painted.

Kensington.—Station platform was repaired. Interior of agent's dwelling was papered and painted, and ceilings whitened.

Freetown.—Station platform was repaired. Agent's dwelling was repaired, and the inside of it painted.

Emerald.—Station platform was renewed, and repairs made to the station and dwelling.

SESSIONAL PAPER No. 20

Bradalbane.—New storm doors and windows were made for station. A new hard-wood floor was put down in agent's kitchen and finished in oil, and one room of dwelling painted. Station doors and windows were repaired.

Elliott's.—A new window and door were placed on station, and a new flue built.

Clyde.—Station platform was repaired.

Hunter river.—Station platform, and doors and windows of station were repaired.

North Wiltshire.—Station platform was renewed, and a storm window made for office.

Colville.—Station platform was repaired.

Loyalist.—Station platform was renewed.

Milton.—Station platform was renewed.

Cape Traverse.—Station, dwelling, station platform, engine-house and ash-pits were repaired. A new water closet was built.

Albany.—Station platform was repaired.

Kinkora.—Station platform was repaired.

Royalty Junction.—Agent's dwelling was painted, and a new coal shed built.

Charlottetown.—Roof of freight-house was shingled. Gravel roofs of machine shop, power house and car shop were repaired. General offices were painted and the ceilings whitened. Freight offices were painted inside.

Brackley Point.—A new station platform was built.

Union.—A new stock-pen was erected.

Bedford.—An addition, 15 feet by 22 feet, was built to freight house. Waiting room and office were sheathed and painted, and new floors placed in them. Exterior of station was painted.

Mount Stewart.—Station platform, roof of station, and nun signal were repaired. Exterior of station was painted. Agent's dwelling was papered and painted. A new water closet was built.

Pisquid.—A new station, 11 feet x 25 feet, was built, containing a waiting room and freight room. A new platform, 80 feet long by 3 feet wide, was laid.

Peake's.—Roof of station was shingled. Platform was repaired.

St. Teresa.—A new platform was built opposite church.

48 Road.—A new station, 11 feet x 25 feet, was built, containing waiting-room and freight-room. A new platform was laid.

Perth.—A new station platform was provided, 95 feet long by 4 feet wide.

Cardigan.—Freight house, roof of freight house, and agent's dwelling were repaired. New doors were placed on freight house.

Georgetown.—A new station platform, 60 feet long, 4 feet wide, was constructed. A new covering was placed on semaphore stand. Engine house, coal shed and station were repaired. Station, warehouse and water tank were painted on the outside.

Montague.—Doors and counter of office were changed and repairs made to office. Station and warehouse were painted on the outside.

Morell.—Station was repaired. A new window was placed in dining room.

St. Peter's.—Station platform was renewed.

Midgell.—A new shelter station, 8 x 18 feet, containing waiting room and freight room, and a new station platform were built.

Bear River.—Station platform was renewed.

Souris.—Roof of freight house on wharf was repaired. A new battery room, 6 feet x 8 feet, was built in station.

Fountain Head.—A new shelter station, 8 feet x 18 feet, was built.

Elmira.—Coal shed was rebuilt and a new coal hoist built. A nun signal was placed on station.

Hermitage.—Station received new doors, windows, and flue. Station platform was repaired.

Millview.—Station was provided with new doors, windows and flue.

Vernon River.—Station platform was repaired, and new storm doors placed on station.

Grandview.—Station platform was repaired.

Fodhla.—Station platform was repaired.

Wood Island.—Station platform and roof of station were repaired. A new flue was placed on station.

Uigg.—Station platform was repaired.

Village Green.—Station was provided with new doors, windows and flue.

Hopefield.—Station platform was repaired.

Murray Harbour.—Station doors and windows were repaired. A large number of new sign boards were placed on stations during the year.

STORES.

The value of stores purchased was.	\$ 147,958 41
The value of stores used was.	156,441 14
The value of material sold.	4,130 89
The value of stores on hand at the end of the year was:—	
Miscellaneous.	36,226 61
Fuel.	19,046 59
Roadway and bridge material.	16,573 34
	\$ 71,846 54

GENERAL.

The rolling stock is in good condition. The roadbed has received careful attention. all needed repairs have been made to buildings, and all are in a satisfactory condition. I enclose returns of casualties which occurred during the year.

I have the honour to be, sir,

Your obedient servant,

H. McEWEN,
Superintendent.

F. P. GUTELIUS, Esq.,
General Manager, Canadian Government Railways,
Moncton, N.B.

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT—12 MONTHS ENDING MARCH 31, 1913.

		Dr.	\$	cts.	\$	cts.	1912.	Cr.	\$	cts.
1912.										
Mar. 31..	To cost of P. E. I. Railway, to date.				8,687,727	38	Mar. 31..	By Dominion of Canada.....	8,687,727	38
1913.							1913.			
Mar. 31..	To Branch Line, Harmony to Elmita.....		66,146	15			Mar. 31..	By Dominion of Canada.....	103,001	03
	Claims, A. E. Wallberg.....		13,778	30						
	Inc. Accommodation and Facilities along the line.....		8,549	21						
	Car Ferry, &c.....		8,276	20						
	Inc. Accommodation, Summerside.....		6,051	67						
	Original Construction.....		190	50	103,001	03				
					8,790,728	41			8,790,728	41

E. & O. E.

W. T. HUGGAN,
Accountant and Auditor.

4 GEORGE V., A. 1914

PRINCE EDWARD ISLAND RAILWAY.

REVENUE ACCOUNT—12 months ended March 31, 1913.

EXPENDITURE.	\$	cts.	EARNINGS.	\$	cts.
Maintenance of way and structures..	135,434	58	Passenger.	171,348	57
Maintenance of equipment.....	86,656	33	Freight.....	180,347	31
Traffic expenses.....	1,713	36	Mails and express	26,446	49
Transportation expenses.....	251,186	09	Miscellaneous.....	11,331	70
General expenses.....	15,581	98			
				389,474	07
			Balance	100,498	27
	489,972	34		489,972	34

E. & O. E.
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,
Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF WAY AND STRUCTURES—12 months ended March 31, 1913.

No.		\$	cts.
1	Superintendence.....	3,404	60
2	Ballast.....	5,235	01
3	Ties.....	22,349	25
4	Rails.....	932	43
5	Other track material.....	3,478	98
6	Roadway and track.....	66,646	35
7	Removal of snow and ice	3,757	54
9	Bridges, trestles and culverts.....	1,083	05
10	Over and under grade crossings.....	23	73
11	Grade crossings, fences, cattle guards and signs.....	6,111	68
12	Snow and sand fences, and snow sheds	886	75
13	Signal and interlocking plants.....	248	78
14	Telegraph and telephone lines.....	745	94
16	Buildings, fixtures and grounds.....	16,991	40
17	Docks and wharfs.....	1,130	07
18	Roadway tools and supplies	2,156	43
20	Work equipment, renewals.....		
23	Stationery and printing.....	246	59
25	Other expenses.....		6 00
		135,434	58

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PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF EQUIPMENT—12 months ended March 31, 1913.

	\$ cts.
No. 23. Superintendence.....	6,353 09
29. Steam locomotives, repairs.....	29,902 68
35. Passenger train cars, repairs.....	16,770 37
36. " " " renewals.....	
38. Freight " " repairs.....	16,615 19
39. " " " renewals.....	3,640 16
47. Shop machinery and tools.....	4,236 06
49. Injuries to persons.....	27 90
50. Stationery and printing.....	243 40
52. Other expenses.....	7,375 06
54. Work equipment, repairs.....	1,502 42
	86,656 33

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Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

TRAFFIC EXPENSES—12 months ended March 31, 1913.

	\$ cts.
No. 57. Superintendence.....	21 14
58. Outside agencies.....	
59. Advertising.....	1,092 22
60. Stationery and printing.....	
65. Other expenses.....	
	1,113 36

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Accountant and Auditor.

4 GEORGE V., A. 1914

PRINCE EDWARD ISLAND RAILWAY.

TRANSPORTATION EXPENSES—12 months ended March 31, 1913.

No.		\$	cts.
66	Superintendence	6,193	37
67	Despatching trains	3,226	04
68	Station employees	37,383	57
72	Station supplies and expenses	7,426	13
73	Yardmasters and their clerks	2,661	69
74	Yard conductors and brakemen	2,796	99
76	Yard supplies and expenses	57	93
77	Yard enginemmen	5,360	10
78	Enginehouse expenses, yard	1,537	25
79	Fuel for yard locomotives	3,925	60
80	Water for yard locomotives	120	00
81	Lubricants for yard locomotives	141	72
82	Other supplies for yard locomotives	131	48
86	Road enginemmen	27,096	47
87	Enginehouse expenses, road	12,937	16
88	Fuel for road locomotives	49,779	34
89	Water for road locomotives	2,425	49
90	Lubricants for road locomotives	1,235	18
91	Other supplies for road locomotives	1,143	49
94	Road trainmen	37,720	26
95	Train supplies and expenses	8,652	18
96	Interlockers, block, and other signals, operation	129	80
97	Crossing flagmen and gatemen	420	99
98	Draw bridge operation	691	08
99	Clearing wrecks	822	95
100	Telegraph and telephone, operation	8,372	41
101	Operation floating equipment	215	51
103	Stationery and printing	6,595	06
105	Other expenses	47	50
106	Loss and damage, freight	562	03
107	Loss and damage, baggage	24	65
108	Damage to property	1,073	99
109	Damage to stock on right of way	277	68
110	Injuries to persons	1	00
		251,186	09

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Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

GENERAL EXPENSES—12 months ended March 31, 1913.

No.		\$	cts.
113	Salaries and expenses of General Officers	1,822	15
114	Salaries and expenses of clerks and attendants	7,330	24
115	General Office supplies and expenses	217	11
116	Law expenses	177	02
118	Relief department expenses	5,073	87
120	Stationery and printing	599	93
121	Other expenses	361	66
		15,581	98

E. & O. E.
CHARLOTTETOWN, P.E.I.W. T. HUGGAN,
Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

GENERAL STORES ACCOUNT—12 months ended March 31, 1913.

1912.	DR.	\$ cts.	\$ cts.
March 31.....	To Balance brought forward.....		63,548 56
1913.			
March 31.....	To Purchases during the year.....	147,958 41	
	Charges from other departments.....	8,334 43	
	Labour, etc.....	4,765 25	
	Pay rolls.....	7,811 92	
			168,870 01
1913.	CR.		232,418 57
March 31.....	By Issues during the year.....		160,572 03
	Balance ..		
	{ Ordinary stores, including stationery	36,226 61	} 71,846 54
	{ Fuel	19,046 59	
	{ Roadway and bridge material	16,573 34	

E. & O. E.
CHARLOTTETOWN, P.E.I.

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Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

GENERAL BALANCE—12 months ended March 31, 1913.

DR.	\$ cts.	CR.	\$ cts.
General stores.....	71,846 54	Dominion account.....	95,560 62
Post Office Department.....	11,533 14	Canadian Car & Foundry Co.....	690 69
Cash.....	9,846 47	Rhodes, Curry & Co.....	390 00
Station agents.....	2,789 89	John Simon.....	220 78
Starr Manufacturing Co.....	361 35	Unclaimed wages.....	50 71
Intercolonial Railway.....	244 74	Whitehead Bros.....	42 50
Suspense account.....	103 72		
Grand Trunk Railway.....	68 09		
Rents.....	54 87		
Militia Department.....	56 24		
Local Government, P. E. I.....	20 25		
Judge Weatherbie.....	30 00		
	96,955 30		96,955 30

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PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF AVERAGES—Year ended March 31, 1913.

		Miles.
Mileage of railway		270
Engine mileage.....		442,497
Total train mileage		361,714
Total car mileage.....		2,334,635
Ratio of earnings to gross earnings—		
Passenger.....	Per cent.	46·31
Freight.....	"	43·99
Mails and express.....	"	9·70
Gross earnings per mile of railway.....	Dollars.	1,142 50
" engine mile.....	Cents.	88·02
" train mileage.....	"	107·67
" car mileage	"	16·68
Ratio expenses to gross earnings—		
Maintenance of way and structures.....	Per cent.	34·77
Maintenance of equipment.....	"	25·25
Traffic expenses.....	"	0·29
Transportation expenses	"	64·49
General expenses.....	"	4·00
Expenses per train mile—		
Maintenance of way and structures.....	Cents.	37·44
Maintenance of equipment	"	23·96
Traffic expenses.....	"	0·31
Transportation expenses	"	69·44
General expenses.....	"	4·31
Expenses per mile of railway—		
Maintenance of way and structures.....	Dollars.	501 61
Maintenance of equipment.....	"	320 95
Traffic expenses	"	4 12
Transportation expenses.....	"	930 32
General expenses.....	"	57 71
Locomotive and car repairs, per locomotive and car—		
Locomotive	Dollars.	1,359 21
Passenger cars.....	"	342 25
Freight cars.....	"	39 18

E. & O. E.
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,
Accountant and Auditor.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF RECEIPTS.

Months.	Passenger Traffic.	Freight Traffic.	Mails and Express.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1912.				
April.....	12,019 21	16,669 38	2,288 78	30,977 37
May.....	10,236 09	20,463 38	1,926 51	32,625 98
June.....	12,708 51	14,532 03	1,984 52	29,225 06
July.....	21,319 16	14,300 69	7,245 96	42,865 81
August.....	22,389 19	14,613 57	2,365 92	39,368 68
September.....	17,106 28	11,603 46	1,961 43	30,671 17
October.....	17,364 04	18,667 95	1,974 65	38,006 64
November.....	13,105 90	23,816 00	2,059 75	38,981 65
December.....	13,267 26	16,403 74	2,352 85	32,023 85
1913.				
January.....	10,660 24	9,268 55	7,786 27	27,715 06
February.....	8,619 72	8,845 89	2,935 18	20,400 79
March.....	12,552 97	11,162 67	2,896 37	26,612 01
1912-1913.....	171,348 57	180,347 31	37,778 19	389,474 07
1911-1912.....	153,284 42	176,861 68	37,057 29	367,203 39

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,
Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

PASSENGER STATEMENT.

Months.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1912.						
April.....	36,895	653,849	179	7,981	37,074	661,830
May.....	29,374	631,451	750	36,200	30,124	667,651
June.....	29,667	599,362	1,994	97,787	31,661	697,149
July.....	51,378	1,151,785	2,597	121,495	53,975	1,273,280
August.....	44,334	997,440	5,184	252,120	49,518	1,249,560
September.....	39,699	1,044,994	4,646	216,183	44,345	1,261,177
October.....	29,573	578,923	3,161	154,293	32,734	733,216
November.....	33,453	609,086	1,846	87,595	35,299	696,681
December.....	37,468	723,826	967	41,401	38,435	768,227
1913.						
January.....	26,994	544,605	880	40,953	27,874	585,558
February.....	20,907	470,798	254	13,224	21,161	484,022
March.....	31,166	686,410	522	26,009	31,688	712,419
1912-13.....	410,908	8,692,529	22,980	1,098,241	433,888	9,790,770
1911-12.....	366,523	7,808,956	21,553	1,096,081	388,076	8,905,037

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,
Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

FREIGHT STATEMENT.

Months.	1912-13.		1911-12.	
	Tons.	Mileage.	Tons.	Mileage.
April.....	10,921	430,205	7,066	253,279
May.....	14,054	458,414	12,235	448,504
June.....	9,382	382,150	11,033	383,041
July.....	9,441	347,946	9,609	346,961
August.....	9,853	420,406	7,936	300,511
September.....	8,090	297,267	9,479	315,157
October.....	13,794	437,928	16,476	591,483
November.....	17,458	593,110	14,727	588,829
December.....	10,788	440,702	8,684	387,231
January.....	5,378	239,614	5,360	253,817
February.....	6,030	250,259	7,436	295,254
March.....	7,595	287,045	10,177	454,714
	122,784	4,585,046	120,218	4,618,781

E. & O. E.

CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,

Accountant and Auditor.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

DESCRIPTIVE STATEMENT of Freight transported 12 months ended March 31, 1913.

Products of.	Commodity.	Tons.	
Agriculture.....	Grain.....	14,774	
	Flour.....	4,192	
	Other mill products.....	2,336	
	Hay.....	4,039	
	Tobacco.....	156	
	Cotton.....	60	
Animals.....	Fruit and vegetables.....	12,932	
	Live stock.....	3,626	
	Dressed meats.....	2,757	
	Other packing house products.....	2,959	
	Poultry, game and fish.....	3,529	
	Wool.....	63	
Mines.....	Hides and leather.....	604	
	Anthracite.....	373	
	Bituminous.....	13,356	
	Coke.....	1	
Lumber.....	Stone, sand and other like articles.....	2,629	
	Lumber.....	14,562	
Manufactures.....	Petroleum.....	1,684	
	Sugar.....	1,010	
	Naval stores.....	3	
	Iron, pig and bloom.....	581	
	Other castings and machinery.....	239	
	Iron and steel rails.....	646	
	Bar and sheet metal.....	123	
	Cement, brick and lime.....	2,346	
	Agricultural implements.....	945	
	Wagons, carriages, tools, &c.....	296	
	Wines, liquors, beers.....	599	
	Household goods and furniture.....	751	
	Miscellaneous.....	Other commodities not mentioned above.....	30,613
		Total weight.....	122,784

E. & O. E.

CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,

Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE MASTER MECHANIC,
CHARLOTTETOWN, P.E.I., April 10, 1913.

H. McEWAN, Esq.,
Superintendent, P.E.I. Ry.

SIR,—I beg to submit for your information the following statement of the operation of the mechanical department for the year ended March 31st, 1913.

The following is a summary of the principal work performed:—

LOCOMOTIVES.

Thirteen locomotives received thorough repairs. Eleven locomotives received side and main rod brasses. All the motion and running gear thoroughly examined, staybolts in boilers thoroughly examined, and five hundred and sixteen new staybolts put in boilers.

Six locomotives received specific repairs.

Eight locomotives received new pistons and twelve piston rods. Six tender tanks and six tender frames were largely rebuilt. Three fireboxes were patched. Six cross-heads were made and twelve were tinned and planed. Three engine frames were reworked.

The following new parts were supplied:—

Twenty truck boxes, twelve driving boxes, six whistles, thirteen pops, twenty pop-valves, twenty-four valve stems, twenty slide valves, three hundred and seventy-five sets metallic packing, twenty cylinder cocks, four blow-off cocks, forty punches, six smoke stacks, six tube expanders, one hundred and twenty-five truck straps, six truck bolsters, forty brass valve spindles, ten valve yokes, twenty check valves, twenty-four taps, eight crank pins, four bell ringers, twenty injector spindles, six steam pipes, six throttle glands and valves, sixteen engine springs, and one driving axle.

One hoisting engine fitted out and thirty injectors repaired.

Seventy-two oil cups, twenty grease cups, twenty piston rod oil cups, twelve slush boxes, twenty-four slide blocks, twenty-six air pump cylinders, sixty brake levers, twenty-five brake jaws, four hundred and fifty brake pins, and two hundred and fifty brake bolts were bored and fitted out. Thirty-four sets driving wheels, thirty sets truck wheels, one hundred and twenty sets steel wheels, and ninety new axles were turned off. One hundred and ten sets wheels were pressed on axles. Five hundred and twenty-six new tubes were welded and put in boilers. Seventy thousand pounds of iron and four thousand, one hundred and fifty-one pounds of steel were forged; four thousand one hundred and sixty pounds of nuts were tapped, and a great deal of running repairs too numerous to mention.

CAR DEPARTMENT.

Five box cars, five flat cars, one stock car, one snow plough and two engine cabs were rebuilt and charged to renewals.

The following received heavy repairs:—

Twenty-seven first-class cars, fourteen second class cars, ten postal and baggage cars, one hundred and fifty-one box cars, thirty-five flat cars, five snow ploughs, four flangers and one van.

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The following received light repairs:—

Fourteen first-class cars, seventeen second class cars, thirteen postal and baggage cars, fifty-eight box cars, seventy-three flat cars, one snow plough and four flangers.

Nine cars were resheathed.

Ninety-six oil boxes, twenty-eight brake spindles, twenty-three brake beams, fifty-four sashes, twenty-eight doors, twenty-six truck frames, thirty-eight truck bolsters, ten buffers, five hundred and twenty car frictions, twenty-seven sets car housings and five hundred and forty car castings were made. One hundred and forty-eight wheels, forty-eight new roofs and thirty-four new floors were put on cars.

BRASS FOUNDRY.

Output: 16,775 pounds of brass castings.

COPPER SHOP.

Thirty-eight headlights, twenty-nine discharge pipes, ten copper pipes, three elevator pipes, four oil pipes, four injector pipes, twenty-nine train lamps, fifteen station lamps, twelve passenger car lamps, three semaphore lamps, two conductor's lamps, four tank spouts, one pump, four car baskets, one hundred and ninety oil cans and forty-five water cans were repaired.

Eighty-two engine truck funnels, twenty-six wire joints for steam chests, nineteen water glass shields, three feed pipes, four sand pipes, two oil pipes, two smoke stacks, and two zinc boxes for machine shop were made.

Lead lined forty car bearings and zinc-lined seven ice boxes.

Twelve driving boxes, forty truck boxes and four truck brasses were babitted.

Six crossheads and eleven sets rod brasses were tinned.

Copper pipes on twelve engines softened and examined.

Repaired lagging on eighteen boilers and piped from injector to ashpan in twenty-two engines.

PAINT SHOP.

Thirteen locomotives were painted and varnished.

Fifteen first class cars were cleaned and eleven varnished; two postal and baggage cars were painted, seven cleaned and eight varnished; two second class cars were painted seven cleaned and eight varnished; forty-three box cars were painted, two cleaned and two varnished; one hundred and thirty box car roofs were painted; thirty-five flat cars, eight snow ploughs, four flangers, twenty-three hand cars, one refrigerator car, one oil tank, twenty-five water cans, seventeen loading platforms, sixteen track levels, thirteen outside sashes and eight flag poles were painted. Eight sets outside sashes varnished; three desks, one table and four ticket cases filled and varnished; twenty-nine settees, four tables, fourteen seats, four letter cases, four ticket cases and four desks stained and varnished. Two stations, two offices and Charlottetown station roof painted.

Thirteen sashes glazed, forty-seven sign boards lettered, ninety box cars relettered and three hundred and thirty-six panes of glass put in buildings.

ROAD AND TRAFFIC DEPARTMENT.

Thirty-four loading platforms, eleven freight trucks, one coal hoist, seven cattle loaders, three sheep loaders, three baggage trucks, thirteen coal boxes, six storage boxes, three clothes boxes, three tool boxes, thirty-two doors, thirteen sign boards, two bill boards, three lamp stands, two grindstone stands, four tables, one telegraph table, four ticket cases, four book cases, four desks, twenty-nine settees, two wheelbarrows, fourteen track levels, twelve switch targets, three ladders, one hundred pocket staples, three post hole diggers, six hundred rail braces, twenty-four gate hinges, forty-seven

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cold chisels, forty picks, five switches, sixty switch rods, sixteen switch headers, twenty switch cranks, thirty pairs fish plates, fourteen frogs, thirty-two clawbars, seven push cars, eight windows and sashes, and seven drawers were made.

Eight hand cars were rebuilt. Air compressor thoroughly repaired.

One hand truck, seven freight trucks, four baggage trucks, four hand cars, seven trollies, eight doors, eighty picks, twelve clawbars, sixteen switch cranks and one turntable were repaired.

Steam shovel thoroughly repaired. New tubes in boiler and engine and dipper repaired; also new water tank and smoke stack.

Installed Tignish and Elmira turntables.

On January 1, 1913, an open switch at the oil tanks caused a special train to leave the track, dumping engine No. 25 and cars Nos. 47 and 71 into the ditch. The wreck entailed a cost of \$1,408.50, which is included in working expenses.

I have the honour to be, Sir,

Your obedient servant.

PETER McQUAID.

Master Mechanic.

PRINCE EDWARD ISLAND RAILWAY.

STATEMENT showing the number of Locomotives and the various class of Cars and other Rolling Stock on March 31st, 1913.

	Classification of Cars.													Total.						
	Locomotives.	1st class.	2nd class.	Combined 2nd and baggage.	Postal and smoking.	Combined postal and baggage.	Baggage.	Vans.	Box freight.	Refrigerator cars.	Stock.	Oil tank car.	Hart-Otis convertible cars.		Coal.	Platform.	Total.	Snow ploughs.	Flangers.	Steam shovel.	Total.
On hand, serviceable, March 31st, 1912	22	19	9	5	4	3	6	3	307	3	28	1	15	12	149	564	10	8	1	19
Condemned, April 1st, 1912	9	4	4	2	1	1	2	1	6	1	1	1	1	1	5	25	1	1	1	1
Total Equipment, April 1st, 1912	31	23	13	7	4	4	8	4	313	3	28	1	15	12	154	589	11	8	1	20
Condemned, April 1st, 1912	9	4	4	2	1	1	2	1	6	1	1	1	1	1	2	3	1	1	1	1
Condemned during the year	9	4	4	2	1	1	2	1	7	1	1	1	1	2	3	3	1	1	1	1
Total condemned	9	4	4	2	1	1	2	1	7	2	2	2	2	3	5	6	2	2	2	2
Less rebuilt during the year																				
To be rebuilt or purchased	9	4	4	2	1	1	2	1	5	1	1	1	1	4	23	23	1	1	1	1
Add serviceable and repairing	22	19	9	5	4	3	6	3	308	3	28	1	15	12	150	566	10	8	1	19
Total Equipment, March 31st, 1913	31	23	13	7	4	4	8	4	313	3	28	1	15	12	154	589	11	8	1	20

S. F. HODGSON,
Mechanical Accountant.

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PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of mileage and coal, oil and waste consumed by locomotives for the
Year ended March 31st, 1913.

—	Locomotive Mileage.	Consumption.				Average Consumption per 100 Miles.			
		Tons of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Waste.	Pounds of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Waste.
1912.									
April.	37,010	1,110	536	1,008	740	6,718	1·44	2·72	2·00
May.	38,983	1,093	558	1,128	654	6,280	1·43	2·89	1·67
June.	41,456	1,132	528	1,160	557	6,116	1·27	2·80	1·34
July.	45,957	1,166	680	1,468	750	5,681	1·48	3·19	1·63
August.	46,400	1,126	568	1,360	689	5,436	1·22	2·93	1·48
September.	44,206	1,241	664	1,296	618	6,288	1·50	2·93	1·40
October.	47,415	1,316	600	1,340	650	6,217	1·26	2·82	1·37
November.	40,543	1,223	608	1,140	648	6,757	1·49	2·81	1·42
December.	38,624	1,155	572	1,100	626	6,698	1·48	2·85	1·62
1913.									
January.	32,023	990	564	1,072	605	6,925	1·76	3·34	1·89
February.	30,448	977	388	884	587	7,187	1·27	2·90	1·92
March.	33,034	1,010	476	956	640	6,848	1·44	2·89	1·93
Totals.	476,099	13,539	6,742	13,912	7,764	6,370	1·41	2·92	1·63

S. F. HODGSON,
Mechanical Accountant.

PRINCE EDWARD ISLAND RAILWAY.

Accidents during period ended March 31st, 1913.

—	Cause of Accident.	PASSENGERS.		EMPLOYEES.		OTHERS.		Total.	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1	Fell from cars or engine.								
2	Jumping on or off trains while in motion.				1				1
3	At work on or near the track making up trains.								
4	Putting arms or heads out of windows.								
5	Coupling cars.				1				1
6	Collisions or by trains thrown from track.				1				1
7	Struck by engines or cars on highway crossings								
8	Walking, standing, lying, sitting or being on track.								
9	Explosions.								
10	Striking bridges.								
11	Other causes.				19				19
	Total.				22				22

CHARLOTTETOWN, P.E.I.,
June 4th, 1913.

PRINCE EDWARD ISLAND RAILWAY.
Details of Accidents for the period ending March 31st, 1913.

Date.	Name, address and occupation of persons.	Place of accident.	Cause.	Nature and extent of injury.
1912.				
April 30.	Charles McLean, sectionman, Charlottetown	Charlottetown	Rail fell on foot.	Bruised foot.
May 27.	Archibald McKay, storeman, Charlottetown	"	Fell coming out of lumber warehouse.	Injury to knee.
June 5.	Frank Dorsey, cleaner, Charlottetown.	Along line of Ry.	Shaker bar in engine slipped.	Injury to side.
" 11.	Arthur J. Harper, brakeman, Charlottetown	Vernon	Squeezed between cars.	Injury to ribs.
July 1.	Lemuel Ferguson, labourer, Charlottetown.	Charlottetown	While working on roof of machine shop fell through smoke stack	Injured leg and back.
" 15.	William Bell, cleaner, Charlottetown.	"	While cleaning on engine accidentally drove a piece of steel through his wrist.	Wrist injured.
" 27.	M. S. Lee, sectionman, Vernon River	Vernon River	While breaking off track bolt nut flew and struck him on shin bone.	Leg injured.
Aug. 12.	Duncan D. McDonald, section foreman, Georgetown.	Georgetown.	While alighting from train foot slipped.	Sprained knee badly.
" 28.	James Mallard, labourer, Elmira.	Elmira	While operating track lifter	Smashed thumb.
Sept. 3.	James Lee, sectionman, Charlottetown	Charlottetown	Rail fell on foot.	Foot badly bruised.
" 20.	John Stewart, brakeman, Georgetown.	Georgetown.	While loading baggage caught finger between car door and trunk.	Finger badly bruised and lacerated.
Oct. 21.	John O'Neil, labourer, Charlottetown.	Charlottetown railway yard	Fell while tipping coal tubs.	Ankle sprained.
" 17.	Harry Mallard, labourer, Elmira.	Elmira	While unloading rails	Fingers bruised.
Nov. 14.	Hugh McLeod, extra gang foreman, Bradalbane.	Harmony bridge.	Slipped on side of bank.	Knee sprained.
Dec. 6.	Joseph Fower, labourer, Charlottetown.	Charlottetown	While attending furnace.	Face burned.
" 9.	James A. O'Brien, labourer, Charlottetown.	freight shed.	While splitting wood axe glanced	Part of toe severed.
" 14.	Frank J. Cameron, cleaner, Charlottetown.	Charlottetown	While turning table foot caught between rail of table and rail of pit.	Foot bruised.
1913.				
Jan. 7.	P. E. Dorsey, engine driver, Charlottetown.	Charlottetown, up per St. Peter's road, near crossing.	Tram went off the track.	Side injured.
" 16.	John Kelly, cleaner, Charlottetown	Charlottetown round house.	While turning off light fell into pit.	Side and leg injured.
" 27.	John McEachern, carpenter, Charlottetown.	Bedford	While cutting hole in roof of station slipped.	Injured testicle.
Feb. 12.	Thomas Sweeney, porter, Charlottetown.	Charlottetown	Frozen quarter of beef fell on foot in freight shed.	Bruised foot.
Mar. 13.	Joseph Clark, carpenter, Charlottetown.	Charlottetown carpenter shop.	While sawing boards set screw on counter shaft caught clothing.	Leg injured.

CHARLOTTETOWN, P.E.I., June 2nd, 1913.

INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS
EMPLOYEES' PROVIDENT FUND.

SIXTH ANNUAL REPORT.

MONCTON, N.B., May 30, 1913.

To all Officers and Employees, Contributors to the above fund:

GENTLEMEN,—By instruction of the Provident Fund Board we beg to submit for your information the following report of the operations of the Provident Fund for the fiscal year ended March 31, 1913.

The personnel of the Provident Fund Board for that year was as follows:—

D. POTTINGER, Assistant Chairman, Government Railways Managing Board,
Chairman, Moncton, N.B.

T. C. BURPEE, Engineer of Maintenance, I.C.R., Moncton, N.B. } Appointed
D. McDONALD, Superintendent I.C.R., Levis, Que. } {By the Minister.

WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Truro, N.S. } Elected by the

W. MILLEDGE THOMPSON, Conductor, I.C.R., Moncton, N.B. } Employees.

Four regular meetings of the Board, as required by the regulations, were held during the year.

The following is a statement of the receipts and expenditures during the year ended March 31, 1913:—

Balance at the credit of the fund on March 31, 1912.	\$309,234 71
The contributions made by employees during the year, being one and one-half per cent of their monthly salary and wages were.	\$85,365 23
The contributions made by the railways of an equal amount during the same period, were.	85,365 23
	170,730 46
Amount received for refunds, &c	2,146 00
Interest accrued (at three per cent)	*9,350 20
	\$491,461 37

The expenditures were—

For retiring allowances.	\$133,539 69
For contributions refunded in cases of deceased employees.	2,738 91
For contributions refunded, which were deducted in error.	455 58
For contributions refunded to discharged employees.	167 10
Medical examinations for probationers entering service.	3,128 00
Medical examinations for employees retiring from service.	86 00
For election expenses	467 12
For salaries and travelling expenses, secretary's office.	4,068 30
For Board members—Time lost and travelling expenses.	126 99
For stationery, printing, postage, &c., &c.	655 11
	\$145,432 80

Balance to the credit of the fund on March 31, 1913. \$346,028 57

The following statement shows the amount which was contributed by the railways, and the amount which was contributed by the employees to the Provident Fund, in each fiscal year; since the fund has been in operation. It also shows the number of employees retired, the number of deaths among the same, and the amount paid for

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retiring allowances in each year. The average amount of the retiring allowance, paid in the month of March in each year, is also shown. *\$511 of this amount was earned last year, but was not credited until this.

For Fiscal Year.	Amount contributed by Railways.	Amount contributed by Employees.	No. of Employees placed on Fund.	No. of retired Employees died.	Amount Paid for Retiring Allowances.	Average monthly Allowance paid in March.	Balance at credit of Fund.
	\$ cts.	\$ cts.			\$ cts.	\$ cts.	\$ cts.
1907-8.....	82,707 74	82,707 74	142	11	23,913 04	25 49	139,249 21
1908-9.....	75,306 41	75,306 41	88	17	64,067 63	25 63	225,898 31
1909-10....	69,949 70	69,949 70	168	17	103,628 20	26 30	255,585 08
1910-11.....	71,296 42	71,296 42	51	23	121,014 34	26 56	273,480 01
1911-12.....	81,119 81	81,119 81	29	23	125,131 32	26 04	309,234 71
1912-13.....	85,365 23	85,365 23	63	36	133,539 69	26 78	346,028 57

It will be noted by the above statement of receipts and expenditures that the amount of the contributions received from the railways and from the employees during the year were..... \$170,730 46
 And that the expenditures were..... 145,432 80

Surplus of contributions over expenditures..... \$25,297 66

The gross surplus, including interest, to the credit of the fund on March 31, 1913, was..... \$346,028 57

The Act provides that two members of the Provident Fund Board shall be elected annually, and it was therefore necessary in January, 1913, to arrange for the election of these two members to serve during the year ending March 31, 1914.

Notice calling for the nomination of candidates was accordingly posted as required by the rule, and the election was held in February, 1913.

The two members elected were—

WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Truro, N.S.

BLISS A. BOURGEOIS, Chief Clerk I.C.R., Moncton, N.B.

An order of the Governor-General in Council was passed on May 5, 1913, dissolving the Government Railways Managing Board, and appointing Mr. F. P. Gutelius, General Manager of Government Railways, so that from that date Mr. D. Pottinger ceased to be the chairman of the Provident Fund Board.

The personnel of the Board as at present constituted is as follows:—

F. P. GUTELIUS, General Manager, Canadian Government Railways, Chairman, Moncton, N.B.

T. C. BURPEE, Engineer of Maintenance, I.C.R., Moncton, N.B. } Appointed
 D. McDONALD, Superintendent, I.C.R., Lévis, Que. } by the Minister.

WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Moncton, N.B. } Elected by the
 BLISS A. BOURGEOIS, Chief Clerk, I.C.R., Moncton, N.B. } Employees.

D. POTTINGER,
Chairman.

W. C. PAVER,
Secretary.

Honourable FRANK COCHRANE,
 Minister of Railways and Canals,
 Ottawa, Ont.

PART IV

Report of the Government Chief Engineer of the Western
Division of the National Transcontinental Railway

MR. COLLINGWOOD SCHREIBER, C.M.G.

Office of the General Consulting Engineer to the Government and Chief Engineer of the Western Division of the National Transcontinental Railway.

OTTAWA, CANADA, March 31, 1913.

SIR,—I have the honour to submit my annual report for the fiscal year ended the 31st of March, 1913, on the progress made with the construction of the Western Division of the Grand Trunk Pacific railway.

WESTERN DIVISION.

This division extends westward from the western boundary of the Winnipeg terminals to the City of Prince Rupert, the Pacific terminus.

For construction purposes, this division is divided into two sections, viz.:—

The 'Prairie Section,' extending from Winnipeg to Wolfe Creek, 915 miles in length.

The 'Mountain Section' commencing on the east bank of Wolfe Creek and extending to zero on the Grand Trunk Pacific Railway Company's dock at Prince Rupert, a distance of 830 miles.

PRAIRIE SECTION.

This section, though not absolutely completed according to contract, has continued to be successfully operated for public traffic for the entire year, which has been a great boon to the general public and to the settlers along the line of road.

The principal work executed during the year has been the maintenance and repairs of the buildings, structures, roadbed and permanent way. The works of construction, under the usual acceptation of the term, that have been done are the addition of three and four stalls, respectively, to the round houses at Melville and Watrous for the accommodation of the branch line engines. The erection of:—

4 freight sheds,	1 section house,
3 tool houses,	6 store houses,
2 station houses,	3 loading platforms.
3 stock yards,	

Improving the water service, the laying in of a few sidings and a small amount of bringing up to grade embankments that have settled or slid out.

The western approach to Winnipeg and the line through Edmonton are in the same condition as described in my annual report for the fiscal year ended the 31st of March, 1912. At neither of these points have the Grand Trunk Pacific Railway Company built a through trunk line, but I understand they are seeking legislation during the present session of Parliament to legalize agreements which they have entered into with the Canadian Northern Railway Company for the joint use of the tracks, etc., of the two companies at both points, and to accept such joint use as a compliance with the requirements of their charter and their agreement with the Government by which they were obligated to build a through line from Moncton to the Pacific coast.

MOUNTAIN SECTION.

The progress made with the construction of this section has been most unsatisfactory and disappointing. This, it is alleged by the Grand Trunk Pacific Railway

Company, is due to the unsettled condition of the labour market and to unforeseen difficulties that have arisen in connection with the transport and distribution of supplies and plant along the work, and I am assured that every effort possible has been made to procure labouring men, by having paid agents in the various towns on the lookout to secure them and by the conveyance of labourers over the Grand Trunk Pacific Railway to the works of construction, free of charge.

As regards the distribution of supplies and plant, I am aware that from 600 to 700 teams were engaged on this service during the winter season, and that the contractors built two large passenger and freight steamers at Tete Jaune Cache for service between that point and Fort George, but owing to the unusually light fall of snow in the Rocky Mountain in the winter of 1911-12, the river water subsided so rapidly that after three weeks service the steamers were put out of commission instead of being available for several months. Fortunately, on the east end of the Mountain section, during the winter season, supplies and heavy plant such as steam shovels, dinky engines and muck waggons had been taken in by sleighs over the ice down the Fraser River, otherwise the work would not even be as far advanced as it is.

On the western end of the road, the Grand Trunk Pacific Railway Company ascribe the slowness of progress to the dilatory manner in which the erection of the steel bridges proceeded; the work of tracklaying being delayed, causing much longer haul by team over very bad roads, at great cost, not less than 93 cents per ton per mile.

The present condition of the work may be summarized as follows:—

From mile 0—Wolfe Creek—to mile 210—the crossing of the Rau Shuswap River.—The grading, bridging and tracklaying are practically completed. On this distance, the road for 180 miles has received a good lift of ballast. Upon this section, the following buildings have been erected:—

22 way station buildings,	1 freight house,
2 section houses,	2 divisional stations,
23 tool houses,	2 round houses,
2 machine shops,	1 carpenter shop,
2 coaling plants,	4 water services.

Regular traffic trains are being operated over this 210 miles.

From mile 210—Rau Shuswap River Crossing—to mile 245—Goat River Crossing.—The grading and wooden bridges are about 95% completed and the erection of the steel bridge over the Rau Shuswap River will be completed about the 15th of April, proximo, when the tracklaying will be continued with only short interruptions, to the crossing of the Goat River, at which point it will be held up whilst the steel superstructure of this bridge is being erected.

From mile 245—Goat River Crossing—to mile 275—second crossing of the Fraser River.—About 48% of the grading is done, not including the 2,200 foot tunnel at mile 268, of which only 420 feet has been driven. The character of the material met with in driving this tunnel is a very wet greasy clay which is causing much trouble, but as a temporary line has been built around the tunnel, no delay will occur at this point to the tracklaying, which will probably reach the second crossing of the Fraser River by the 1st of July, 1913.

From mile 275—Goat River Crossing—to mile 362—at Fort George.—The work of clearing the right of way is far advanced towards completion. The grading has been opened up at a number of points, but only a small amount of it has, so far, been done; however, the winter season is being taken advantage of in rushing in supplies

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and plant with a view of prosecuting the work with vigour as soon as the spring opens.

From mile 362—at Fort George—to mile 500—Burns lake.—No work of grading has been done, but the clearing of the right of way is practically completed.

From mile 500—Burns Lake—to mile 570—Bulkly Summit.—About 35% of the grading has been executed, and the clearing of the right of way completed.

From mile 570—Bulkly Summit—to mile 632—the crossing of Boulder creek.—The grading is practically completed and the piles for the wooden bridges are driven.

The necessity for awaiting the construction of several steel bridges will, however, delay the tracklaying, as the erection of the steel superstructures can only be proceeded with as the track reaches in sequence each bridge.

From mile 632—crossing of Boulder creek—to mile 830—zero on the Grand Trunk Pacific Railway Company's wharf at Prince Rupert.—The grading, bridging and tracklaying are practically completed. A lift of ballast has been laid from mile 655 to mile 830—at Prince Rupert—175 miles, and the following buildings have been erected between mile 649 and mile 830:—

22 way station houses.	1 divisional station house.
22 latrines.	1 section house.
27 tool houses.	1 bunk house.
5 water services.	2 dock warehouses.

Upon the mountain section up to this date, there have been 13 tunnels driven, aggregating about 9,000 feet in length; 7 wooden snow-sheds have been built, of an aggregate length of 1,700 feet, and the following steel bridges have been erected, the figures show the number and length of the spans in each case:—

Wolf creek, 2 x 60 feet, 2 x 40 feet, 3 x 150 feet.
McLeod river, 2 x 70 feet, 2 x 40 feet, 4 x 210 feet.
Prairie creek, 9 x 50 feet, 5 x 70 feet.
Rocky river, 1 x 225 feet.
Athabasca river, 3 x 225 feet.
Snaring river, 2 x 225 feet.
Miette river—No. 1—1 x 90 feet.
“ ” 2—1 x 125 feet.
Boulder creek, 1 x 60 feet.
Grant's creek, 1 x 66 feet.
Moose river, 1 x 125 feet.
Fraser river No. 1—1 x 40 feet, 1 x 70 feet, 1 x 175 feet.
Glazier creek, 1 x 90 feet.
McLennan's creek, 2 x 70 feet, 1 x 100 feet.
Sand creek, 1 x 125 feet.
Rau Shuswap river, 1 x 30 feet, 7 x 40 feet, 9 x 60 feet.
Porphyry creek, 5 x 40 feet, 9 x 70 feet.
Mud creek, 5 x 40 feet, 6 x 60 feet.
Skeena river, 3 x 70 feet, 3 x 240 feet.
Ecstews river, 1 x 175 feet.
Kitsumkaylum river, 1 x 225 feet.
Ex-chom-siks river, 1 x 225 feet.
Zim-a-cord river, 1 x 225 feet.
Ka-its-siks river, 1 x 225 feet.
Zanardi rapids, 3 x 55 feet, 2 x 125 feet, 1 x 225 feet.

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I may here mention that public traffic trains are being operated from mile 649—New Hazelton—to mile 830—Prince Rupert—greatly to the accommodation of the residents along this section of road.

To summarize:—Of the 830 miles—the length of the Mountain section—the grading on 443 miles is practically completed; 408 miles of track laid; 355 miles have received a good lift of ballast, and on 391 miles public traffic is being conducted.

From mile 190 to mile 620, a very stiff indurated clay has been met with, for the greater part very wet, so much so that in many instances it is found to be impossible to hold it within the limits of the embankment, and it has, in many cases, slid out, carrying the original surface of the ground with it, and again in other cases, it lies in ledges as hard as solid rock, and is costly to handle. Such, I consider, under the specification, should be classed as solid rock. Both characteristics of this material have caused a considerable increase in the cost of the work, and have materially delayed its progress.

EXPENDITURE UP TO 31ST MARCH, 1913.

The expenditure on the 'Prairie section,'	\$35,894,376 91
Certified expenditure on the 'Mountain section'	50,232,556 34
	\$86,126,933 25

The difference of expenditure on the 'Prairie section' up to March 31, 1912, and the expenditure up to March 31, 1913, is composed for the most part of interest on bonds.

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

COLLINGWOOD SCHREIBER,
Chief Engineer, Western Division, N. T. Ry.

PART V

QUEBEC BRIDGE RECONSTRUCTION

REPORT OF CHAIRMAN OF BOARD OF ENGINEERS



DEPARTMENT OF RAILWAYS AND CANALS,
BOARD OF ENGINEERS, QUEBEC BRIDGE,
MONTREAL, August 27, 1913.

SIR.—I beg to report progress of work on the re-construction of the Quebec bridge for the fiscal year ending March 31, 1913, as follows:—

Substructure.—Fairly good progress was made on the construction of the masonry during the past year, although the work was delayed to a certain extent by extremely wet weather and strikes. Particular attention was paid during this season to the sinking of the caisson for the south main pier, and at the close of the season it was successfully sunk to bed rock some 86 feet below the bed of the river or 102 feet below extreme high water. The caisson was filled with concrete from elevation 1.0 to elevation 75.0, where the granite shaft of the pier will start. The material encountered during sinking was mainly sand with a sprinkling of boulders, and no serious difficulty was encountered during the entire operation.

The work on the south anchor pier consisted in excavating for the foundations. The borings at this point showed a shaley rock close to the surface and it was thought that a substantial foundation could be reached with little or no excavation. It was found, however, that there were pockets of clay and rotten shale, which necessitated one corner of the foundation being carried down nearly 30 feet below the surface of the ground. Satisfactory foundations were finally reached, however, and everything will be ready for an early start in the spring.

On the north side, the north intermediate pier, supporting the approach spans, was started early in the spring and has been entirely completed.

Work on the foundation of the north anchor pier was carried on during the greater part of the season. The rock foundation at this point shelved off very sharply and it was necessary to construct a coffer dam, as the site of this pier is below high water mark. Satisfactory foundations were uncovered, however, about the last of October, and before the season ended some eleven courses of masonry had been laid, amounting to about 6,800 cubic yards.

The work on the north main pier was also rushed ahead as fast as possible, but the work on this pier was delayed more than on the others on account of the difficulty in getting stone and by a strike of the stone cutters. The two caissons, however, were connected by concrete and steel arching and the shaft of the pier carried up to elevation 99.0 or 2 feet below extreme high water.

The status of the work up to March 31, 1913, is as follows:—

Structure.	Required.	Completed.	Remaining.	% Completed.
	C. yds.	C. yds.	C. yds.	C. yds.
North abutment.....	375	375	.....	100
North intermediate pier.....	1,666	1,666	.....	100
North anchor pier.....	17,736	6,806	10,930	39
North main pier.....	31,860	26,633	5,227	84
South main pier.....	38,269	27,893	10,376	73
South anchor pier.....	16,128	492	15,636	3
South abutment.....	26	26
Total.....	106,060	63,865	42,195

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All the difficult work necessitating caissons and compressed air has been completed; the remainder of the work to be done is above high water and will present no problems, and, as a result, will be carried on much more rapidly than the work so far engaged in. It is expected, unless something unforeseen happens, that all the masonry will be completed during the season of 1913.

Superstructure.—During the past year the contractor for the superstructure has constructed a large plant at Rockfield for the purpose of fabricating steel required for the bridge. This shop is specially designed for handling the large members, most of the machinery and handling apparatus having been specially designed for this purpose. It is expected that when the shop staff gets fully organized that they will be able to turn out in the vicinity of 2,000 tons of finished bridge members per month. Actual manufacturing was started in February.

The following is a statement of the progress of manufacturing up to the end of March:—

	Tons.
Material ordered from the mills.	8,000
Material received from the rolling mills, Pittsburgh.	5,750
Material completely fabricated in the shops.	1,400
Material shipped to the bridge site.	800
Material erected.	370

The detail shop plans have progressed to such a stage that they are well ahead of the requirements of the shop.

Preparations are being made at the bridge site to start foundations for their crane runways and falsework in order that an early start may be made in the spring.

Removal of unused material.—The contract for the removal of the unused material at Belair and Chaudiere Curve was awarded to R. W. Mayer of St. John, N.B., and up to the end of March he has removed and paid for some 4,000 tons, being about one-third of the total quantity to be removed.

Tests.—During the past year the St. Lawrence Bridge Co. have made a series of tests at the laboratories of the Phoenix Bridge Co. under the supervision of the Board of Engineers. Some of these tests members were constructed to conform with the type of members being used in the design of the bridge, while others were tested to determine the actual relation between nickel and carbon steel. The results of these tests have shown that the members as designed are able to develop the strength called for by the specifications used in designing the bridge.

All of which is respectfully submitted.

C. N. MONSARRAT,
Chairman and Chief Engineer.

Hon. FRANK COCHRANE,
Minister of Railways and Canals,
Ottawa, Ont.

PART VI

REPORT OF THE CHIEF ENGINEER OF THE DEPARTMENT

AND

Reports of Canal Superintending Engineers and Superintendents,
Chief Engineer, Hudson Bay Railway, and Engineer
in charge Dartmouth-Deans Branch, I.C.R.

FOR THE YEAR 1912-13.

- Ernest Marceau, Superintending Engineer, Quebec Canals.
C. D. Sargent, Superintending Engineer, Ontario-St. Lawrence Canals.
W. H. Sullivan, Superintending Engineer, Welland Canal.
J. W. LeBreton Ross, Superintending Engineer, Sault Ste. Marie Canal.
F. B. Fripp, Engineer-in-Charge, Sault Ste. Marie Canal.
A. T. Phillips, Superintending Engineer, Rideau Canal.
A. J. Grant, Superintending Engineer, Trent Canal.
J. H. McClellan, Superintendent, Trent Canal.
C. D. Sargent, Engineer-in-Charge, St. Peter's Canal.
J. Armstrong, Chief Engineer, Hudson Bay Railway.
J. L. Weller, Engineer-in-Charge, Welland Ship Canal.
W. A. Hendry, Engineer-in-Charge, Dartmouth-Deans Branch I.C.R.

OFFICE OF THE CHIEF ENGINEER.

OTTAWA, ONT., April 1, 1913.

SIR,—I have the honour to submit my annual report for the fiscal year ending March 31, 1913.

Attached hereto will be found the annual reports of the Superintending Engineers of the several canals, the Engineer-in-Charge of Improvements at Sault Ste. Marie, the Superintendent of the Trent canal, the Engineer-in-Charge of the Welland ship canal, the Chief Engineer of the Hudson Bay railway and the Engineer-in-Charge of the Dartmouth branch line, Intercolonial railway.

CANALS.

The through water route between Montreal, at the head of ocean navigation, and Fort William and Port Arthur, on the west shore of Lake Superior, comprises 74 miles of canal with 48 locks and 1,155 miles of river and lake waters, or a total of 1,229 miles, the minimum depth of water being 14 feet. From Montreal to Duluth, at the south west of Lake Superior, the total distance is 1,354 miles, and to Chicago 1,286 miles. A summary of this route will be found in Part VII with details of the several works. At Port Arthur and at Fort William (about six miles apart), the Canadian Pacific railway gives connection westward and with the south at Fort William. A line of railway has been built from Fort William by the Grand Trunk Pacific railway to give communication with the Transcontinental railway and over that road from Winnipeg.

On this through route the approaches to the canals and the channels through the intermediate river reaches are well defined, and are lighted with gas buoys under the control of the Department of Marine and Fisheries, admitting of safe navigation in the hands of competent pilots, both by day and night. In the cases of the Sault Ste. Marie, the Welland, the Cornwall, the Soulanges and the Lachine canals, they are well lighted throughout with electricity and are electrically operated. The Farans Point canal is lighted with acetylene gas.

Of the minor systems, the Murray, Trent, Rideau and Ottawa River canals may be considered geographically as branches from the through route. In operation, however, these canals serve a distinct traffic of a more local nature. Isolated from these above mentioned systems, the navigation of the Richelieu river and Lake Champlain is effected by the St. Ours lock and the Chambly canal; while, in the far east, the Bras d'Or lakes of Cape Breton are made accessible from the Atlantic by the St. Peter's canal.

Detailed information respecting the several canals is contained in an appendix.

The work executed during the past year has been almost wholly of the nature of improvements and repairs to existing works, the exception being in the case of the Trent canal, where the construction of an extension of the present system to an outlet on Lake Ontario is in progress.

LACHINE CANAL.

On the Lachine canal the principal items of work have been the continuation of the rebuilding of the slope and vertical walls with concrete in the reach above Cote St. Paul lock, near Rockfield; the completion of the substructure of the Rockfield bridge and the erection of a Strauss bascule bridge with a 165 foot span; the installation of additional life protection devices consisting of iron ladders, fences, &c., and the

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dredging and various minor repairs necessary as more particularly described in the Superintending Engineer's report herewith attached.

SOULANGES CANAL.

On the Soulanges canal the work of removing projections from the slopes and lining the latter with concrete was continued and is now completed, at any rate for the present. Further dredging was done at the site of the extension of the guard pier into Lake St. Francis. Ordinary repairs to locks, canal slopes, ditches, fences, &c., were carried out.

CORNWALL CANAL.

On the Cornwall canal, besides executing various repairs and renewals, a contract was let for the improvement of the lower entrance to lock 15. The work principally consists of the construction of new cribwork and concrete north and south entrance walls.

WILLIAMSBURG CANALS.

Construction on the long entrance pier below the Farrans Point lock, which will ensure safe navigation to upbound vessels through the treacherous eddy at this point, was continued.

At Morrisburg (Rapide Plat canal) the improvement of the lower entrance to lock 24, by widening and straightening the channel and constructing a timber and concrete approach wall on the north side of the entrance, was continued and is nearing completion.

At lock 28, Galops canal, the improvement of the upper entrance by the construction of a timber and concrete approach wall in the south side was completed and the work has already proved of great benefit to vessels using this lock.

MURRAY CANAL.

On the Murray canal, the dredging of certain high areas was continued and is practically completed.

WELLAND CANAL.

Messrs. Hogan and Macdonell's contract for improving the Port Colborne entrance was completed. A contract was entered into with M. J. Hogan for the removal of the old east entrance pier at Port Colborne, the extension of the east dock and the excavation of the entrance in front of the latter. This work is now in progress and the depth of water afforded will meet the requirements of the new ship canal.

PORT COLBORNE ELEVATOR.

As detailed in the Superintending Engineer's report, attached hereto, the government elevator handled 11,600,000 bushels of grain, as compared with 7,000,000 bushels in 1911, and 4,000,000 in 1910, and its net surplus in earnings for the season was over \$28,000. This is a most satisfactory increase in business. The present elevator capacity is 800,000 bushels and a contract has been let, and is now under way, for the erection of an addition to the elevator which will provide a storage capacity of 2,000,000 bushels.

WELLAND SHIP CANAL.

Preparation of contract plans for this large work was carried on all year and tenders will shortly be called for. An interesting description of the ship canal route and general arrangements is given in the report of the Engineer-in-Charge, attached hereto.

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SAULT STE. MARIE CANAL.

The extension, 300 feet in length, to the north entrance pier, for which a contract was let in 1911, was completed, and better accommodation for vessels is thus provided.

The work of widening the lower entrance channel on both the north and south sides was commenced and completed during the season.

The traffic statistics of both the Canadian and American canals show a large increase over last year or any previous year. The freight tonnage through the Canadian canal amounted to 39,664,874 tons, an increase of 28 per cent; passengers numbered 37,753, a decrease of 2 per cent, and the registered tonnage totalled 25,789,654 tons, an increase of 33 per cent.

RIDEAU CANAL.

Many repairs and renewals were carried out on this canal as detailed in the Superintending Engineer's report, attached hereto. The unusual rainfall during the whole season ensured a satisfactory depth of water for navigation, a rather unusual condition, as, during the later part of ordinary seasons, there is usually insufficient water owing to the limited area of the watershed upon which the canal is dependent for its water supply.

TRENT CANAL.

On the Trent canal, upon which new construction is in progress, the extent under operation remains the same as in the previous year, namely 160 miles, extending from Lake Simcoe to Healey Falls, a point sixteen miles below the village of Hastings. Owing to the unprecedented rainfall during the whole season, it was practically impossible to regulate the flow of water and many complaints of land flooding arose therefrom.

A considerable amount of repairs and improvement was executed upon the completed portion of the canal.

The construction of the Burleigh Falls dam was completed, as was the Rosedale section, consisting of a new canal cut across the narrow peninsula between Cameron and Balsam lakes, the construction of a new lock and dam, and the dredging of channels at the entrances.

Plans and specifications are in course of preparation for new dams at Nassau and Fenelon Falls.

The work of water conservation for the canal system by rebuilding and repairing the dams on the various northern tributary waters of the canal watershed has received careful attention.

ONTARIO-RICE LAKE DIVISION.

The construction of the Ontario-Rice Lake division is dealt with in an interesting and comprehensive report of the Superintending Engineer, which will be found in the appendices hereto.

This division, which extends from Trenton, on Lake Ontario, to Rice Lake, is 56½ miles in length and is divided for construction purposes into seven sections, all of which are under contract. It follows the River Trent and will comprise 9½ miles of canal, 13 miles of subaqueous channels, and 3¼ miles of deep river. The total rise between low water level on Lake Ontario and normal navigation level on Rice Lake is 369 feet, to be overcome by 18 locks. The river and canal levels will be controlled by 14 dams, and 18 bridges are required, all of which, except one, will be swing or bascule spans. Up to end of fiscal year, 16 locks, 10 dams, and 12 bridges have been built. The locks are concrete, with 8 feet 4 inches of water on the sills; they are 175 feet long between the hollow quoins and 33 feet wide, accommodating barges of 1,000

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tons, about 150 feet long and 30 feet beam, drawing 8 feet of water. The work involved requires the removal of about 1,500,000 cubic yards of earth, 1,250,000 cubic yards of rock, loose and solid, and the building of about 400,000 cubic yards of concrete. The approximate cost is set down at \$6,750,000, of which the estimated value of the seven contracts for the seven sections totals \$5,100,000 on which there has been expended for work done and material delivered up to March 31, 1912, the sum of \$3,503,422.18, or about 70 per cent of the estimated value at contract rates of the seven contracts. Details of the work done will be found in the above mentioned report of the Superintending Engineer.

HOLLAND RIVER DIVISION.

The government decided to abandon further work on this division, and accepted a surrender of the York Construction Company's contract on December 31, 1911. A special agreement was entered into with the York Construction Company for the execution of certain unavoidable work required before operations could be finally abandoned, and this work was completed in June last.

LAKE SIMCOE—GEORGIAN BAY DIVISION.

A thorough survey of the Severn river is under way with a view to preparing plans and specifications for canalizing the river to the same dimensions as the Ontario-Rice Lake division.

HYDROGRAPHIC SURVEYS.

Surveys are being carried on intermittently with the object of making a complete and reliable set of charts of the chain of lakes which form part of the Trent navigation. So far, very little of the field work has been plotted.

ST. PETER'S CANAL.

The construction of the new lock and entrance at the Atlantic end of the canal was proceeded with during the season without any interference with the navigation of the canal. The progress made on this work was disappointing, principally due to the continued extremely wet weather.

HUDSON BAY RAILWAY.

Contracts were let during the year for sections 2 and 3 to Mr. J. D. McArthur, thus placing under contract the whole line from The Pas to the Hudson Bay terminus, Port Nelson—420 miles.

At the end of this fiscal year, grading has been practically completed from The Pas to Mile 70 and clearing to Mile 185.

The bridge across the Saskatchewan river, at The Pas, consisting of four fixed spans of 147 feet in length each and a swing span of 262 feet in length, is rapidly nearing completion, the erection of the superstructure being well advanced.

A survey and engineering party went in to Port Nelson by Steamer Beothic last summer for the purpose of surveying, investigating and preparing preliminary designs of harbour development at this port. This party is engaged on this work at present.

DARTMOUTH BRANCH LINE.

This line from Dartmouth, N.S., to Upper Musquodoboit is 67 miles long and is under contract for construction to M. P. & J. T. Davis. Clearing was finished in 1912 and grading has been carried on at some ten or more points on the whole line where

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the work was the heaviest. The progress made has been fair considering the difficulty experienced of an extremely wet season.

NORTHUMBERLAND STRAITS CAR FERRY.

A contract was let during the year to the Sir W. G. Armstrong, Whitworth Company of Newcastle-on-Tyne, England, for the construction of an ice breaking car ferry steamer to run between Cape Tormentine, N.B., and Carleton Point, P.E.I., a distance of 8 miles.

Plans have been prepared for harbour works, landing piers, &c., at these points and tenders are now being called for by advertisements for the same.

In addition to the supervision of the works of construction and operation, numerous investigations of a technical nature have engaged the attention of the members of this branch. These investigations arise from damage claims, the submission of plans affecting property or interests of this department, applications for leases, railway inspections for subsidy and guarantee bond purposes, &c.

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

W. A. BOWDEN,
Chief Engineer.

A. W. CAMPBELL, Esq.,
Deputy Minister,
Department of Railways and Canals,
Ottawa, Ont.

DEPARTMENT OF RAILWAYS AND CANALS.
QUEBEC CANALS,
SUPERINTENDING ENGINEER'S OFFICE.
MONTREAL, August 12, 1913.

SIR,—I have the honour to submit herewith my annual report on the works under my charge, for the fiscal year ended March, 1913.

This division comprises the Lachine and Soulanges Canals on the St. Lawrence route; the Ste. Anne, Carillon & Grenville Canals, on the Ottawa River and the St. Ours and Chambly Canals on the Richelieu river.

Of these the Lachine is by far the most important owing to immediate connection with the Harbour of Montreal.

LACHINE CANAL

Length $8\frac{1}{2}$ miles, total rise 45 feet, 5 locks 270 ft. x 45 ft. with 14 ft. on sills, 5 old locks 200 ft. x 45 ft. with 9 ft. of water on sills, still available to navigation.

REPAIRS AND RENEWALS.

Besides the usual maintaining of the canal structures in good condition throughout the year, the following special items of work were performed.

Spare lock gates.—All the spare lock gates, which are kept underwater, were raised and put ready for emergency.

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Mooring posts.—100 old wooden mooring posts were removed and replaced by heavy cast iron posts set in concrete bases.

Walls.—A piece of wall on the north side of the upper entrance above old lock No. 5, was practically rebuilt.

Concrete work.—A number of broken coupling stones on locks Nos. 1 and 2 were raised and replaced by blocks of reinforced concrete. A concrete retaining wall was built at the northeast corner of Black's bridge. Concrete sidewalks were laid at both ends of bridges Nos. 4 and 5. A ramp leading into St. Gabriel shed No. 4, was overhauled, the sidewall rebuilt with concrete and the roadway paved with granite blocks resting on a concrete foundation.

Buildings.—The Statistical Officer's office at lock No. 2, was remodelled, the walls burlapped and painted. A hot water furnace was also installed in it.

Life protection devices.—A permanent iron fence, set in concrete, was erected from the north end of Black's bridge to a point opposite the lower entrance to south lock No. 2. Another was set in the masonry at the south corner of lock No. 2. Similar fences were placed around the northeast and northwest corners of North Basin No. 1.

One hundred iron ladders were placed in the concrete and stone walls in the eastern division of the canal, the total number of such ladders at present installed is 887. They are formed of 9, 10 or 11 rungs.

Ninety-five life-saving sets, consisting of a wooden buoy, a rope 50 ft. long and a pole 22 ft. in length with a three prong grappling iron attached, were placed at various points along the entire length of the canal during the year.

Bridge gates.—Drop gates were installed at both ends of bridges Nos. 1, 2, 4 and 5.

OPERATION.

This canal was unwatered on the 1st, and re-opened for navigation on the 28th April, 1912. It was closed for the winter on the 5th December last.

Navigation was interrupted twice during last season, on account of accidents to lock gates.

At 5 p.m. on the 18th June, 1912, the SS. *Zapotee*, while being locked through lock No. 4, broke her moorings and, colliding with the south upper gate, threw it down. Repairs were completed the following day at 7 a.m.

Another accident took place on the 24th September last, at 5.45 a.m., when the S.S. *Nevada*, westward bound, collided with the lower gates of lock No. 3, causing serious damage to them. Another vessel, going in the same direction was in the act of going out of the lock at the time. She was carried down, stern first through the lock into the reach below. Neither of the vessels was seriously injured.

A new pair of gates were in working order at 1.30 p.m. on the 26th, navigation having been interrupted, as far as the larger craft were concerned, during 55 hours.

CAPITAL.

Concrete vertical walls.—This work which has been proceeding for several years, was continued by Messrs. Haney, Quinlan & Robertson, during last summer. Some 6½ miles of walls had been laid at the expiration of the contract, on the 1st December, 1912.

A new contract for the balance of the work was awarded to Messrs. Hugh Quinlan, Angus W. Robertson & Roger Miller, on the 1st April, 1913.

Bascule bridge at Rockfield.—This bridge, which is of the bascule type, is now practically completed. Its span is 165 ft. and provision has been made for a double track of street railway over it.

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The concrete substructure was done under contract by Messrs. Haney, Quinlan & Robertson and the superstructure manufactured and erected by the Dominion Bridge Co.

Improvements at lock No. 4.—This work consists of removing a portion of the south bank forming an outward curve above lock No. 4, building a new power station, &c.

Some land required for the improvements having only been secured towards the end of the last fiscal year, nothing could be done during 1912-13, but at the time of writing, the work is well under way.

DREDGING.

The dredging fleet came out of winter quarters on the last day of April, 1913, and two days later, was engaged removing stone blasted off the banks of the canal near the Canadian Pacific railway swing span at Lachine. The vessels left for the head of the Soulanges canal on the 1st of June and resumed work in connection with the protection works at that point.

Some dredging was also done in connection with the concrete lining of the Soulanges canal slopes between locks Nos. 3 and 4.

On the 15th October, the fleet returned to the Lachine where it was engaged dredging at various points until it went into winter quarters on the 23rd November.

REPAIRS TO VESSELS.

The Quebec Canals Dredging Fleet comprises two tugs, the *Frank Perew* and the *Carillon*, one steam spoon dredge, one steam derrick, two dump scows, thirteen flat scows and a floating storehouse.

The machinery in both the tug *Frank Perew* and the steam dredge and the hulls and decks of most of the other vessels were carefully overhauled and repaired during last winter.

SOULANGES CANAL.

Length 14 miles, 5 locks 270 x 45 feet, 15 feet of water on the sills, total rise 84 feet.

REPAIRS AND RENEWALS.

Locks.—The stony sluices of lock No. 1 were taken out during the winter and the tracks and rollers renewed.

Cast-iron mooring posts.—Twenty of the mooring posts between locks Nos. 4 and 5, which had been displaced by vessels' lines, were dug out and the concrete blocks in which they are set increased in size.

Ditches.—3 miles of ditches were deepened during last summer, viz:—1 mile on the south bank below lock No. 3 and 2 miles between St. Emmanuel bridge and lock No. 5.

Canal slopes.—A considerable quantity of stone from the canal quarry was placed on the slopes to replace the original stone lining which is gradually falling down to the bottom of the canal.

Fences.—3 miles of fence were renewed between St. Dominique bridge and lock No. 4.

Range lighthouse.—One of the range lighthouses at the foot of the canal, which had become out of plumb, was reset and its base strengthened.

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Painting.—The following structures were painted during the year:—Bridge on the road from Cascades Pt. to Vaudreuil, fences at the upper entrance, the outside of the Overseer's house, 4 range light houses, the inside of the Statistical Officer's office and also all the electric line posts, 150 in number.

Derricks.—Two hand derricks of over 5 ton capacity were built for the purpose of handling the steel stop logs provided during the year.

OPERATION.

Navigation was conducted without any interruption on this canal during last season.

A collision took place on September 9, 1912, between the steamer *Dundurn* and the steamer *Port Colborne* in the vicinity of the St. Dominique swing bridge. As a result of it the *Dundurn* struck the pivot pier of the bridge with such force as to tilt several inches; the superstructure was also considerably damaged. However, owing to the fact that the swing was almost fully open at the time, the channel was not blocked and navigation went on uninterruptedly.

CAPITAL.

The syphon culvert which passes the waters of Rivière a la Graisse under the Soulanges canal, having been made too small to quickly let these waters through in times of flood, a number of small bridges on adjoining farms had been destroyed. Five of them were replaced during the year. The abutments are made of concrete and the floor consists of iron beams supporting a reinforced concrete slab.

Steel stop logs.—Eighteen trussed steel stop logs were purchased last year for lock No. 1, in anticipation of heavy repairs to be done in connection with the sill and gates of this lock and also for future use in case of a break. They are calculated to resist, with safety, the pressure of 26 feet of water.

Stopping leaks and trimming slopes.—Messrs. Haney, Quinlan & Robertson resumed work on this contract on June 13, 1912, and ceased operations on the 26th October following, having during that period lined 6,770 lineal feet of slope.

The whole of the lining was done on the south side, the really dangerous sections of which have now been made safe. The various sections thus treated aggregate 22,409 feet in length. This work may be considered finished for the present, but, eventually it will become necessary to continue it on account of the gradual washing away of the soft clay forming the slopes, by the waves created by passing vessels.

Protection works at upper entrance.—At the end of last year, the contractors had not yet commenced operations. As for the dredging in connection with this contract, it is being done by the department. Our dredge No. 2 was at work here for a month or so and our clam shell dredge about twice as long. The total quantity of material removed from the channel was about 8,000 cubic yards.

STE. ANNE'S LOCK.

Length $\frac{1}{2}$ mile, one lock 200 x 45 feet, 9 feet of water on the sills. Old lock still available 200 x 45 feet, 6 feet of water on the sills.

REPAIRS.

Nothing but ordinary repair work was done here during the year. The banks of both entrances, the locks and lock gates, the two piers of the south channel and the

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mooring pier at Ile aux Tourtes, the Superintendent's and Statistical Officers' houses, &c., received the necessary attention.

OPERATION.

Navigation was not interrupted here during the season.

Owing to the very heavy increase in the lockages through the single lock here, due to the passage of a large number of barges bringing sand from the lake of Two Mountains to Montreal, and also to motor boats running up and down between this lake and lake St. Louis, it has become imperative to install electric motors for the operation of the lock gates.

An amount will be placed in the estimates next session for the purpose.

CARILLON AND GRENVILLE CANALS.

Carillon Canal.—Length $\frac{3}{4}$ mile, two locks 200 x 45 ft., 9 ft. of water on the sills, total rise, 16 ft.

Grenville Canal.—Length $5\frac{3}{4}$ miles, five locks 200 x 45 ft., 9 ft. of water on the sills, total rise $43\frac{3}{4}$ ft.

REPAIRS AND RENEWALS.

Besides keeping the locks, buildings, roads, &c., in good repair, very little was done here under the above head during the last fiscal year.

The only item worth mentioning was the taking apart and rebuilding of two pairs of spare gates for lock No. 2 and lock No. 5 respectively.

INCOME.

Carillon Dam.—On account of high water it has been found impossible to undertake the lengthening of the apron of a section of this dam during the last fiscal year. Most of the timber required has, however, been purchased, and it is the intention to begin the work as soon as the condition of the river will permit.

ST. OURS LOCK.

Length $\frac{1}{2}$ mile, one lock 200 x 45 feet, 7 feet of water on the sills, rise 5 feet.

REPAIRS.

Under this head there is nothing to record, except the maintaining of the structures in good repair.

INCOME.

Removing boom piers.—The three last remaining cribwork piers along the east side of the lower entrance were removed last fall and piles driven on their sites for the foundation of the proposed new concrete piers. Owing, however, to the continued high water, nothing further could be done. This work will be completed during the fall of 1913.

CHAMBLY CANAL.

Length 12 miles, 9 locks 118 x $22\frac{1}{2}$ feet, $6\frac{1}{2}$ feet of water on sills, total rise 74 feet.

REPAIRS AND RENEWALS.

The most important items of work done under this head during the last fiscal year were:—1st, the renewal of the bottom of locks Nos. 2 and 4, the old planking

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being removed and replaced by concrete; 2nd, the cleaning, by the sand blasting process of three steel swing bridges; 3rd, the completing of the lodgings of the keeper of bridge No. 3; 4th, the installation of two electric motors, one of 40 horsepower in the sawmill and the other of 10 horsepower to run our large wood planer.

INCOME.

New electric station.—As reported last year, this station was fully completed and equipped with the exception that the switchboard had not been received.

The lighting of the canal with incandescent, instead of arc lamps, has proved a success. There are 268 60 c.p. lamps, placed about 400 feet apart in the reaches, 2 at each bridge and 4 at each lock.

St. Johns wharf.—The new wharf built here in 1911 was partly filled in last year with material dredged out of the canal entrance and from the bed of the river in front of the wharf.

The work will be completed in 1913.

Dump scow and spare gates.—A small dump scow of some 50 cubic yards capacity and a pair of spare gates were constructed at our own shops during last winter.

OPERATION.

This canal was opened to navigation from May 1 to December 1, 1912, without interruption.

BEAUHARNOIS CANAL.

REPAIRS.

Hungry Bay Dyke.—This dyke and the highway on top of it have been carefully maintained during last year, and about 100 tons of crushed stone placed along it for future repairs.

INCOME.

Removal of obstruction in the Lost Channel.—The remains of the stone piers of an old bridge, which formerly spanned the Lost Channel between the mainland and the Grand Isle de Beauharnois, near St. Timothy, and which was replaced by a steel span built by the Department fifteen years ago, were removed last summer.

The disappearance of those obstructions will prevent ice jams, which were a danger to the present bridge every spring. It has already proved beneficial to the mills using this channel as a tail-race.

Lake St. Francis.—Protection of shores.—Owing to the scant fall of snow in the beginning of last winter, it was impossible to haul stone for this work until February, 1912, and work could only be carried on up to the last week in March. During that period, protection walls were built as follows:—south shore, 2,500 lineal feet, north shore, 1,620 lineal feet.

Hungry Bay Dyke Road.—The section of this road extending from the western limit of the town of Valleyfield and the eastern end of Hungry Bay, some 3500 feet in length, was macadamized during the summer and fall of 1912, the crushed stone being supplied under contract by Mr. V. Lamothe and the preparing of the road bed, the spreading and rolling of the metal being done by days' labour.

SURVEYS AND INSPECTORS.

The general plan of the upper section of the Soulanges Canal has been completed and the balance of this plan is now ready to ink in.

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During last summer, a survey of the Government property from the head of the Beauharnois Canal to Knight's Point on Lake St. Francis, was also made and plotted.

CANAL STORES.

The inspector of canal stores in this Division reports a marked improvement in the bookkeeping at all our stores. The stocks have been considerably reduced and the methods now followed in receiving materials and delivering them out of the stores make for economy and the prevention of waste.

The works under the head of Capital and Income, on the Lachine Canal, are under the immediate supervision of Lt. Col. H. R. Lordly, C.E., and Mr. L. S. Pariseau, C.E., is in charge of Capital and Income work on the other canals in this Division.

I have much pleasure in stating that both of them, and the engineers under them, have discharged the duties entrusted to them during last year in a manner creditable to themselves and very satisfactory to me.

I have the honour to be,

Sir,

Your obedient servant,

ERNEST MARCEAU,

Suptg. Engr. Quebec Canals.

W. A. BOWDEN, Esq.,
Chief Engineer, Railways and Canals,
Ottawa, Ont.

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 ending March 31, 1913.

Months.	New Lock No. 1, Lower Sill.				New Lock No. 5 Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.
1912.								
April.....	37	0	21	5	18	11	14	8
May.....	23	6	19	0	19	11	18	0
June.....	23	7	18	2	20	10	17	8
July.....	18	2	15	10	17	8	16	3
August.....	16	2	15	2	16	4	15	9
September.....	15	8	15	1	16	0	15	8
October.....	16	7	14	5	16	5	15	2
November.....	19	1	15	9	17	10	15	6
December.....	18	11	16	0	17	4	15	6
1913.								
January.....	31	8	16	9	19	1	15	9
February.....	34	5	29	1	17	5	15	8
March.....	38	10	27	0	19	10	15	5

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SOULANGES CANAL.

STATEMENT showing the depth of the river water on the mitre sill of lock No. 1 at lower entrance and lock No. 5 at upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 1, Lower Sill.		Lock No. 5, Upper Sill.					
	Highest.	Lowest.	Highest.	Lowest.				
1912.	ft.	in.	ft.	in.	ft.	in.		
April.....	22	3	19	9	17	8	16	0
May.....	22	2	19	4	18	2	17	0
June.....	22	2	19	2	18	2	17	3
July.....	18	11	17	0	17	3	17	0
August.....	18	1	17	7	17	0	16	9
September.....	17	8	17	6	16	9	16	9
October.....	18	2	17	3	16	9	16	6
November.....	19	2	17	9	18	0	16	3
December.....	18	9	18	1	16	7	17	2
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January.....	20	9	18	5	18	0	16	6
February.....	21	4	20	0	18	0	16	8
March.....	22	5	20	0	18	4	16	8

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 ending March 31, 1913.

Months.	Lock No. 9, Lower Still.		Lock No. 1, Upper Sill.					
	Highest.	Lowest.	Highest.	Lowest.				
1912.	ft.	in.	ft.	in.	ft.	in.		
April.....	22	0	13	2	13	6	9	7
May.....	17	3	15	0	12	7	11	2
June.....	17	1	12	11	12	1	9	11
July.....	12	7	10	1	10	1	8	5
August.....	10	8	9	2	8	10	7	9
September.....	11	4	9	11	8	8	7	9
October.....	12	4	10	5	9	2	7	11
November.....	14	8	11	8	10	0	8	8
December.....	13	10	11	5	10	9	9	2
1913.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January.....	15	10	10	9	10	5	9	2
February.....	15	7	13	8	10	5	9	3
March.....	21	2	12	0	13	10	9	0

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ST. OURS LOCK.

STATEMENT showing the depth of the river water on the mitre sills of the St. Ours lock during the fiscal year ending March 31, 1912.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April	24	7	12	6	19	8	9	8
May	17	4	13	11	13	7	11	11
June	17	6	11	6	13	7	10	5
July	11	2	8	8	10	7	9	0
August	9	4	7	8	9	10	8	4
September	8	9	7	7	10	6	9	9
October	10	2	7	1	11	4	10	0
November	12	9	9	0	12	10	11	1
December	13	0	9	10	11	11	9	2
1913.								
January	16	4	10	11	12	6	9	0
February	15	0	12	6	11	0	10	0
March	22	3	13	6	17	3	9	7

CARILLON CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 1 at lower entrance and Lock No. 2 at upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 1, Lower Sill.				Lock No. 2, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April	18	0	12	5	17	7	10	3
May	20	0	16	8	19	10	16	0
June	20	3	15	6	19	10	15	4
July	15	4	13	1	15	3	12	4
August	13	2	12	5	12	3	11	7
September	12	8	12	5	11	9	11	5
October	14	0	11	11	13	6	10	3
November	15	11	13	7	15	4	13	5
December	15	4	13	6	17	2	13	6
1913.								
January	14	8	13	5	19	4	12	5
February	14	8	13	7	16	9	13	2
March	19	9	14	1	16	10	12	0

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GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 3 at lower entrance and Lock No. 7 at upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 3, Lower Sill.				Lock No. 7, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.
1912.								
April.....	21	8	14	5	18	10	10	3
May.....	24	8	20	6	21	4	17	8
June.....	26	9	18	0	21	5	16	2
July.....	18	6	15	1	15	11	12	6
August.....	15	1	14	2	12	7	11	9
September.....	14	4	13	11	11	11	11	0
October.....	16	7	13	8	14	0	11	1
November.....	18	11	16	4	16	7	14	0
December.....	19	11	16	1	14	6	12	10
1913.								
January.....	22	2	15	4	13	11	12	7
February.....	22	8	17	3	13	2	11	10
March.....	24	2	17	6	19	0	11	6

STE. ANNE'S LOCK.

STATEMENT showing the depth of the river water on the mitre and mud sills of Ste. Anne's Lock, at the lower and upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 1, Lower Mitre.				Lock No. 1, Mud Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.
1912.								
April.....	14	2	10	2	15	11	10	11
May.....	15	8	13	0	17	8	14	11
June.....	15	10	12	7	17	10	13	11
July.....	12	5	11	3	13	8	11	9
August.....	11	11	10	9	11	8	11	2
September.....	10	11	10	9	11	4	11	2
October.....	11	4	10	4	12	7	10	10
November.....	12	8	11	2	14	3	12	6
December.....	12	6	11	4	13	5	12	0
1913.								
January.....	13	7	11	2	12	11	11	9
February.....	12	11	11	5	12	5	11	10
March.....	15	6	11	8	16	9	12	0

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STATEMENT showing the date of closing and opening of the Quebec canals for season of 1912-13.

Name.	Opening.	Closing.
Lachine Canal	May 1, 1912.	December 5, 1912.
Soulanges Canal	April 28, 1912.	" 6, 1912.
Chambly Canal	May 1, 1912.	November 30, 1912.
St. Ours Lock	May 1, 1912.	" 30, 1912.
C. & G. Canals	May 1, 1912.	" 30, 1912.
Ste. Anne's Lock	April 25, 1912.	" 30, 1912.

W. A. BOWDEN, Esq., C. E.,
 Chief Engineer,
 Department of Railways and Canals,
 Ottawa, Ont.

DEPARTMENT OF RAILWAYS AND CANALS.

ONTARIO—ST. LAWRENCE CANALS,

SUPERINTENDING ENGINEER'S OFFICE.

CORNWALL, April 1, 1913.

SIR,—I have the honour to submit my annual report on the maintenance and operation of the Ontario-St. Lawrence Canals for the fiscal year ending March 31, 1913.

The Ontario-St. Lawrence Canals comprise the Cornwall, Farran's Point, Rapide Plant and Galops Canals, the North Channel below Prescott, on the St. Lawrence Route, and the Murray Canal between the head of the Bay Quinte and Brighton Bay on the north shore of Lake Ontario.

CORNWALL CANAL.

The Cornwall Canal was opened for navigation on April 29, and closed December 10th.

Accidents.—On Monday evening, May 27, the Imperial Oil Company's steamer barge *Imperial*, downbound, entered Lock No. 17 at too high a rate of speed and carried away both lower gates. The rush of water from the upper level carried out both upper gates, breaking the fastenings to lock walls. The spare gates, which are stored in the river at the foot of old canal, were carried out into deep water by the flood from above, rendering them difficult of access, and this fact and the necessity of removing a very large quantity of gravel from lock, coupled with extremely bad weather conditions, rendered the work of repair unusually slow, and navigation was not resumed till Friday afternoon, May 31st.

On June 5th, the steamer *India*, belonging to The Calvin Co., downbound, collided with the south lower gate of lock No. 20, forcing the gates apart about three feet at the top and very nearly carrying them out.

The upper gates were speedily closed and the water lowered in lock. The damaged gate, which was badly strained, was taken out, examined, and resteped, and again brought into use. Navigation was interrupted about 10 hours.

RENEWALS AND REPAIRS.

The masonry coping on south side lock No. 15 was lifted, reset, and reinforced behind with concrete throughout its entire length.

The coping of masonry approach wall west of the Cornwall bridge on the south side of canal was reinforced behind with concrete for a length of 650 feet.

While the canal was unwatered in the month of April, 675 lineal feet of riprap west of Cornwall bridge on the north side was rebuilt and faced with concrete.

Eight iron mooring posts set in concrete were placed along the south of basin between locks 15 and 17, and six on the south bank above lock No. 18.

A pile and timber approach to dock at Mille Roches was constructed to aid vessels in approaching and leaving this dock. The work was done by the canal repairs staff.

A steel highway bridge was constructed under contract with the Hamilton Bridge Works Co., and placed in position across old lock No. 17 to replace the old wooden pontoon bridge, which had reached a stage beyond repair.

A new wooden pontoon, 30 ft. x 20 ft., was constructed by the canal repairs staff for the purpose of lifting out the bridge to admit vessels to the repairing basin below. It is very satisfactory.

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The work of enlarging and improving the repairing basin between old locks No. 16 and No. 17, commenced in 1911, was completed during the summer of 1912.

This basin now has a total area for the docking of vessels of 260 feet x 300 feet, and is greatly appreciated and constantly used by owners of vessels of all descriptions in need of repair.

The four gates badly damaged by str. *Imperial* were rebuilt and are being held in readiness as spare gates for locks No. 15 and No. 17.

The lower gates of lock No. 20, damaged by str. *India*, were taken out on November 18, and replaced with the spare gates.

The damaged gates were placed in repair basin and thoroughly overhauled and repaired during the winter.

Spare gates for locks No. 18 and No. 20 were thoroughly repaired and painted.

The seven new automatic emergency gates for the supply weir at the Guard Gates, which were constructed about a year ago, will be placed in position before the opening of navigation this month. The gates are constructed of oak timbers reinforced with steel I-beams.

The buildings at all of the locks throughout the canal received one coat of paint.

Ordinary repairs to lock gates, structures of all kinds, and rip-rap, were carried out during the year, as well as the cleaning of ditches, cutting of weeds, &c.

Improvements.—A contract was entered into with Mr. G. R. Phillips in June, 1912, for the improvement of the lower entrance to lock No. 15.

The work consists of the removal of the old north entrance wall below the lock for a distance of about 300 feet, and the construction of a new cribwork and concrete entrance wall, 570 feet in length, on a new location, the rebuilding of the lower wing walls of lock and also the tearing down and rebuilding of the south entrance wall.

The work when completed will provide a safer and easier approach to the canal from the river and provide increased harbour room without interfering with the channel now used by vessels passing down the river.

THE WILLIAMSBURG CANALS.

The Williamsburg canals were opened for navigation on April 29, and closed on December 13, and were operated throughout the season without serious damage and without any delay to navigation.

Accidents.—The steamer *McVittie*, owned by the Ogdensburg Coal and Towing Company, struck the south wall at the lower entrance to lock No. 23, Rapide Plat canal, on September 12, displacing the coping stones for a length of about 80 feet.

The sum of \$200 has been deposited by the owners of this vessel to cover cost of repairs, which will be made before the opening of navigation this month.

The location of the entrance piers to this lock, coupled with the strong and variable current in the river, make this lock difficult of approach under a proper rate of speed and frequent collisions with the entrance walls result.

Renewals and repairs.—Forty-nine iron mooring posts, set in concrete bases, were placed along both sides of lock No. 22, Farran's Point canal, and the old wooden posts removed. Fourteen posts of the same description were also placed along the south side of lock No. 28, Galops canal.

Stop logs were provided and placed in the north wheel pit of town power house at Iroquois, and the wheel pit pumped out to enable town to make extensive repairs to water wheel.

Six reinforced concrete culverts were constructed over the government ditch west of Iroquois to replace old wooden bridges badly decayed.

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The upper gates of lock No. 27, Galops canal, were taken out, before opening of navigation, and replaced with a new pair.

A new floor was placed on the large supply weir at this lock.

The upper gates of lock No. 28, which had been removed after the close of navigation in 1911 and repaired during the winter, were placed in position before the opening of navigation.

Two watering places for cattle were constructed at the north channel below Prescott to compensate farmers for being deprived of access to the river for this purpose by the construction of this work.

Ordinary repairs to gates, lock houses, bridges, weirs and riprap were attended to, as well as the cleaning of ditches and cutting of grass and weeds, &c.

FARRAN'S POINT CANAL—IMPROVING LOWER ENTRANCE.

Work upon this contract, which was entered into with the Randolph MacDonald Co., Ltd., on the 22nd May, 1911, and which provides for the extension of the north-east entrance pier a distance of 1,140 feet, was commenced on the 17th June, 1911, and continued throughout the following winter.

In the spring of 1912, a large number of concrete blocks were made, but, owing to the extremely high water in the river, the work of levelling cribs to receive the concrete walls was not commenced till the latter part of August, after which date the work was vigorously prosecuted and good progress was made. During the past winter a portion of the top of old cribwork was removed and the work of levelling and repairing this old cribwork to receive concrete walls was commenced on March 15th, and is still in progress. The work on this contract will be completed before the end of the present season.

RAPIDE PLAT CANAL—IMPROVING LOWER ENTRANCE TO LOCK NO. 24.

Work on this contract, which was entered into with Messrs. Roger Miller & Sons on September 2nd, 1911, was commenced on September 28th, 1911, and continued without interruption till January 17, 1912, when it was closed for the season.

Work was resumed on April 15th, 1912, and good progress was made throughout the season.

The work as designed comprises the widening and straightening of the canal immediately below the lock and the construction of a timber and concrete approach wall on the north side of the lower entrance to lock. With the exception of the dredging, the work is nearing completion, and it is confidently expected that the whole of the works embraced in this contract will be completed by the end of the present season.

GALOPS CANAL—IMPROVING UPPER ENTRANCE TO LOCK NO. 28.

Work on this contract, which was entered into with the Randolph MacDonald Co., Ltd., on June 30, 1911, was commenced in July, 1911, and finally completed in a satisfactory manner on October 26, 1912.

The work as originally designed provided for the construction of a timber and concrete approach wall on the south side of the upper entrance to Lock No. 28, used by all down bound vessels of too great a draft to pass through the Galops rapids. Later it was considered prudent to reduce the length of this wall by about 200 feet, owing to leaks developing in the canal bank where it joined the old river shore. The condition of the bank at this point was such as to cause some apprehension as to its security.

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but by the exercise of constant care and watchfulness the work was successfully carried to completion.

The final estimate for this work has been paid.

The work has proved very beneficial to vessels using this lock and has been highly commended by vesselmen.

The position of this lock, which is open to the river at each end, and unprovided with guard gates which can be used when a down bound vessel is entering lock, made it imperative that some means be provided for closing the lock in the event of an accident to the gates.

A contract was accordingly entered into with the Dominion Bridge Company for the construction of three steel lattice box girders designed to be placed, in case of emergency, in the stop log checks at the head of lock, and supply support for a timber dam. These girders have been constructed and delivered, but machinery for handling them has not yet been installed.

MURRAY CANAL.

The Murray canal was opened for navigation on April 22, and closed on December 16.

Accidents.—On August 18, barge *Recruit* loaded with stone, in tow of str. *John Rolph*, west bound, collided with canal dock near Smithfield road bridge, tearing a large hole in starboard bow and sinking her on the spot. Both boats were owned by the Pointe Anne Quarries, Limited, of Toronto.

After inspection by owners it was decided best to blow her up and remove her by dredging. This was accordingly done.

No delay was occasioned to navigation and no damage was done to dock at time of collision. Some damage was done to dock during the work of removing barge, and the cost of necessary repairs was paid by owners of vessel.

Renewals and repairs.—All of the swing bridges on this canal received one coat of paint. Necessary repairs were made to riprap, roads on canal banks, fences and gates. All of the catch water and off-take ditches were kept clean and in good repair, and minor repairs were made to bridges and houses. The barn at foreman's house received much needed repairs and was also painted.

Improvements.—A contract was entered into with Messrs. S. McLellan and J. Whitley on October 19th, for the erection of a bridgetender's residence at the C. O. railway bridge.

Work on this contract was immediately commenced and carried to completion in a very satisfactory manner on January 19th, 1913.

The final estimate for this work has been paid.

A contract having been awarded the MacDonald Contracting Co., Limited, for the removal of certain high areas in the bottom of this canal, work was commenced on October 4th and continued until November 29th, when it was closed for the season. There still remains of this work a small area at the east end of the canal to be covered and some boulders to be removed west of the Brighton Road bridge, and this work will be completed early this season.

Payment for this work was made by the hour for the plant employed and the work was diligently prosecuted and carried on in a very satisfactory manner by the contractor.

A survey is now in progress with a view to ascertaining the extent and cost of the work necessary to provide a navigable depth of 14 feet in this canal at low water stage in Lake Ontario. As originally designed and constructed, this canal provided for a depth of 11 feet only at the low water stage of Lake Ontario.

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The large increase of traffic through this canal during the past four years and the increasing number of vessels of the larger class using this waterway would seem to warrant the deepening of this canal to permit vessels using it to load to St. Lawrence canals draft and vessel owners are urgent in their demands that this be done.

Attached are statements of fines and damages collected and record of highest and lowest water in river at each of the canals.

I have the honour to be,

Sir,

Your obedient servant,

C. D. SARGENT,

Superintending Engineer.

W. A. BOWDEN, Esq., C.E.,

Chief Engineer, Department of Railways and Canals,

Ottawa, Ontario.

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STATEMENT of Fines and Damages in connection with 'Ontario-St. Lawrence Canals' during Season of 1912.
 CORNWALL CANAL.

Lock.	Date.	Name of Vessel.	Damage.	Fine.	Name of Owner.	Remarks.
	1912.		\$ cts.	\$ cts.		
17	May 27	Steamer Imperial	8,015 36		Imperial Oil Co	Paid.
20	June 5	Steamer India	712 36	100 00	Calvin Co	"
17	"	Steamer Black Rock		40 00	Pendleton Bros.	"
15	Aug. 12	Barge Ungava		10 00	Montreal Transportation Co.	"
18	Sept. 16	Steamer McVittie	26 10		Ogdensburg Coal & Towing Co	"

WILLIAMSBURG CANAL.

23	Sept. 12	Steamer McVittie	200 00 (Estimated).	25 00	Ogdensburg Coal & Towing Co	Paid.
25	Nov. 12	Steamer Edwards		20 00	Ottawa Transportation Co.	"

MURRAY CANAL.

	Aug. 17	Barge Recruit	142 86		Point Anne Quarries Co.	Paid.
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Record of Highest and Lowest Levels of Water on the 'Ontario-St. Lawrence Canals' for the Year ending March 31, 1913.

Months.	CORNWALL CANAL.			FARRAN POINT CANAL.		RAPIDE PLAT CANAL.		GALOIS CANAL.		LUFT LOCK.		MURRAY CANAL.								
	Lock 15.	Lock 21.		Lower Lock 22.	Upper Lock 22.	Lock 23.		Lock 24.	Lock 25.	Lock 27.	Lock 28.	High.	Low.							
		High.	Low.			High.	Low.							High.	Low.	High.	Low.			
1912.																				
April.....	21.6	15.7	16.9	14.8	18.9	16.7	19.2	17.0	18.4	15.7	17.6	15.0	21.6	17.8	17.0	14.6	18.0	14.5	13.9	12.6
May.....	17.1	15.7	16.9	16.6	19.2	18.2	19.7	18.4	18.9	17.7	18.4	16.7	21.8	20.5	17.0	16.3	18.3	17.6	14.7	13.7
June.....	17.1	16.1	17.2	16.8	19.3	18.7	19.8	19.1	19.0	18.3	18.8	17.9	22.2	21.4	18.0	17.0	19.0	18.0	14.8	14.4
July.....	16.1	15.8	16.9	16.4	18.9	18.4	19.4	19.0	18.6	18.0	18.3	17.1	21.6	20.8	17.4	16.3	18.2	17.5	14.4	13.9
August.....	15.9	15.6	16.9	16.1	19.0	18.2	19.2	18.4	18.5	17.7	18.0	17.3	21.3	20.5	16.8	16.4	18.0	17.0	14.1	13.7
September.....	16.0	15.5	16.4	15.8	18.7	17.9	18.8	18.4	18.2	17.4	17.5	17.0	20.8	20.0	16.4	16.0	17.4	17.0	13.9	13.5
October.....	16.3	16.0	16.4	15.7	18.7	17.7	18.8	17.9	18.0	17.2	17.7	16.8	20.9	19.8	16.8	15.6	17.6	16.6	13.5	13.0
November.....	15.8	15.2	16.5	15.2	18.6	17.3	18.9	17.6	18.5	17.1	17.8	15.8	20.9	18.8	16.4	15.2	17.4	16.8	13.9	13.0
December.....	15.9	15.2	16.6	15.7	18.9	17.7	19.2	18.0	18.7	16.9	18.1	16.3	21.5	18.8	17.0	15.8	18.0	16.8	13.8	13.2
1913.																				
January.....	17.9	15.4	17.0	15.1	19.0	17.6	19.3	18.7	18.7	17.0	18.1	16.0	21.8	19.0	17.0	15.3	18.0	16.3	14.3	13.3
February.....	30.9	16.5	17.5	15.7	19.6	17.9	20.0	18.1	19.4	16.9	17.7	16.0	22.4	19.0	18.0	15.5	19.0	16.5	14.2	13.7
March.....	28.7	17.7	17.5	15.5	19.6	18.0	20.0	18.2	19.2	17.0	18.8	16.6	22.0	19.8	17.5	15.3	18.9	16.3	14.8	13.6

WELLAND CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
ST. CATHARINES, July 19, 1913.

SIR,—I have the honour to report upon the maintainance and the operation of the Welland Canal and its branches for the fiscal year ending March 31, 1913.

NAVIGATION SEASON.

The canal opened for navigation on April 22 and closed December 19, 1912.

ACCIDENTS.

On the 20th June, 1912, the steamer *La Canadienne*, bound up, carried away the four gates of lock No. 22. Three children who were standing on the bank below were swept by the rush of water into the side pond and were drowned. Repairs to the lock were quickly made, four spare gates being placed and navigation resumed in eighteen hours. The steamer, which was badly damaged, sank in the level below and was raised on June 25th by the canal repair staff and placed in dry dock at Port Dalhousie.

Another serious accident occurred on August 2, 1912, when the steamer *W. M. Egan*, bound up, collided with the head gates of lock 23. All four gates were carried out. They were replaced by spare ones and navigation resumed in twenty-two hours.

On August 16, 1912, what might have proved a very serious accident was averted by the Gowan Safety Device, installed at lock No. 24. The steamer *Packer*, moving with considerable speed, collided with the head gates, which, but for the device, would have been carried out. One gate was badly twisted and the hanging gear broken. Temporary repairs were made and navigation resumed after four hours' delay. Later on the damaged gate was replaced by a spare one.

The steamer *Samuel Marshall*, up bound, on November 1st, carried away the upper gates at lock 13. Spare gates were placed and navigation resumed after fifteen hours' delay.

SLIDES.

During low water in February, two slides occurred on the Summit Level, one about 700 feet long on the west side of the canal, about one-half mile north of Welland aqueduct, and the other on the east side of the canal at the south end of the Deep Cut. Arrangements have been made with M. J. Hogan to have these removed sufficiently to provide safe navigation before the opening of the canal.

IMPROVEMENTS.

A contract was entered into with Messrs. James Battle and N. W. Gowan, for the supply of steel castings forming the Gowan Safety Device. Sufficient were supplied to equip five locks, and it is the intention to equip five more this year. In March, 1913, the water was drawn off and the masonry of the locks prepared for the installation of the device. The device having proved its effectiveness at lock 24, it is anticipated serious accidents will be averted at the locks where it is installed, and where the resulting damage in case of an accident would be very great.

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PORT COLBORNE.

Messrs. Hogan and Macdonell completed their contract, entered into in 1900, which covered the bulk of the improvements made at Port Colborne. A contract was entered into with M. J. Hogan for the removal of the old east entrance pier and the extension of the east docking, together with the excavation of the entrance in front of the extension. This work is in progress, the depth of water afforded will meet the requirements of the ship canal.

The government elevator showed a large increase in business, handling 11,600,000 bushels of grain, as compared with 7,000,000 bushels the previous year. The above record was surpassed by only one other lake elevator, which had about three times the storage capacity. The need of additional storage capacity was badly felt and considerable business offering had to be turned away. A contract was entered into with the Dominion Bridge Company for the erection of an addition to the elevator, which will, when completed, give a storage capacity of 2,000,000 bushels.

The receipts for handling grain paid all operating and repair expenses for the year and left a net surplus of over \$28,000.

REPAIRS, NEW CANAL.

Ordinary repairs to the structures on the New canal were carried out during the year. Lock No. 5 was unwatered in March, 1913, and the foundation of the lower recess, which had been undermined, repaired in concrete. The foot bridges over locks Nos. 3, 4 and 5 weirs, which were badly decayed and unsafe, were replaced by reinforced concrete bridges.

REPAIRS, OLD CANAL.

The Old canal was unwatered for two weeks at the end of May, and repairs were made to the under water structures. The foundations of both recess of lock 24, and the upper recess of lock 23, as well as the foundation of lock 24 weir, which were badly undermined, were repaired in concrete.

A reinforced concrete highway bridge was built over the hydraulic races at lock 4 to replace the wooden structure, which was badly decayed and dangerous to those using it.

A reinforced concrete spillway was built near lock 4, from hydraulic race No. 2 to No. 4. The old spillway had been out of commission for some years and the necessity of such a safety valve was badly felt. The spillway between races one and two was rebuilt.

A new shop with concrete walls was built at lock 21 gate yard, to replace the old one, which was in tumble down condition.

While the water was drawn, the city of St. Catharines laid a new two foot water main across the canal and hydraulic races in the vicinity of lock 4. Various repairs were made by the mill owners to their works.

Sufficient repairs were made to under water works to avoid the necessity of drawing water during the coming year, a feature which is appreciated by the mill owners.

WELLAND CANAL FEEDER.

Early in April, an unprecedented flood occurred on the Grand river (the water rising some eight inches higher than any previous record) and causing heavy damage to canal works at Dunnville and Port Maitland. The cost of repairing the damage amounted to about thirteen thousand dollars (\$13,000).

A repetition of last year's flood occurred early in March of the present year. The canal works, which had been strengthened by the repairs made in 1912, did not suffer so severely as on the former occasion, but the town of Dunnville was flooded and considerable loss was sustained by the citizens. The need of increased facilities for the

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discharge of the water, from the upper to the lower river, in such emergencies, is apparent, and it is proposed to construct a spillway during the present year for this purpose.

The float bridge at the Inman road crossing of the feeder was replaced by a single track swing bridge. A new concrete substructure was built, and the bridge, which had been in use at Dunnville until replaced the previous year, was rebuilt and transferred to Inman road.

GENERAL.

The water in Lake Ontario was somewhat higher than the previous year, and Lake Erie fairly up to normal throughout the navigation season.

The following superannuated employees died during the year: William Aikens on July 16, 1912, and John Gearin on August 24, 1912.

Attached is a statement of moneys collected for damages to canal property by different vessels; also a statement showing the highest and lowest recorded depths of water on the mitre sills of the locks Port Dalhousie and Port Colborne for each month of the year.

I have the honour to be, sir,

Your obedient servant,

W. H. SULLIVAN,

Superintending Engineer.

To W. A. BOWDEN, Esq.,

Chief Engineer, Department of Railways and Canals,

Ottawa, Ont.

WELLAND CANAL.

STATEMENT of damages to Welland Canal property during the fiscal year ending March 31, 1913, and amount paid on account of said damages.

Date of Damage.	Name of Vessel.	Amount of Damage.	Amount Paid.	Date Paid.	Where Paid.
1912.		\$ cts.	\$ cts.	1912.	
May 5	Steamer Bickerdike	16 55	16 55	Oct. 11	Pt. Dalhousie.
" 5	" Arabian	9 72	9 72	" 30	"
" 7	" J. H. Plummer	25 00	25 00	" 30	"
" 11	" Keystorm	24 96	24 96	Feb. 12-13 . . .	"
" 17	Brg. No. 6 S.O. Co.	11 24	11 24	Oct. 1-12	"
" 19	Str. Beaverton	28 16	28 16	" 17-12	"
" 20	" G. Howe	17 75	17 75	" 8-12	"
" 25	" Keywest	19 53	19 53	" 11-12	"
June 20	" La Canadienne	5,479 53	5,479 53	Jan. 14-13 . . .	Department.
" 27	" A. G. McKinstry	14 25	14 25	Nov. 16-12 . . .	Pt. Dalhousie.
July 5	Tug. Minitague	18 75	18 75	Jan. 15-13 . . .	"
" 13	Str. City of Hamilton	13 70	13 70	Nov. 16-12 . . .	"
Aug. 1	Tug Meteor	16 25	16 25	Dec. 16-12 . . .	"
" 2	Str. Wiley M. Egan	4,881 74	3,659 40	Mar. 27-13 . . .	"
" 16	" H. E. Packer	950 69	950 69	Aug. 20-12 . . .	"
Sept. 5	" Keystorm	17 05	17 05	Jan. 15-13 . . .	"
" 15	" Ogdensburg	22 98	22 98	Mar. 24-13 . . .	"
Oct. 18	Brg. Augustus	27 00	27 00	Dec. 16-12 . . .	"
" 25	" No. 6 S. O. Co.	27 75	27 75	Dec. 3-12	"
" 23	Str. Arlington	30 57	30 57	Apr. 2-13	"
Nov. 1	" Samuel Marshall	3,970 99	3,970 99	Nov. 5-12	"

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WELLAND CANAL.

STATEMENT showing the highest and lowest depths of water on the lower mitre sill, Lock No. 1, New Welland Canal, Port Dalhousie, for the fiscal year ending March 31, 1913.

Months.	Lower Sill.				Months.	Lower Sill.			
	Highest.		Lowest.			Highest.		Lowest.	
1912.	Ft.	In.	Ft.	In.	1912.	Ft.	In.	Ft.	In.
April	16	4	15	2	November	16	0	15	9
May	16	11	16	3	December	16	0	15	9
June	17	2	17	0	1913.				
July	17	2	16	9	January	16	9	15	10
August	16	9	16	5	February	16	4	16	7
September	16	5	16	3	March	17	0	16	3
October	16	4	15	10					

STATEMENT showing the highest and lowest depths of water on the upper mitre sill, Lock 27, New Welland Canal, Port Colborne, for the fiscal year ending March 31, 1913.

Months.	Upper Sill.				Months.	Upper Sill.			
	Highest.		Lowest.			Highest.		Lowest.	
1912.	Ft.	In.	Ft.	In.	1912.	Ft.	In.	Ft.	In.
April	15	0	13	0	November	16	2	14	1
May	16	7	14	0	December	16	6	13	8
June	15	2	13	7	1913.				
July	15	1	14	1	January	15	9	12	8
August	15	5	14	3	February	15	7	13	3
September	15	8	14	5	March	16	5	13	8
October	15	4	14	1					

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SAULT STE. MARIE CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

SAULT STE. MARIE, ONT., March 31, 1913.

SIR,—I have the honour to report upon the maintenance and operation of the Sault Ste. Marie Canal, for the fiscal year ending March 31, 1913.

The canal was opened for traffic on April 24, 1912, and closed on December 19, having been in operation for two hundred and forty days.

The traffic passing this point, through the Canadian and United States Canals, shows a large increase over last year or any previous year. The freight tonnage amounted to 72,472,676 tons, an increase over last year of 36 per cent, the passengers numbered 66,877, a decrease of 16 per cent, and the registered tonnage of vessels amounted to 56,736,807, an increase of 36 per cent.

The Canadian registered tonnage through both canals amounted to 3,693,604 tons, an increase of 81,135 tons or 2 per cent.

The freight through the Canadian canal amounted to 39,664,874 tons, an increase of 28 per cent, the passengers numbered 37,753, a decrease of 2 per cent and the registered tonnage amounted to 25,789,654 tons, an increase of 33 per cent.

ACCIDENTS.

The only accident of any importance to a vessel, during last season, was the grounding of the steamer *Wm. P. Snyder*, of the Shenango Steamship Company, on a boulder in the lower entrance, on August 22.

The boulder had been shoved over into the channel by the dredge engaged in widening the channel; and the *Snyder* while leaving the lock and attempting to pass an upbound vessel, kept to the south side of the channel, and in doing so grounded on the boulder.

The *Snyder* was released at 3.30 a.m. on August 24th, after having been aground for about fourteen hours.

Traffic was suspended for several hours during the night and nine large vessels were detained for several hours.

On May 26th, the valve rod in the south upper motorhouse was broken by a round log jamming in the valve, and the operating of the lock was suspended for three hours while the log was being removed by the diver.

The lock was operated for several days with one valve while the other valve rod was being repaired.

On August 21st, both opening and closing cables on the north lower main gate, were broken by a surge in the water jerking the gate.

On an examination being made by the diver it was found that the vertical sheave in the well hole behind the gate together with the bearing and bed plate were broken, and the bolts holding the bed plate to the rock were bent.

As there were no spare parts on hand, it was necessary to operate the lock with the auxiliary gates until castings could be made; and on September 3rd the lock was closed down for the day, unwatered and the repairs made.

REPAIRS.

The top of the lower north pier, from the water line up, was rebuilt last season, for a length of three hundred feet; leaving four hundred feet in length to be rebuilt. This work will be completed during the season of 1913.

The usual cleaning, painting and repair work in connection with the lock buildings and machinery was performed at the close of last season and the present spring.

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The old wooden floor in the basement of the power house, which had been in bad condition for some time, was replaced by a concrete floor.

The work of building an extension, three hundred feet in length, to the upper north pier was completed during the season of 1912 and the pier put into use.

The usual statements, showing the traffic passing this point through the Canadian and American canals, are attached.

I have the honour to be,

Sir,

Your obedient servant,

J. W. LEB. ROSS,

Superintending Engineer.

W. A. BOWDEN, Esq., C.E.,

Chief Engineer, Department of Railways and Canals,
Ottawa, Ontario.

SAULT STE. MARIE CANAL.

COMPARATIVE STATEMENT since opening of lock, September 9, 1895.

	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.
	1895.		1896.		1897.	
Period Open.....	{ Sept. 9. Dec. 6.		{ May 7. Dec. 10.		{ April 21. Dec. 14.	
Canad. Regist. Tonnage...	125,240		586,571	461,331	398,343	-188,228
U. S. Registered Tonnage.	623,131		3,810,794	3,187,663	3,406,018	-404,776
Total Tonnage.....	748,371		4,397,365	3,648,994	3,804,361	-593,004
Lockages.....	698		3,042	2,344	2,976	-66
Vessel Passages.....	1,193		5,189	3,996	4,376	-813
Time Passing Lock.....	212 h. 27 m.		984 h. 22 m.	771 h. 55 m.	684 h. 11 m.	-300 h. 11 m.
Average Time Lockage....	18' 26 m.		18' 42 m.		13' 79 m.	
	1898.		1899.		1900.	
Period Open.....	{ April 11. Dec. 9.		{ April 26. Dec. 20.		{ April 23. Dec. 16.	
Canad. Regist. Tonnage...	403,331	4,998	561,759	158,528	579,528	17,769
U. S. Registered Tonnage.	2,354,606	-1,051,412	2,388,441	33,835	1,616,139	-772,302
Total Tonnage.....	2,757,937	-1,046,424	2,950,200	192,263	2,195,667	-754,533
Lockages.....	2,520	-156	2,610	90	2,205	-405
Vessel Passages.....	3,712	-664	3,820	108	3,163	-657
Time Passing Lock.....	609 h. 30 m.	-74 h. 41 m.	643 h. 16 m.	33 h. 46 m.	541 h. 24 m.	-101 h. 52 m.
Average Time Lockage....	14' 51 m.		14' 78 m.		14' 73 m.	
	1901.		1902.		1903.	
Period Open.....	{ April 20. Dec. 21.		{ April 1 Dec. 20.		{ April 2. Dec. 13.	
Canad. Regist. Tonnage...	776,331	196,803	1,366,087	589,756	1,616,385	250,298
U. S. Registered Tonnage.	1,672,631	56,492	3,233,069	1,565,438	3,145,020	-93,049
Total Tonnage.....	2,448,962	253,295	4,604,156	2,155,194	4,761,405	157,249
Lockages.....	2,906	701	3,418	512	3,242	-176
Vessel Passages.....	4,243	1,080	5,169	926	4,418	-751
Time Passing Lock.....	724 h. 38 m.	183 h. 14 m.	925 h. 57 m.	201 h. 19 m.	883 h. 10 m.	-42 h. 47 m.
Average Time Lockage....	14' 96 m.		16' 25 m.		16' 34 m.	

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SAULT STE. MARIE CANAL.—Continued.

COMPARATIVE STATEMENT since opening of lock, September 9, 1895.—Continued.

	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.
	1904.		1905.		1906.	
Period open	{ April 30. { Dec. 26.		{ April 10. { Dec. 20.		{ April 14. { Dec. 22.	
Canad. Regist. Tonnage...	1,557,335	-59,050	1,799,336	242,001	1,958,186	159,850
U. S. Regist. Tonnage....	2,673,090	-471,930	3,739,224	1,066,134	4,399,990	660,766
Total Tonnage.....	4,250,425	-530,980	5,538,560	1,308,135	6,359,176	820,616
Lockages	3,012	-230	4,031	1,019	4,152	121
Vessel Passages.....	4,092	-323	5,853	1,761	5,913	60
Time Passing Lock.....	811 h. 28 m.	-71 h. 42 m.	1060 h. 10 m.	249 h. 10 m.	1131 h. 23 m.	70 h. 24 m.
Average Time Lockage...	16' 16 m.		15' 79 m.		16' 35 m.	
	1907.		1908.		1909.	
Period Open	{ April 22. { Dec. 15.		{ April 21. { Dec. 15.		{ April 21. { Dec. 16.	
Canad. Regist. Tonnage...	2,288,349	329,163	2,556,552	268,203	2,912,586	356,034
U. S. Regist. Tonnage....	9,961,977	5,561,987	7,038,389	-2,923,588	14,899,562	7,861,173
Total Tonnage.....	12,250,326	5,891,150	9,594,941	-2,655,385	17,812,148	8,217,207
Lockages	4,596	444	3,667	-929	5,046	1,379
Vessel Passages.....	6,153	240	5,344	-809	6,420	1,076
Time Passing Lock.....	1362 h. 8 m.	230 h. 45 m.	1258 h. 35 m.	-103 h. 23 m.	1853 h. 45 m.	595 h. 10 m.
Average Time Lockage...	17' 78 m.		20' 59 m.		17' 31 m.	
	1910.		1911.		1912.	
Period Open.....	{ April 12. { Dec. 15.		{ April 22. { Dec. 13.		{ April 24. { Dec. 19.	
Canad. Regist. Tonnage...	3,122,068	209,482	3,089,863	-32,205	3,273,614	183,751
U. S. Regist. Tonnage....	20,227,083	5,327,521	16,242,103	-3,984,980	22,516,040	6,273,937
Total Tonnage.....	23,349,151	5,537,003	19,331,966	-4,017,185	25,789,654	6,457,688
Lockages	6,110	1,064	5,229	-881	6,290	971
Vessel Passages.....	8,285	1,865	6,802	-1,483	7,866	1,064
Time Passing Lock.....	2327 h. 40 m.	473 h. 55 m.	1704 h. 35 m.	-623 h. 15 m.	1811 h. 45 m.	107 h. 20 m.
Average Time Lockage...	22' 86 m.		19' 55 m.		17' 53 m.	

REPORT of Traffic passing Sault Ste. Marie through Canadian and American Canals.

Year.	Number of Vessels passed.	Registered Tonnage of Vessels.	Total Freight Tonnage.	Cost of	Estimated Value of Freight Carried.	Percentage of Freight Carried in Vessels.	Number of Passengers.
				carrying per mile ton.			
				Mills.	\$	p. c.	
1855.....	193	106,296	14,503	.....	.....	.....	8,295
1860.....	916	403,657	153,721	.....	.....	.....	9,230
1865.....	997	409,062	181,638	.....	.....	.....	19,777
1870.....	1,828	690,826	539,883	.....	.....	.....	17,153
1875.....	2,023	1,259,534	833,465	.....	.....	.....	19,685
1880.....	3,503	1,734,890	1,321,906	.....	.....	.....	25,766
1885.....	5,380	3,035,987	3,256,628	.....	.....	.....	36,147
1890.....	10,557	8,454,435	9,041,213	1 3	102,214,948	3 5	24,856
1891.....	10,191	8,400,685	8,886,759	1 35	123,178,208	4 0	26,190
1892.....	12,580	10,647,203	11,214,333	1 31	135,117,267	3 8	25,896
1893.....	12,008	8,949,754	10,796,572	1 1	145,436,957	4 1	18,869
1894.....	14,491	13,110,366	13,195,860	0 99	143,114,502	3 5	27,236
1895.....	17,956	16,806,781	15,062,580	1 14	159,575,129	3 75	31,656
1896.....	18,615	17,249,418	16,239,061	0 99	195,146,842	3 0	37,066
1897.....	17,171	17,619,923	18,982,755	0 83	218,235,927	3 0	40,213
1898.....	17,761	18,622,764	21,234,634	0 79	233,069,749	2 2	43,426
1899.....	20,255	21,958,347	25,255,810	1 05	281,364,750	3 1	49,082
1900.....	19,452	22,315,834	25,643,073	1 18	267,011,959	3 0	58,555
1901.....	20,041	24,626,976	28,403,065	0 99	289,906,865	4 0	59,663
1902.....	26,659	31,955,582	35,961,146	0 89	358,306,300	4 0	59,377
1903.....	18,596	27,736,444	34,674,437	0 92	349,405,014	6 0	55,175
1904.....	16,120	24,364,138	31,546,106	0 81	334,502,686	6 0	37,695
1905.....	21,679	36,617,699	44,270,680	0 85	416,965,484	5 0	54,204
1906.....	22,155	41,098,324	51,751,080	0 84	537,463,454	5 0	63,033
1907.....	20,437	44,087,974	58,217,214	0 80	569,830,188	5 0	62,758
1908.....	15,181	31,091,730	41,890,557	0 69	470,141,318	7 0	53,287
1909.....	19,204	46,751,717	57,895,149	0 78	626,104,173	6 0	59,948
1910.....	20,899	49,856,123	62,363,218	0 74	654,110,844	6 0	66,933
1911.....	18,673	41,653,488	53,477,216	0 67	595,019,844	6 0	79,951
1912.....	22,778	56,736,807	72,472,676	0 67	791,167,591	6 0	66,877

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SAULT STE. MARIE CANAL.

ENGINEER'S OFFICE,
SAULT STE. MARIE, ONT.,
April 1, 1913.

DEAR SIR,—I have the honour to submit my annual report on the improvements to the entrance of the Sault Ste. Marie canal for the fiscal year ending March 31, 1913.

EXTENSION OF THE NORTH PIER AT THE UPPER ENTRANCE.

A contract was entered into with Mr. John F. Boyd on July 20, 1911, for the construction of a pier 300 feet in length, forming an extension westerly to the north entrance pier. Work was started on this contract September 5, 1911, and after many delays caused chiefly in securing material and labour, the works were brought to a completion November 6, 1912. The additional length of pier constructed will provide better accommodation for vessels awaiting lockage.

WIDENING OF THE CHANNELWAY AT THE LOWER ENTRANCE.

A contract was entered into with the Soo Dredging Construction Company on July 28, 1912, and was brought to a satisfactory completion on November 30, 1912.

The work embraced in the contract consisted in widening the channel on the south side to a line 230 feet distant and parallel with the centre ranges; and on the north side to a line laid down 295 feet distant with the centre ranges at the easterly extremity and 162 feet distant at the westerly extremity of the work.

The additional width of channel provided at the lower entrance to the lock at the turning point from the channel ranges to the centre line of lock will make the passage of vessels much safer and allow of quicker dispatch.

I have the honour to be
Your obedient servant,

F. B. FRIPP,
Engineer in Charge.

W. A. BOWDEN, Esq.,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE,
OTTAWA, April 1, 1913.

SIR,—I have the honour to submit herewith my report on the Rideau Canal for the fiscal year ending March 31, 1913.

Navigation opened at Ottawa on May 1, 1912. Navigation opened at Kingston Mills, on May 1, 1912. Navigation closed at Ottawa on December 3, 1912. Navigation closed at Kingston Mills on November 27, 1912.

Navigation was maintained without interruption throughout the entire length of the canal during the whole season, the exceptionally wet summer keeping all the levels up to far above their usual height towards the end of the season.

As a result of this abnormal rainfall during 1912, it may be interesting to state that Rideau lake—the principal source of water supply from Smith's Falls to Ottawa—was within a very few inches of being as high when navigation closed at the end of November last as it was during the spring freshet in April, 1912.

This unusual rainfall continued also during the past winter, and to such an extent as to entirely prevent some of our contemplated winter repairs being carried out; and seriously hindering all our work, in fact, we had three distinct freshets during December and January.

The present spring freshet commenced on Thursday, March 20, and was of an average violence, although after the 24th cold weather again occurred, which checked the flow of the water to a very large extent. This cold weather has continued, and the freshet is not yet over, nor has the ice gone out of the canal levels; but the water having fallen to a great extent, the danger of damage being done by the ice when it breaks up and goes out is considerably lessened, and I do not anticipate much trouble from this cause now.

The number of lockages last year was slightly lower than that of the year before; the reason for which is somewhat difficult to assign; but the wet summer certainly prevented numbers of persons making use of the canal for motor boat outings, and this may perhaps be taken as one of the principal reasons for the reduced number of lockages.

The principal works and repairs carried out along the line of the canal during the past fiscal year are as follows:—

OTTAWA LOCK STATION (8 Locks and 1 Basin).

One new pair of lock gates was framed and hung in place.

A considerable portion of the roadway round the basin, from the Public Works Department coal sheds to the foot of Slater street, was filled in with heavy flags and graded and macadamized.

The old stone arch across the Cut at the head of the locks, known as Sappers Bridge, and which was built over eighty years ago by the Royal Engineers, was demolished to make way for the new Plaza; and the great difficulty experienced in throwing down this old stone arch, bore eloquent testimony to the excellent workmanship bestowed upon it when it was built. This arch was thrown down into the canal during the season of navigation, a crib having been placed in the water to receive the debris; but the contractors worked day and night to remove same, so that navigation was only delayed for two or three days, and no great inconvenience was occasioned to boatmen.

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The coping of the upper sill of lock No. 3 was heaved up by the water during the summer, but it was secured for the rest of the season by means of rock bolts and grouting; and a new coping was cut for it during the summer in our quarry; and is now being laid.

OTTAWA EAST SWING BRIDGE.

The swing bridge and the iron hand railing on each side of the approaches, were sand blasted and painted with bitumastic paint. The flooring was renewed and the roadway on each approach was graded and macadamized.

CONCESSION STREET BRIDGE.

The steel swing span was sand blasted and painted with bitumastic paint. Small repairs were made to the protection piers of the bridge. Portions of the east side of the Cut between this bridge and Bank street, which had slid into the canal, were built up with dry stone walling; and this work will be continued this spring.

HARTWELLS LOCK STATION (2 Locks).

The lower wing wall on the west side of the lower lock was taken down and rebuilt, and a new coping was laid on both sides of the chamber of the lower lock. Some grading and sodding was done on the lock lawns; and the dry stone protection wall was continued on the east side of the cut, both above and below the locks. A new roof was laid on the kitchen of the lock house. Small repairs were made to the crib-work below the waste weir and to the tow path roads and to the station in general.

HOGSBACK LOCK STATION (2 Locks and 1 Bridge).

Considerable repairs were made to the west abutment of the west bulkhead which was taken down and rebuilt with timber from the bottom, on the down stream side. This new crib was then filled to the top with stone. The swing bridge and the bulkheads were replanked and small repairs made to the handrailing. A large quantity of clay was placed in front of the dam by our dredge *Rideau*, and much leakage thereby stopped. A small crib has just been built above the waste weirs to serve for anchorage for the boom, and also to act as an ice breaker in conjunction with the other cribs. This new crib is, however, only partially filled with stone, as this work was stopped by the early and sudden freshet last month. The boom itself suffered considerably last winter owing to the continual rising and falling of the water, which broke the ice and forced it out of its proper position. However, in future, the boom will be drawn out of the water at the close of navigation and placed in position before the freshet. A new storehouse was built here last summer. Sundry small repairs were made to the tow path road and to the station generally.

BLACK RAPIDS LOCK STATION (1 Lock).

The upper wing wall on the east side of the lock was taken down and rebuilt, and the pavement above the stop-log sill above the lock was taken up and concreted. Small repairs were made to the piers below the lock, and some stone filling placed in the dam. Under ordinary circumstances the masonry repairs stated above could have been executed without unwatering, as the waste weirs usually carry off the water and leave the upper lock sill dry during the winter; but this year the continued winter rains kept the water up to such an extent that a coffer dam had to be built across the mouth of the lock in order to unwater it. Sundry other small repairs were made to the station in general.

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LONG ISLAND LOCK STATION (3 Locks and 1 Bridge).

The waste wier bulkhead at Manotick was sheeted, and sundry small repairs were made to the station generally. Next winter it is proposed to rebuild the upper lock, the walls of which have been heaved out of line by the frost.

MANOTICK BRIDGE.

The three steel spans of the bridge were sand blasted and painted with bitumastic paint, and small repairs were made to the bridge in general.

WELLINGTON BRIDGE.

Small repairs were made to the flooring of the bridge.

BECKETT'S LANDING BRIDGE.

The timber piers under the bridge were taken down as far as the high stage of the water would permit, and rebuilt.

BURRITT'S RAPIDS LOCK STATION (1 Lock and 1 Bridge).

No repairs were made here last year, although quite a quantity of timber was delivered for the repairing of the waste weir, and the construction of a crib below the dam, but the water being so high all winter, the work had to be postponed till a later date.

NICHOLSON'S LOCK STATION (2 Locks and 1 Bridge).

The lower gates of the upper lock were renewed. The upper wing wall, piers and sill of the lower lock were taken down and rebuilt. About 100 feet of the dry wall on the south side of the lower cut, just above the lower lock, was taken down and rebuilt in cement; and 200 feet more of this same wall was rebuilt dry. The lower sill of the lower lock was concreted and planked. A coffer dam had to be built below the lock and the lock pumped for this work on account of the high water. The chamber walls of the lower lock were grouted and sundry small repairs made to the station in general.

CLOWES LOCK STATION (1 Lock).

One pair of lock gates were renewed. The chamber walls were grouted and pointed, this work being completed from last year. The large stone dam which is arched upstream, has been shifted by the ice and the arc of the key work broken from this cause; so preparations were made last summer to take down about 150 feet of the dam, and rebuild it to its proper radius. The stone was all cut for this work last summer in our quarry, and delivered on the dam; and the cement was also delivered and derricks, &c., erected. However, the river kept so abnormally high last winter that it was considered dangerous to cut the dam, as the water might get beyond control, the dam being 16 feet high.

This work therefore was abandoned until next winter when more favourable weather may be met with, so the cement was used elsewhere on the other work.

This dam is not in any immediate danger, and has stood the present freshet as well as ever; but should be rebuilt as soon as possible after the close of navigation this year. Sundry small repairs were made to the station in general.

MERRICKVILLE LOCK STATION (3 Locks, 2 Basins, 2 Bridges).

One new pair of lock gates hung last April, having been framed the previous winter, as stated in my last report. The upper mitre sill of the middle lock, as well

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as the upper wing walls, recesses, and gate piers; and also the lower recesses and piers, all on the north side of the lock, were taken down and rebuilt. The coping on the north side of the chamber of this lock was also taken up and relaid; and the chamber walls were grouted and pointed. The lower sill of this lock was concreted and planked, and portion of the mitre was repaired and rebolted to the rock.

A new concrete wall was built inside the old stone wall forming the north side of the lower basin; and the old coping was moved forward on to the top of this new concrete wall. This will effectually staunch the great leakage that has constantly been flowing through the old wall, and which made it extremely difficult to keep the water up in the basin.

The upper wing walls, recesses, and gate piers on the north side of the lower lock were also taken down and rebuilt.

A large quantity of earth, &c., which had accumulated in the upper basin, was excavated and placed behind the wall on the north side of the lower basin to strengthen and widen the same.

The swing bridge and the fixed bridge together with the railing leading thereto, were sand blasted and painted with bitumastic paint. Sundry other small repairs were made to the station in general.

KILMARNOCK LOCK STATION (1 Lock, and 2 Bridges).

Small repairs were made to the back dam as usual. This structure which is literally nothing but a heap of stones, will have to be rebuilt at no distant date, as it requires constant repairs to make it hold the water up every year. Portion of dry stone wall on the south side of the upper cut was rebuilt, and sundry small repairs were made to the station in general.

EDMONDS LOCK STATION (1 Lock).

The lock masonry was grouted and pointed, and sundry small repairs made to the station in general.

OLD SLYS LOCK STATION (2 Locks, and 1 Bridge).

The swing bridge was replanked, and the storehouse and portions of the out-buildings of the lock house were reshingled. The hollow between the north side of the locks and the lock house is gradually being levelled up with clay, and this work will be continued until completed. Sundry small repairs were made to the station in general.

SMITH'S FALLS COMBINED LOCK STATION (3 Locks, 1 Basin, 2 Bridges).

The steel bridge below the waste weirs and dam in the basin was sand blasted and painted with bitumastic paint. The masonry of the middle and lower locks was pointed; as were also the walls of the lock house. The work of filling in portion of the south side of the basin was again continued, and will be proceeded with again next summer. Sundry small repairs were made to the station in general.

SMITH'S FALLS DETACHED LOCK STATION (1 Lock and 2 Bridges).

A new wharf was built above the lock on the north side, for boats to tie up to whilst waiting for the lock, and the island was cleared and brushed and a road made leading to this wharf.

The swing bridge below the lock and the fixed bridge across the mill pond were sand blasted and painted with bitumastic paint.

A contract was entered into with Mr. James Bogue, of Peterborough, Ont., for the construction of a concrete wall along the south side of the cut below the lock.

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This wall was to have been about 900 feet long, and was to have been completed by March 31, last; but this I regret to state Mr. Bogue has failed to do. The workmanship and material are good; but Mr. Bogue did not commence the work immediately after the close of navigation, in spite of my repeatedly calling upon him to do so; and after he did start, he carried on the work so slowly, that the freshet came upon him before the work was finished; and I doubt if the water in the basin will go down low enough before navigation closes this year, to enable him to put in the foundations for the uncompleted portions of the wall. Mr. Bogue has assured me that he can complete the work by the 31st May if the department will extend the time till that date; and I have recommended this being done, although I doubt if he will be able to finish the work which he appears so confident of being able to do; because the basin is now full owing to the freshet, and will be kept for navigation after May 1.

POONAMALIE LOCK STATION (1 Lock).

A curious washout occurred under the upper mitre sill of the lock, caused by the rush of the water from the sluices, involving the necessity of pumping the lock, and concreting the bottom.

The roadway along the north bank of the upper cut was raised and graded, and 320 feet of cement walling was built there. This wall requires to be extended for some distance yet, and will be so extended from time to time. Small repairs were made to the masonry of the lock and also to the lock house. Some obstructions were removed from the cut by our diver. Some new stoplogs were framed for the lock and sundry small repairs were made to the station in general.

BEVERIDGES LOCK STATION (2 Locks, and 1 Bridge).

The long piers running out into the lake at the foot of the lower lock were completed and filled with stone. Small repairs were made to the lock house; and a small frame shelter was built for the lock labourers at the head of the upper lock. A considerable quantity of clay was deposited in front of the retaining dam, being brought on scows from our dredge *Rideau* which was working in the vicinity. Sundry small repairs were made to the lock gates and sluices, and to the station in general.

PERTH BRANCH (1 Basin, and 4 Bridges).

About 350 feet of the wharf on the north side of the basin was taken down to the water level and rebuilt; and five of the bridge rest piers were also rebuilt from water line up.

Portions of the walls along the cuts were rebuilt and some pipe culverts put in. Both storehouses were painted, and sundry small repairs made generally.

OLIVER'S FERRY BRIDGE.

All the fixed spans of this bridge were cleaned by sand blast and painted with bitumastic paint.

THE NARROWS LOCK STATION (1 Lock, and 1 Bridge).

A new frame storehouse on cement foundation was built here. The piers above the lock, which had been damaged by ice last spring, were repaired. One hundred cubic yards of gravel were placed on the dam, and sundry small repairs were made to the station in general.

WOLF LAKE DAM.

The bridge across the outlet of the dam was rebuilt; and a contract was awarded to Mr. E. G. Adams, of Westport, for cleaning out the creek below the dam, in order to allow more water being run off the lake to feed the canal level below Westport.

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NEWBORO LOCK STATION (1 Lock, and 1 Bridge).

New swing bars were framed and put on the upper gates of the lock. The high level bridge across the cut was sand blasted and painted with bitumastic paint. Repairs were made to the approaches to the bridge, and to the piers of the dam; and also small repairs were made to the lock house and to the station in general.

CHAFFEY'S LOCK STATION (1 Lock, and 1 Bridge).

The bridge over the waste weir was rebuilt, and sundry small repairs were made to the station in general.

The Canadian Northern Railway Company are building their line of railway across the upper end of the cut, and a station is to be built quite near the lock, all of which will be a great convenience to campers and tourists, as they will be thus enabled to reach this beautiful spot in two or three hours.

DAVIS'S LOCK STATION (1 Lock).

Small repairs were made to the lock house and outbuildings and to the station in general.

JONES' FALLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

Repairs were made to the masonry of the upper lock; and a new chimney was built on the blacksmith shop. Our diver cleaned up a considerable quantity of debris from the bottom of the lower lock, which had become shallow from this cause.

A new masonry approach was built to the east side of the swing bridge across the lock. The long bridge at the foot of the combined locks was rebuilt from the water line up. The retaining dam at Morton was partially rebuilt and repairs made to the wharf at that point. Sundry small repairs were made to the roads and to the station in general.

BRASSES POINT BRIDGE.

The fixed spans of the bridge were sand blasted and painted with bitumastic paint. The swing span was rebuilt and repairs made to the rest piers.

UPPER BREWERS LOCK STATION (2 Locks, 1 Bridge, 1 Basin).

The centre pier, recess, and manhole on the south side of the locks were grouted and concreted. Two small wooden bridges over the road leading to the bridge were taken away, being replaced with 18-inch tile pipe culverts, and the roadway filled in on top. Sundry small repairs were made to the station in general.

LOWER BREWERS LOCK STATION (1 Lock, and 1 Bridge).

No repairs were required at this station during the past year.

KINGSTON MILLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

Our diver cleaned out the bottom of the locks here, and made small repairs to the sluices. Four hundred cubic yards of stone were placed on the embankments by contract with Mr. W. J. Keenan. Sundry small repairs were made to the station in general.

GENERAL.

The usual spring repairs, consisting of pointing and grouting the lock masonry, painting of lock gates, &c., &c., were executed by the lock labourers during the month of April last.

The heavy dimension stone required for the masonry repairs, as detailed above, was taken out of our leased quarry near Westport by our own men, and cut in the

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quarry by our own stone-cutters. The stone was freighted to its various destinations by our own tug and scows, as well as by various private boats.

The bridges mentioned above as having been sand blasted and painted with bitumastic paint, were so treated under contract from the department to Concrete Constructions, Limited.

The various materials required during the year, such as cement, timber of all kinds, paint, oil, hardware, stone, &c., were procured for our use by the Purchasing Agent of this Department.

A small boarding scow, fitted with bunks for 20 men, was built last summer, and equipped with a derrick and tool room, &c., &c., for our carpenters to live on when making repairs along the canal. This scow was rendered necessary on account of the difficulty that exists in our men obtaining board when working along the canal. She is provided with kitchen and mess room, so that the men can live comfortably on her wherever they may be working. A small gasoline launch should be purchased to tow her from place to place; and this launch could be run by the men themselves, and would prove useful in making trips for timber, &c., whenever necessary, instead of our having to send for a boat whenever this service is required.

DREDGING PLANT.

The dredge *Rideau* wintered last year in Hartwells Locks, and was employed for a few weeks at the commencement of the season in loading scows with clay for depositing in front of the dam at Hog's Back. She then proceeded to the Tay branch of this canal, where she was employed for the rest of the season in cleaning out and widening the canal cuts in that place. She was laid up this winter in the basin at Perth, and her crane and boom were repaired, as well as portions of her hull. As soon as navigation opens she will resume her work in the Tay branch where she left off last year.

The tug *Loretta* was employed as usual last season in buoying out the channel, towing dredge and scows, delivering timber, stone, cement, paint, oil, &c., along the canal to the various lock stations and bridges; and also she was employed on her usual inspection work. She has been supplied with an electric storage battery, which will furnish light without the inconvenience of the dynamo running when the boat is tied up, and which will also allow the engineer to go off duty at a reasonable hour every night.

Our scows were repaired last winter, in the basin at Ottawa, and are all in good condition.

A new dredging plant was contracted for last year as follows:—The dredge and tug awarded to the W. H. Kelley Lumber Company of Buckingham, Que., and two side dumping scows to Messrs. Burns & Waters of Ottawa.

The scows have been built and delivered and are most satisfactory. The tug is practically finished, and is lying in the basin at Ottawa. She is a well-built boat, but she cannot be tested until after the water is let into the canal after May 1 next. The dredge, which is being built on the banks of the Ottawa river at Buckingham, Que., is, I regret to say, not nearly as far advanced as she should be.

The Contractor informs me that the shops that are building the engines and boiler, have disappointed him with regard to delivery, and has asked to have the time extended for delivery till May 31 next.

This involves a revote of the money already provided, but I do not see any other way out of the difficulty, and I have recommended this being done by the department.

When this new dredging plant is ready, it is intended to use it exclusively in depositing clay on the backs of all the dams, which work will keep her busy for several years.

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This is really most urgently needed, as the leakage through the dams causes a large waste of water, and is partly the cause of the low water towards the end of the season, on account of the leakage making it necessary to draw on our reservoirs to keep up the levels, long before we really should have to do so.

The following is a statement of the highest and lowest water on the lower mitre sills of locks Nos. 1 and 47 at Ottawa and Kingston Mills lock stations respectively.

Ottawa, Lock No. 1.			Kingston Mills, Lock No. 47.				
Highest.		Lowest.	Highest.		Lowest.		
ft. in.		ft. in.	ft. in.		ft. in.		
Apr. 26	17 3	Apr. 1	8 1	Apr. 29-30	9 0	Apr. 1	7 4
May 31	21 8	May 5	16 9	May 31	9 4	May 5	8 10
June 1	21 9	June 29	15 3	June 14-15	9 10	June 1-2	9 4
July 1	14 6	July 30-31	10 1	July 1	9 6	July 28-31	9 1
Aug. 1	9 10	Aug. 24	8 5	Aug. 1-9	9 1	Aug. 10-20	9 0
Sept. 1	8 8	Sept. 29-30	8 2	Sept. 1-4	9 0	Sept. 25-30	8 8
Oct. 30	11 6	Oct. 9-10	7 11	Oct. 1-4	8 9	Oct. 13-23	8 4
Nov. 16	14 3	Nov. 30	11 4	Nov. 1-14	8 5	Nov. 26-30	8 3
Dec. 10	13 4	Dec. 1	11 2	Dec. 1-8	8 3	Dec. 9-15	8 2
Jan. 21-22	12 1	Jan. 12-15	10 9	Jan. 25-31	8 6	Jan. 1-7	8 2
Feb. 1	11 6	Feb. 27-28	10 2	Feb. 1-9	8 5	Feb. 10-14	8 4
March 26	19 4	March 3	10 0	March 30-31	9 1	March 1-3	8 4

I have the honour to be, Sir, Your obedient Servant,

A. T. PHILLIPS, M.Can. Soc. C.E.,
Superintending Engineer.

W. A. BOWDEN, Esq., C.E.,
 Chief Engineer,
 Department of Railways and Canals.
 Ottawa, Ont.

DEPARTMENT OF RAILWAYS AND CANALS.

TRENT CANAL,

SUPERINTENDING ENGINEER'S OFFICE,
PETERBOROUGH, 17 April, 1913.

W. A. BOWDEN, Esq.,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

DEAR SIR,—I have the honour to submit my annual report for the fiscal year ended March 31, 1913, covering the work of construction chargeable to 'Capital,' Trent canal.

ONTARIO-RICE LAKE DIVISION.

This division extends from Trenton on Lake Ontario to Rice Lake, a distance of fifty-six and a half miles, a detailed description of which was given in my annual report for 1910.

For construction purposes the division has been divided into seven sections, or contracts; all of which are under contract. The estimated value of these seven contracts as revised to date is about \$5,100,000, on which there was expended for work done and materials delivered up to the 31st March, 1913, the sum of \$3,503,442.18, or about 70 p. c. of the estimated value of the seven contracts at their respective contract rates.

There are on the division 18 locks, 14 dams and 18 bridges. All the locks are built except Nos. 8 and 15, which will be built this year. All the dams are built except Nos. 4, 9, 10 and 13 which are from 24 p. c. to 75 p. c. finished. Twelve bridges are finished and in commission, and five more are under construction.

Section No. 1.—This section extends from Trenton to Glen Miller, a distance of about four and a half miles, on which length of the river there are three locks, three dams and two bridges.

A contract for the work was entered into with Messrs. Larkin and Sangster on March 10, 1908. The total value of work done and materials delivered up to March 31, 1913, amounted to \$980,915.75 or about 92 per cent of the value of the contract.

The principal items of work done are 254,704 cubic yards earth, 15,709 cubic yards loose rock, 242,429 cubic yards solid rock, and 71,376 cubic yards concrete.

The three locks with their entrance piers and the short canals leading into them are finished. The lock gate machines and valves of the lock culverts have been placed in position.

The three dams on the section are finished and in commission. Dam No. 1 was finished last October, when the old Gilmour Dam at this point was removed.

There are about twenty-two thousand cubic yards of rock yet to remove above grade in order to complete the submarine channel connecting the lower end of the canal below Lock No. 1, and the mouth of the river. This dredging has been sublet by the contractors to Mr. Robert Weddell who will complete the work this season.

In order to protect the canal channel in front of Meyers Island, below Lock No. 1, it was decided last fall to build 1,350 feet of concrete wall along the river side of the channel, so as to alleviate the velocity of the current in the navigation channel during the spring freshets. Arrangements were accordingly made with the contractors to execute the work this summer.

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The Sydney Electric Power Co.'s plant at Dam No. 2 was successfully operated throughout the past year. A short description of this plant was given in my last annual report.

The swing span in the Glen Miller Highway bridge was opened for traffic in February, 1909. The substructure of the Gilmour siding bridge has been finished up to water level, but cannot be completed until the type of the superstructure is definitely decided upon.

The main line of the Campellford, Lake Ontario and Western Railway (C.P.R.) crosses the river about 4,700 feet below Lock No. 1 by a viaduct 1,500 feet long, and 50 feet high, built under the terms of Lease No. 19,946, dated March 14, 1913. It is designed for a single track, and will provide a clear head room of about 39 feet between the lowest steel and high water. The navigation channel span will be 100 feet wide in the clear. The concrete substructure is about completed, and it is expected the steel superstructure will be erected before next Autumn. The whole of the work is being carried out by the Railway Company at their own cost.

The whole of the work embraced in Messrs. Larkin & Sangster's contract for Section No. 1 will be fully completed this season.

Section No. 2.—This section extends from Glen Miller to Frankford, a distance of about four and a half miles, on which stretch of the river there are three locks, three dams, and one bridge.

A contract for the work was entered into with Messrs. Dennon & Rogers on May 30, 1908. The total value of work done and materials delivered up to March 31, 1913, amounted to \$439,914.31, or about 61 p. c. of the value of the contract.

The principal items of the work done are 102,557 cu. yds. earth, 13,770 cu. yds. loose rock, 84,665 cu. yds. solid rock, and 53,753 cu. yds. concrete.

The three locks on the section are built, but some work has yet to be done on the entrance piers of Lock No. 4. There is yet a lot of excavation, &c., to do before the short canals at each lock are finished. The lock gate machines and valves of the lock culverts have been placed in position.

Dam No. 4 is about 75 p. c. finished, and will be completed this summer. Dam No. 5 is finished except the platform across the top of the piers. Dam No. 6 is completed.

There is 20 per cent of the earth, and 47 per cent of the rock excavation on the section to do. The quantity of the latter item remaining to be done is about 73,000 cubic yards, and is principally under water, and will take the contractors two or more years to take it out. There are yet about 10,000 cubic yards of concrete on the section to lay, which item of work should be finished this season.

The Sydney Electric Power Company's plant at dam No. 5 was placed in commission on January 28 last, when one of the four units which comprise this plant was started running. The current is transmitted under low voltage to their large transformer station at dam No. 2, where it is stepped up for transmission to various parts of the country.

After five years work only 61 per cent of this contract is finished. During the past year \$69,040.61 was spent on the work, chiefly in laying concrete in lock and Dam No. 4.

Section No. 3.—This section extends from Frankford to a point three miles west of Glen Ross, a distance of seven and a half miles. At Glen Ross there are a lock, a dam, and two bridges.

A contract for the work was entered into with the Canadian General Development Company, Limited, on April 24, 1908. The total value of work done and materials delivered up to March 31, 1913, amounted to \$181,042.32, or about 63 per cent of the value of the contract.

Lock and Dam No. 7, the short canal, and bridges at Glen Ross are finished.

The work on this section is finished except the dredging in the river and at the ends of canal at lock No. 7, on which no work has yet been done, as the contractors

have no dredging fleet on the section, and are waiting for the completion of the canal between Trenton and Frankford, so that they can bring drill boats and dredges up the river from Lake Ontario.

Section No. 4.—This section extends from Adam's Landing, a point three miles west of Glen Ross, to Campbellford, a distance of about fourteen miles. There are between Bradley Bay and Campbellford five locks, three dams, four bridges; and about one mile of concrete retaining wall, for enclosing the river through the town of Campbellford, together with a large quantity of earth and rock excavation.

A contract for the work was entered into with Messrs. Haney, Quinlan and Robertson, on June 22, 1910. The total value of work done and materials delivered up to March 31, 1913, amounted to \$701,420.04 or about 53 per cent of the value of the contract.

The principal items of work done are 166,050 cubic yards earth, 4,660 cubic yards loose rock, 130,700 cubic yards solid rock, and 88,630 cubic yards concrete.

Locks 9, 10, 11 and 12 are built, with the exception of part of their entrance piers, which will be finished early this season. The lock gate machines, and the valves of the filling culverts have been placed in position in these locks.

Dam No. 8 and its long wing wall up Meyer's Island is finished. Dams No. 9 and 10 are respectively about 35 per cent and 24 per cent built, the former will be finished this year.

The supply weirs for power below Dam No. 9, and at the head of lock 12 are built.

The concrete culvert under the canal, a short distance above lock 12 is built and in commission, together with all the sewer pipe along the gravel road, which discharges into it.

The piers for the highway swing bridge across the head of lock 12 are built, and the superstructure is erected and finished.

The diversion and substructure of the bridge for carrying the Northumberland Paper Mills siding over the canal are finished. The diversion was opened for traffic in February, 1912. Trains at present are carried over the canal on a wooden trestle. as the superstructure of the permanent bridge, a bascule, will not be erected ready for traffic until midsummer this year.

The Trout Creek diversion and bridges across it on the gravel road and Balaclava street were finished in December, 1911.

About 50 per cent of the core wall in the canal embankment between locks 8 and 9 is built, and 97 per cent of the core walls in the banks between lock 12 and the Grand Trunk Railway bridge are also finished.

About 35 per cent of the east river wall for enclosing the river between the Grand Trunk Railway bridge and the upper end of the section has been built, together with 40 feet of the culvert under the river for connecting the sewers in the back of the east and west river walls.

On August 10, 1912, the removal of the old dam at Campbellford was begun, and as soon as the water in the river reach above the dam had fallen, excavation for the bascule span of the highway bridge was begun. Since then the substructure has been built together with 100 feet of the west river wall adjacent to the bridge. The superstructure of the bascule span, which replaces two of the fixed spans removed from the west end of the bridge, is now about finished, and was placed in commission on March 21 last.

During this season lock 8 and its entrance piers, and all other concrete work between Bradley Bay and the Grand Trunk Railway bridge, Campbellford, will be finished, and about 75 per cent of the excavation, back filling, and embankments, &c., between the above points.

Whether the river walls through Campbellford will be finished or not this season depends on how soon high water subsides, and what action is taken towards proceeding with the construction of the new bridge for the Grand Trunk Railway.

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It is very unlikely that the contractors will do any excavation on Bradley Bay until they can bring a dredging fleet up the river from lake Ontario. There are on this reach of the river, pertaining to the contract for section No. 4, two seasons' work for one dredge.

Section No. 5.—This section extends from Campbellford to Crow Bay, a distance of three miles. On this section are two locks, two dams, and about half a mile of concrete wall for enclosing the river through Campbellford.

A contract for the work was entered into with Messrs. Brown and Aylmer on the 28th September, 1907. The contract was amended the 30th May, 1911, so as to include the construction of the river walls. The total value of work done and materials delivered up to the 31st March, 1913, amounted to \$566,796.45, or about 84% of the value of the contract.

The principal items of work done are 143,460 c. yds. earth, 27,085 c. yds. loose rock, 57,100 c. yds. solid rock, and 57,191 c. yds. concrete.

Locks 13 and 14, dams 11 and 12, and the river walls at the lower end of the section are built. The excavation in the Crow Bay channel above lock 14 is finished and accepted.

About 90% of the excavation required to be done between the east river wall and the edge of the channel has been taken out, together with most of the excavation in the navigation channel opposite the river wall. The area covered by this excavation was coffer-dammed, and most of the material was removed by a steam shovel and cars.

The principal item of work remaining to be done on this section is the excavation (dredging) of the channel between the upper end of the east river wall, and the lower entrance of lock 13, but it is very doubtful if much of it can be done this season, as the water in the river at present may be too low to float a dredging fleet, and it will be impossible for us to raise the level of this reach until dam No. 10 is finished, which structure will not likely be completed until late in the summer of 1914.

Section No. 6.—This section extends from the lower end of Crow Bay to one thousand feet west of Heeley Falls bridge, a distance of about three miles. There are three locks, one dam, and one bridge on the section, together with a large quantity of earth and rock excavation. The short canal at this point is located on the west side of the river and is designed to overcome the 76 feet rise between Crow Bay and the fourteen miles of river reach between Heeley Falls and Hastings.

A contract for the work was entered into with Messrs. Haney, Quinlan & Robertson, on the 23rd May, 1910. The total value of work done and materials delivered up to the 31st March, 1912, amounted to \$357,358.04, or about 68% of the value of the contract.

The principal items of work done are 28,000 cubic yards of earth, 23,200 cubic yards loose rock, 102,170 cubic yards solid rock, and 51,872 cubic yards concrete.

Locks 16 and 17, and their entrance piers are finished, and also the retaining wall along the east side of the canal between locks 15 and 16. The extension walls at the head of lock 15 and the piers for the road bridges at this point are also built. The lock gate machines and the valves of the filling culverts in locks Nos. 16 and 17 have been placed in position.

Dam No. 13 is about 70% built, and the wall along the east side of the canal between the dam and lock No. 17 is finished.

Three of the small fixed spans at the east end of Heeley Falls bridge have been taken down and replaced by a swing bridge, which was placed in commission the second week of October, 1912.

The work remaining to be done on this section is the construction of lock No. 15, completion of dam No. 13, and the balance of the excavation, all of which will be done this season, except some excavation (dredging) in the lower entrance of lock No. 15.

The Eastern Power Co. who are constructing a hydro-electric plant at this point, carried on their work during the past year in an intermittent manner. The foundation of the power house is 75% built, the supply weir or head-block situated at the head of lock No. 17 is built, and two lines of 12 feet diameter steel pipe connecting the head block and power house are 90% finished, and the steel plates of the third line of pipe are delivered on the ground. Some work has been done in the tail race, the excavating of which involves the removal of a large quantity of submarine rock excavation. The plant is designed for the full development of the power at this point, and the company hope to have it ready for operation concurrently with the completion of the canal works.

Section No. 7.—This section extends from Heeley Falls to Rice Lake, a distance of about nineteen and a quarter miles. The principal works consist of a large quantity of earth and rock dredging in the river, the construction of a new lock and dam at Hastings, and a new and longer swing span at Trent Bridge, and new guide piers for the Grand Trunk Railway bridge at Hastings.

A contract for the work was entered into with the Randolph Macdonald Co., Ltd., on the 4th January, 1909. The total value of work done and materials delivered up to the 31st March, 1913, amounted to \$275,995.27 or about 64% of the value of the contract.

The principal items of work done are 51,948 c. yds. earth, 18,314 c. yds. loose rock, 44,095 c. yds. solid rock, and 13,780 c. yds. concrete.

The new lock was placed in commission on March 30, 1911. The new dam was finished and placed in commission in October, 1912, when the old structure was removed. The short swing span in Trent Bridge has been taken down and replaced by new piers and a longer span, which was placed in commission on the 5th June, 1911. The new channel under the south arm of the swing span was dug out last summer. It increases the cross section of the river at the bridge, which will tend to improve spring flood conditions between Trent Bridge and Hastings. The new guide pier for the Grand Trunk bridge at Hastings is built, and is a great improvement to navigation.

About 90% of the excavation in the river between Rice Lake and Hastings is finished and eighteen channel piers have been placed in position between these points. Below Hastings considerable dredging has been done.

There are yet about one hundred thousand cubic yards of dredging to do, and we estimate that it will take the contractor's two dredging fleets about two seasons to complete the work.

BURLEIGH FALLS DAM.

Messrs. Bishop & Buchannan completed their contract for the construction of the new concrete dam at Burleigh Falls in July, 1912. The old timber dam was removed the following month.

On the 3rd October, 1912, the final estimate for the work amounting to \$54,047.96 was returned to the department.

ROSEDALE SECTION.

Messrs. The Randolph Macdonald Co., Ltd., completed their contract for the construction of the Rosedale section on the 26th October, 1912. The new lock has been in commission since May, 1910, and the new dam since November, 1910.

A final estimate for the work, amounting to \$289,184.64, was sent into the department on the 7th March, 1913.

HOLLAND RIVER DIVISION.

In December 1911, the Government decided to abandon further work on the Holland River division, and accordingly accepted the surrender of the York Construction

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Co's contract for the construction of section No. 2 on the 31st December, 1911, and the execution by them under a special agreement of certain unavoidable work in connection with the road approaches to bridges, &c. The latter work was completed the 30th June, 1912, at a cost of \$27,929.48.

A final estimate for the work done by the company on section No. 2 up to the 31st December, 1911, amounting to \$537,189.16, was sent into the Department on November 11, 1912.

The Canal office at Newmarket was closed on the 31st July, 1912, and shortly afterwards a caretaker, residing in Holland Landing, was appointed to look after the canal property and right of way.

BRIDGES.

The Cleveland Bridge and Engineering Co's contract, dated 24th October, 1910, for the manufacture and erection of highway swing bridges at Heeley Falls and Trent bridge, was completed on the 7th November, 1912, at a total cost of \$16,240.84.

The swing span at Trent Bridge was placed in commission on the 5th June, 1911.

On the 30th June 1911, a contract was entered into with the Hamilton Bridge Works Co., Ltd., for the manufacture and erection of a "Strauss" Highway Bascule Bridge over the canal at Bridge St., Campbellford, Ont. The bridge is a single leaf, of the Heel Trunnion Type, consisting of a one hundred and eight feet through truss moveable span, and a thirty-five feet tower span carrying the counterweight.

The erection of the bridge was far enough completed to permit it being placed in commission on the 21st March last. Painting and testing has yet to be done.

The Canadian General Electric Co. are providing the electric equipment for the bridge, under a contract dated 8th October, 1912. The material is delivered, and about 90 p.c. of it is erected.

The Dickson Bridge Works Co's contract, dated 4th August, 1911, for the manufacture and erection of a highway swing span across the head of Lock No. 12, at Campbellford, was finished on the 17th July, 1912, at a total cost of \$3,998.00.

On the 12th November, 1912, a contract was entered into with the Hamilton Bridge Works Co., Ltd., for the manufacture and erection of a 'Strauss' Railway Bascule and fixed span bridge for carrying the Northumberland Paper Mills Railway Siding over the canal at Campbellford. The bascule is a single leaf, single track bridge, consisting of an 83 feet through plate girder moveable span, and a tower carrying the counterweight. The fixed span is a semi-through plate girder 77 feet long. The bridge is now being manufactured and will be erected this summer. The electrical equipment for it is being manufactured by the Canadian General Electric Co.

VALVES FOR LOCKS.

Wagon Valves.—A contract for the manufacture and erection of the wagon valves required for the new locks, and regulating culverts of the Ontario-Rice Lake Division of the canal, was entered into with the Dominion Bridge Co., Ltd., on the 5th October, 1908.

All the valves have been installed in place, except those of Locks Nos. 8 and 15, the material for which is delivered on the ground, and will be placed in position as soon as the locks are built. A description of these valves was given in my annual report for 1910.

Cylindrical Valves.—The Wm. Hamilton Co., Ltd., completed their contract for the manufacture and erection of the cylindrical valves for the flight locks at Ranney and Heeley Falls, Ontario-Rice Lake Division, on the 12th November, 1912, at a total cost of \$24,522.00.

LOCK GATE OPERATING MACHINES.

A contract was entered into with Mr. Herbert B. Collier on the 7th May, 1909, for the supply and delivery of Operating Machines, Anchorage Fittings, and Pivots required for the Lock Gates of the new locks along the canal. These machines are being manufactured by the Wm. Hamilton Co., Peterboro.

All the material has been manufactured and installed in position, except that for Locks Nos. 8 and 15, Ontario-Rice Lake Division, which will be installed as soon as the locks are built.

EMERGENCY DAMS.

On the 5th April, 1911, a contract was entered into with the Dominion Bridge Co., Ltd., for the supply, delivery, and erection of seven sets of steel stop-logs and bridges, for emergency dams.

These structures are to be placed at the head of locks situated at the lower end of long river reaches, or lakes, and are intended for use in case through accident; connection is established between the upper and lower levels, by a stream through the lock chamber of such velocity, that the mitering gates could not be closed until the current has been checked.

In general the structure consists of a small deck girder swing bridge of unequal arms, carrying a trolley car, and winches for handling and placing the five steel stop-logs, for closing the head of the lock. These logs when not in use are stored on the short arm of the bridge, and act as a counterweight for balancing it when swinging.

The material for the seven dams has all been manufactured and delivered, and that for the dams at the head of the canal above Lock 6, and at the heads of locks 7, 12 and 14 is all erected. The contract will be fully completed early this summer.

GENERAL.

Cement.—About 71,000 barrels of Portland cement were delivered on the canal during the past year, under contract with the Canada Cement Company.

Lock Gates.—Plans and specifications for the lock gates of the locks on the Ontario-Rice Lake Division have been completed, ready for advertising for tenders for their construction during the current year.

Nassau Dam.—A plan and specification are being prepared for a new concrete dam at Nassau to replace the present wooden structure which is very leaky. Tenders will probably be invited for the construction of the dam as soon as the plan and specification are ready.

Fenelon Falls Dam.—A plan and specification have been prepared for a new concrete dam at Fenelon Falls to replace the present dilapidated wooden structure. The work is now advertised for tenders.

Severn River.—In accordance with your instructions of December, 1911, a very complete survey of the Severn river was begun last year with the object of preparing plans and specifications for the work of canalizing the river to the same dimensions as the Ontario-Rice Lake Division of the Trent waterway. The work is under the immediate charge of Mr. E. B. Jost.

The various outlets or mouths of the river have been thoroughly surveyed and sounded, and also the north shore of Matchedash Bay for the purpose of determining the best harbour for the northern terminal of the canal. The country in the vicinity of the Big Chute has also been very carefully examined and surveyed with the object of determining the best location for the locks and canal at this point.

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At present an extended examination and survey of the river between Ragged and Swift Rapids is being made with the object of ascertaining the feasibility of locating a lock and dam at Swift instead of at Ragged Rapids, and also of moving the Orillia hydro-electric plant to Swift in the event of it being finally decided to locate the lock and dam at that point.

For construction purposes it is proposed to subdivide the river into three sections. Section No. 1 to include all work at the mouth of the river and at Big Chute; section No. 2 to include the work at Swift and Ragged Rapids; and section No. 3 to include that between Sparrow and Couchiching Lakes.

The preliminary plans and estimates for section No. 1 have been forwarded to the Department, and those for section No. 2 will be ready by the end of this month. The field notes for section No. 3 have been plotted and some work done on calculating quantities, &c.

Lake Surveys.—Very little work was done during the past year on the hydrographic survey begun five years ago, of the chain of lakes which form part of the Trent waterway. It is the intention however to continue the work this summer, as soon as the Severn River survey is finished.

I am, sir,
Your obedient servant,

ALEX. J. GRANT,
Superintending Engineer.

DEPARTMENT OF RAILWAYS AND CANALS, TRENT CANAL.

SUPERINTENDENT'S OFFICE.

PETERBOROUGH, May 27, 1913.

SIR,—I have the honour to submit herewith my annual report of the maintenance and operation of the Trent canal for the fiscal year from April 1, 1912, to March 31, 1913.

The extent of the canal completed is the same as last year, namely, 160 miles.

OPENING AND CLOSING OF NAVIGATION.

	Opened.	Closed.
Peterborough-Hastings division.....	April 23.	December 1.
Peterborough-Lakefield division.....	May 20.	November 6.
Lakefield-Fenelon Falls division.....	May 3.	December 1.
Balsam lake-Lake Simcoe division...	May 8.	October 26.

PETERBOROUGH LIFT-LOCK OPENED.

The Peterborough hydraulic lift-lock was operated on May 20.

WORK PERFORMED ON THE DIFFERENT DIVISIONS DURING THE YEAR.

RICE LAKE-HEALEY FALLS DIVISION.

The following work was performed during the year on the Rice Lake-Healey Falls division.

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Lockmaster's House, Hastings.—Minor repairs were made to the Lockmaster's house at Hastings, such as renovating, &c.

Wharfs in Rice Lake.—General repairs were made to a number of wharfs in Rice Lake, new planking being put in where necessary, which improved the condition and general appearance of these wharfs. The cost of this work was \$282.75.

PETERBOROUGH—RICE LAKE DIVISION.

Planking Bridge, Hale's Bridge.—Hale's bridge on the Otonabee river was replanked, and minor repairs made at a cost of \$197.17.

Landing Pier at Whitfield's Landing.—A landing pier was constructed at Whitfield's, Rice Lake, that fills a much needed want of the farming community in that section of the county. The township council had been approached at different times by the residents, with a view of working out some method to enable the farmers to get ready access to Peterborough to market their produce, and as a result, a petition was circulated praying for the erection of a wharf or a pier at this point. The township council have spent considerable money on the road leading to the pier, and considerable produce and freight will, no doubt, be handled at this point. The total cost of the pier was \$544.53.

Lock No. 7, Peterborough.—A new timber slide for canoeists was erected at the upper end of No. 7 Lock, known as Collin's Locks, Peterborough. The old slide had become a menace to the canoeists, and it was necessary to take some steps to prevent loss of life and accidents. Additional electric lights were also put in, in the vicinity of the slide. Anchor bolts were put into the entrance pier above the lock, running from the retaining wall twenty-two feet back, and these were reinforced by concrete blocks. The lockmaster's house and office were repainted.

Swing Bridge at No. 7 Lock, Peterborough.—Minor repairs were made to the swing portion of the bridge at No. 7 Lock, Peterborough.

PETERBOROUGH—LAKEFIELD DIVISION.

Peterborough Hydraulic Lift Lock.—On Friday, October 23, the lower west gate of the Peterborough lift lock was out of commission, and refused to raise. On examination it was found that the cover and studs on bearing next to the sprocket-wheel that carries the chain for lowering and raising the gates was broken. This was, no doubt, caused either by the dropping of the gate suddenly or by reversing the gate engine too quickly, causing a sudden jerk on the slack chain. The repairs were made and the lock was in perfect working order by the following Sunday evening. Of course, navigation was interfered with to some extent on Friday and Saturday. Other general repairs were made at a cost of \$2,405.69. Considerable repairs were made to the canal banks between the Peterborough lift lock and the Norwood road. About one hundred and fifty feet of riprapping on the east bank of the south side of the Norwood road slid into the canal. This was evidently caused by the frost leaving the ground during the month of April. As soon as possible men were put to work and repaired the damage. On June 1, 1912, a slide in the bank, north about one hundred and fifty yards above the Peterborough lift lock, was reported. This was caused by seepage from the canal, and, no doubt, would have proved serious had not immediate steps been taken. A clay core about three hundred feet in length was put in. This work will be resumed the coming season. Other minor repairs were made to the banks at a cost of \$4,989.12.

Nassau Dam.—Extensive repairs were made to Nassau dam. The slide in No. 1 weir was in a very bad state of repair, the lumber being completely gone, and the

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stone filling nearly all out. It was found necessary to put in a new bottom, rock bolt it and fill it up with stone. No. 2 weir was in about the same condition as No. 1, and required similar repairs. The log weir was also repaired, new stoplogs and guides being put in. No. 4 weir was in a very dangerous condition, the pier seemingly having been built on gravel, and a considerable washout was located under the pier. A new floor was put in here, as well as new timbers. The repairs to the dam are of a lasting nature, and were made at a cost of about \$1,279.05.

Peterborough Flood-Dam above Hunter Street.—Considerable repairs were made to this dam, but owing to high water it was impossible to complete the work.

Dredging Locks 3 and 5.—Considerable sand and earth had been washed into the approaches of the locks between Peterborough and Lakefield by the current. This obstruction was causing trouble to the steamboatmen, and it was found necessary to have the dredge *Fenelon* brought down from Lindsay late in November, to clean out approaches. This work entailed an expenditure of \$1,779.47. This work was not completed, and will be resumed this spring.

Painting Lockhouses.—The lockmasters' houses between Peterborough and Lakefield, five in number, were repainted at a cost of \$1,332.41.

Dam No. 5.—The two centre piers of the dam went out and had to be reconstructed and new flooring put in the sluiceways at a cost of \$800.59.

Dam No. 3.—Minor repairs were made to the 'gains' at dam No. 3.

Locks at Young's Point.—Minor repairs were made to the locks at Young's Point.

Landing Pier, Sandy Point, Clear Lake.—A small landing pier at Sandy Point, Clear lake, was built, costing \$275.92.

Mount Julian Dock, Stony Lake.—A large quantity of filling was put in at this dock and a storehouse 16 x 24 feet built, the total cost of the work being \$996.73.

Lockmaster's House, Burleigh Falls.—Extensive repairs were made at Burleigh Falls. The lockmaster's house was jacked up and new timbers put in, new flooring was put in throughout the house, the house was repainted as well as the office and storehouse.

Bridge at Burleigh Falls.—New timbers were put in the approaches and the bridge repainted. The road was repaired, the high water causing a washout at this point.

Plant-General.—The cost for general repairs to the plant during the season was \$6,561.56.

Bridge at Buckhorn.—Minor repairs were made to the bridge at Buckhorn.

Lockmaster's House, Buckhorn.—Repairs were made to the lockmaster's house at Buckhorn, and the chimney rebuilt at an expenditure of \$106.65. The storehouse and ice house were repainted.

Glance Pier at Buckhorn.—A portion of this pier had been carried away by the water and was renewed. New lumber being put in and the pier reloaded with stone at a cost of \$330.26.

Peterborough to Bobcaygeon.—*Lockgates*—General repairs were made to the lockgates between Peterborough and Bobcaygeon at a cost of \$1,079.29.

Bridge at Bobcaygeon.—New flooring was put in at Bobcaygeon and the bridge was repainted.

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Bobcaygeon Lock and Dam.—Extensive repairs were made to the Bobcaygeon lock and dam. At the dam the old stoplogs were replaced by new ones, 21 in number, new 'gains' were put and the fish slide replaced. A portion of the tumbling dam was also repaired, additional plank being put on the top of the dam. The lockgates, as well as the lockmaster's office was repainted. New timber supports were placed in the raceway, and a new covering of hemlock plank laid down. These repairs were done at a cost of \$1,624.40.

Scugog River Dredging.—Dredging was resumed in the Scugog river above the Wellington street bridge on April 17, 1912. Until July 1, the dredge was cleaning mud, wire, bark and other refuse off the bottom of the river for a distance of 3,000 feet, from the Wellington street bridge to Baker's mill, preparatory to drilling operations. On July 1 the dredging proper was commenced above the Wellington street bridge. The channel was dredged for a distance of 1,000 feet below the bridge to a depth of nine feet, and one hundred feet wide, and nine feet deep, and fifty feet wide for a distance of 420 feet. An average of two hundred yards per day from July 1 to October 31 was taken out. All this was rock excavation and required blasting to a depth of four feet of rock.

Sturgeon Lake Dredging.—The channel at the entrance of the Scugog river and Sturgeon lake was dredged for a distance of two hundred feet and twenty-five feet wide at a cost of \$1,138.99.

Pigeon Creek Dredging.—The channel from Pigeon lake to Omemee was cleared of bogs. These bogs were removed from the old channel and anchored by means of boom timber and cement anchors. About seven thousand feet of boom timber, two hundred and fifty boom chains, and one hundred cement anchors and chains were used for this purpose. The total cost of the work was \$2,254.51.

Fenelon Falls.—The landing pier at the Fenelon Falls dock at the upper end of the lock was rebuilt from the water line up. A new plank platform was laid on the pier. The lockgates were overhauled and new chains put in and new valves installed in the upper gates. A new cement walk was also laid to the lockmaster's house.

LAKE SIMCOE—BALSAM LAKE DIVISION.

Toolhouse at Rosedale.—A new toolhouse was erected at Rosedale, and minor repairs made to the swing bridge at an expenditure of \$359.75.

Cleaning Drowned Lands.—In April, 1912, a number of men were put to work, cleaning drowned lands at the 4th Concession bridge in the township of Eldon, in the vicinity of Balsover. A considerable portion of land was also cleared, the timber being cut into wood and posts, and the refuse burned. The cost of carrying out the work was \$783.23. On December 16th, 1912, a gang of men were put to work cleaning the floating timber and stumps off the drowned lands in the vicinity of what is known as the Portage Road bridge, Balsam lake, Lake Simcoe division. The timber was cut into cordwood and posts, while the stumps and other debris were piled and burned. The cost of this work was \$524.31.

Kirkfield Hydraulic Lift Lock.—The machinery of the lock was overhauled and minor repairs made to the lock in general at a cost of \$273.38.

Locks and Lockgates.—New concrete recesses for gate arms on the lower gates were put in from lock 1 to 5, inclusive, as well as other minor repairs made. A new concrete floor was put in the cellar of the lockmaster's house at lock No. 4. The total cost of the work being \$1,157.35.

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Cleaning out Ditches.—The ditches between the Middle Road and Talbot river on the north side of the canal, and on the south side from the Middle Road, East, along the Westcott property, were cleaned out. This work was compulsory owing to the fact that the tile drains carrying the water from the farms in the vicinity were cut off and blocked, when that section of the canal was constructed and the ditches were dug to carry the surface water and prevent damage to property. A portion of this work on the north side is yet to be completed. The outlay of this work, so far, is \$557.25.

RESERVOIR WATERS.

GULL RIVER.

Moore's Falls Dam.—The dam at Moore's Falls was rebuilt with concrete. A twenty-five feet sluiceway put in, concrete piers erected and a concrete reinforced platform laid on the dam. On the south side of the dam two twenty-five foot openings were put in with concrete piers and cut-off walls with reinforced concrete tops. The channel on the north side was deepened four feet and the sill lowered four feet. A granite formation of rock was taken out for a distance of eighty-five feet, four feet deep and thirty-six feet wide.

Dam at Norland.—The slide was repaired and a new platform erected on the dam, costing \$162.42.

Dam at Elliott's Falls.—Minor repairs were made to the dam at this point.

Big Bob Lake Dam.—A new lumber platform was erected on Big Bob lake dam costing \$378.69.

Twelve Mile Lake Dam.—Minor repairs were made to the dam at Twelve Mile lake at a cost of \$135.25.

Oblong Dam.—Repairs were made to the slide on Oblong dam on the east branch of the Gull river. The cost to carry out these repairs was \$183.88.

Hawk Lake Dam.—General repairs were made to the dam at Hawk lake at a cost of \$400.97.

BURNT RIVER.

Devil's Lake Dam.—Minor repairs, gravelling, &c., were made to Devil's Lake dam.

White Lake Dam.—Repairs were made to the slide at White Lake dam.

Black Lake Dam.—The road around Black lake in the township of Cavendish was repaired and gravelled. These repairs were necessary owing to a washout caused by the excessive rains and the overflowing of the waters at the dam.

Bear Lake Dam.—Minor repairs were made to the dam at Bear lake.

MASSASSAUGUA WATERS.

Gull Lake Dam.—This dam was repaired and gravelled.

Eagle Lake Dam.—Minor repairs were made to Eagle Lake dam.

Bottle Lake Dam.—One side of the dam was rebuilt and a new timber platform put on and the dam resheeted at a cost of \$1,680.36.

Scott's Dam.—The dam at Scott's Mills was rebuilt. A new platform was put on and the dam resheeted and the slide repaired. This dam is now in a good state of repair. The expenditure of same being \$1,367.36.

EEL'S LAKE.

Eel's Lake Dam.—The old dam at Eel's lake which empties into Eel's creek was removed and a substantial new timber dam built. The new dam is 86 feet long, with a centre pier 11 feet x 16 feet, and two shore piers 31 feet each. There are two 7-foot sluiceways. The dam now controls a 11-foot head. The cost of constructing same was \$2,160.46.

REPORT ON LIGHTHOUSES AND LIGHTS, AND AIDS TO NAVIGATION.

Lake Simcoe.—Built a lighthouse at Big Bay point, Lake Simcoe, and put a concrete pier 24 x 18, 6 feet above normal water level. We also built a wooden house for light fourteen feet high from concrete pier. We placed a blaugas plant in this lighthouse. This light gives good satisfaction with the steamboat men.

We built a new wooden lighthouse on the wharf at Kemfelde bay. This light is fourteen feet high from the wharf. Same design and dimensions as the wooden part of our other lighthouse, Big Bay point, as shown on plan. Light, oil.

Put a light on the wharf at Thorah island. Light, oil.

Put a new siche gas plant in the lighthouse, Gamebridge, at the entrance to canal from Lake Simcoe.

Two buoys were put out at entrance to Holland river from Cook's bay.

One buoy on shoal off Belle Ewart.

One buoy on shoal west of Fox island.

Two buoys on shoal northeast of Fox island.

Two buoys on shoal south of Big Bay Point light.

One buoy on shoal at Hooges wharf.

One buoy on shoal off Jackson point.

One buoy at entrance to canal from Simcoe.

The lighthouse at entrance to canal was painted.

Painted the buoys in the canal from Simcoe to Balsam lake.

Balsam Lake.—Painted the buoys, and put new ones at Greenly's island, Ball island, and Small island, south of Grand island, and also painted the lighthouse at Rosedale, at entrance to canal from Balsam lake.

Cameron Lake.—A new lighthouse was put at the entrance to the canal from Cameron lake. Same design as at Big Bay point, with concrete base.

Painted the lighthouse, buoys, and put in one new buoy.

Sturgeon Lake and Scugog River to Lindsay.—Put out two new buoys at the entrance to Fenelon river from Sturgeon lake and painted all the buoys. Put a new buoy at Sturgeon point, McConnal's island, and a new lighthouse at the entrance to Scugog river from Sturgeon lake. We had the old siche gas plant repaired and replaced. Painted all the lighthouses, fourteen in number, on the Scugog river. Painted the buoys and put in twenty new ones.

Scugog River and Lake Scugog.—Painted the buoys from Lindsay to Port Perry, Scugog lake, fifty six buoys.

Sturgeon Lake at Bobcaygeon.—Painted the lighthouses and buoys.

REPORT ON LIGHTHOUSES AND LIGHTS, AND AIDS TO NAVIGATION.

Pigeon Lake.—Painted the lighthouse at Pigeon lake, and the buoys in Buckhorn, Deer bay, and Lovesick lake.

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Stony Lake and Clear Lake.—Painted and repaired the lighthouse, and reset the buoys and painted them.

Young's Point.—Had the gas plant overhauled and built a new house for the siche gas machine 10 x 12, with concrete foundation and floor.

Young's Point to Lakefield.—We had the buoys repainted and placed in position.

Lakefield to Peterborough.—The buoys were painted and placed in position.

Otonabee River to Rice Lake.—All the buoys were painted and placed in position.

Rice Lake.—Built a new lighthouse at Tiek island, wood top, same as at Big Bay point, with concrete foundation. A light was placed on the pier at the forks of the river, and one on the pier at Jubilee point. Painted and repaired the lighthouse at entrance to river at the cut, leading into Rice lake from the Otonabee river.

I am, Sir,

Your obedient servant,

J. H. McCLELLAN,
Superintendent.

W. A. BOWDEN, ESQ.,
Chief Engineer,
Department of Railways and Canals,
Ottawa.

DEPARTMENT OF RAILWAYS AND CANALS.

ONTARIO—ST. LAWRENCE CANALS,

SUPERINTENDING ENGINEER'S OFFICE,

CORNWALL, April 1, 1913.

SIR,—I have the honour to submit my annual report on the St. Peter's canal for the fiscal year ending March 31, 1913.

The canal was opened for navigation April 22, 1912, and closed January 11, 1913.

During the season of navigation 1,242 registered vessels were passed through the canal. In addition to these a considerable number of small craft (principally fishing boats measuring from 7 to 10 tons burthen) were passed through. No record was kept of these owing to the fact that they are not registered.

REPAIRS.

Some repairs were made to segment plates, chains and rollers, as well as valve rods in lock gates. The hand rails on all lock gates were also repaired.

Minor repairs were made to cribwork facing along west bank of canal.

A new floor was placed on highway swing bridge across canal.

A new watch house for bridgetenders was erected.

A new floor was laid in kitchen of lockmaster's house.

The whole of the canal works are in such a dilapidated condition that only sufficient repairs are attempted to enable the canal to be operated till the new lock is ready for use.

IMPROVEMENTS.

The works of improvement as designed consist of the construction of a new lock and entrance at the Atlantic end of the canal.

The lock is to be 48 feet wide and 300 feet long between gates opening in the same direction. It provides for a depth of 18 feet of water on mitre sills at low tide.

The lock will have a rock bottom, and the side walls of lock as well as the entrance walls for a length of about 400 feet on each side, will be built of concrete.

The work as designed entails the removal of about 300,000 c. yds. of earth and 60,000 c. yds. of solid rock.

A contract for this work was entered into with Mr. W. H. Weller of St. Catharines, Ont., on Nov. 17, 1911, but, owing to the lateness of the season, no attempt was made to commence operations till the spring of 1912.

The contractor's plant, consisting of one 70-ton steam shovel, two 20-ton locomotives, thirty dump cars of 6 c. yds. capacity, two flat cars, two steam hoists, &c., &c., began to arrive early in April, and on May 4, everything being in position, the work of excavation was commenced.

The material to be excavated proved to be exceedingly hard, and it was found necessary to resort to the use of dynamite to loosen the earth in front of the steam shovel. The material is a hard red clay containing about 40% of gravel and small stones with a large number of small boulders measuring from one to four c. ft. This material when placed in dump and exposed to rain falls becomes very soft, making it extremely difficult to maintain tracks in good condition for the running of trains.

The material excavated is being deposited along the north shore of St. Peter's bay and over the low lands adjacent, and will make valuable lands for the location of railway sidings, should future conditions call for them.

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The difficulty experienced in the excavation of this material and the extremely wet weather of the past season greatly retarded the work, and the amount of material excavated (some 77,000 c. yds.) was very disappointing.

A portion of the old portage road along the west side of canal was excavated and a new road has been constructed a short distance west of the old, and although not yet completed, is available for traffic.

The contractor's operations have not interfered in any way with the navigation of the canal.

At the present time the contractor is having all of his plant thoroughly overhauled and put in the best possible shape for the coming season, and expects to be ready to resume work in a few days.

I have the honour to be, sir,

Your obedient servant,

C. D. SARGENT,
Superintending Engineer.

W. A. BOWDEN, Esq., C.E.,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

DEPARTMENT OF RAILWAYS AND CANALS.

WELLAND SHIP CANAL OFFICE,

ST. CATHARINES, ONT., April, 1913.

SIR,—

During the past few years, while filling the position of superintending engineer of the Welland canal, I had several survey parties in the field working on the location of a proposed Welland ship canal.

Three routes west of the present canal were covered, but all were considered unsatisfactory on account of the poor quality of the material found in the sites of the heavy structures.

The route finally adopted was not considered seriously until 1910, as at first consideration the difficulties to be encountered in putting a canal through on this route seemed insurmountable, as the present canal has to be crossed twice, the canal had to go under the main line of the Grand Trunk railway and the most difficult section of the Grand Trunk Welland division had to be relocated, viz.: where it climbs the mountain.

Careful study of the questions involved, however, gradually eliminated the difficulties and a splendid location for the ship canal was the result.

By Order in Council dated May 3, 1912, I was transferred from the present canal to the position of engineer-in-charge of survey, design and construction of the Welland Ship canal. I immediately rented a vacant flat for an office, and commenced gathering a staff together. It has been impossible to obtain men who have had canal experience, but I have been very successful in obtaining the services of a fine lot of young men who have taken great interest in the work, with the result that the contract plans for the whole work are now in an advanced state, almost ready for the calling of tenders.

During the summer of 1912 I had a fine office building erected in the rear of the present canal office at the corner of Yate and St. Paul streets, St. Catharines, into which we moved in January, 1913. The new office is fully equipped and enables good work to be turned out with despatch.

Last month in company with yourself, I spent eight days in the Isthmus of Panama. This visit confirmed all the previous impressions I had formed as to this great work, and completely satisfied me that my designs, while differing radically from the Panama canal, are fully equal if not superior to them or the conditions to be met with in the proposed Welland ship canal.

The proposed Welland ship canal as finally located follows the course of the present canal from Port Colborne on Lake Erie to Allanburg, half way across the peninsula. From this point an entirely new cutting is to be made, crossing the present canal just below lock No. 25, the water level of the two canals at this point being the same, viz.: 568 feet above sea level. The new canal again crosses the present one below lock No. 11, the water of both canals at this point being at an elevation of 382 feet above sea level.

The proposed canal enters Lake Ontario at the mouth of the Ten Mile Creek about three miles east of Port Dalhousie, the entrance to the present canal. The total length of canal from lake to lake is 25 miles, and the difference in level between the two lakes, 325½ feet, is to be overcome by seven lift locks, each having a lift of 46½ feet. The dimensions of the locks are to be 800 feet in length by 80 feet in width in the clear and with 30 feet of water over the mitre sills at extreme low stages in

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the lakes. The width of the canal at the bottom will be 200 feet and for the present the canal reaches will be excavated to a depth of 25 feet only, but all structures will be sunk to the 30 foot depth, so that the canal can be deepened at any future date by the simple process of dredging out the reaches.

A new spur on the western breakwater, consisting of an immense rubble mound of stone from the excavation north of Port Colborne, and terminating in a timber and concrete head-block, located some 2,000 feet farther out in the lake than the present breakwater, will be built to insure quiet water in Port Colborne harbour during storms, which is not the case now, the present breakwater not being far enough out in the lake to deaden the swells.

The outer harbour at Port Colborne has now a 22-foot depth of water at ordinary stages of the lake, which is as much as is available at most of the lake ports and in the channels connecting the lakes at the present time, and the deepening of this portion of the harbour may be left for a few years until the connecting channels in the lakes allow deeper navigation.

The inner harbour at Port Colborne will be deepened to the proposed new depth and the old locks and regulating weir now in the centre of the village will be entirely removed. The rock cut from Port Colborne to Humberstone will be deepened and widened on the west side, and just below Humberstone a thorough cut will be made across the point now forming Ramey's Bend to materially straighten the canal. The materials from these cuts will be nearly all rock, and will be used to form the breakwater previously mentioned. A guard lock will be built in the rock cutting a short distance below Humberstone, and when this new cutting is ready for navigation a regulating weir will be built across the abandoned portion of the present canal which will be used as a by-pass to furnish water to the canal. This lock and regulating weir will control the elevation of the summit level of the canal, which it is proposed to keep at the level of extreme low water in Lake Erie, viz.: 568 feet above sea level.

From Ramey's Bend to Welland the canal will be deepened and widened by excavating a strip along the western bank. Instead of building a new aqueduct at Welland to carry the canal over the Welland river, it is proposed to raise the level of the river to that of the summit level of the canal, viz.: 568 feet above sea level by means of a dam across the river at Port Robinson. This dam will be provided with a large overflow and regulating weir which will control the elevation of the summit level, allowing any surplus water to overflow into the old Welland river and pass out into the Niagara river at Chippawa as at present, a sufficient quantity of water will be allowed to run constantly to keep the river clean.

The present aqueduct at Welland will be dredged out, also the bank between the canal and the river, which latter will be utilized between Welland and Port Robinson instead of the present canal, being somewhat straighter and entailing considerably less excavation. At Port Robinson a cut will be made through the present bank between the canal and the river through which vessels will again enter the canal prism.

The raising of the Welland river above Welland will flood some 1,600 acres of low land adjoining the river bed. This land is flooded every spring by the flood water in the river and is principally used for pasturage. The township of Wainfleet adjoining the Welland river on the south side, consists principally of low lying ground which drains into the Welland river, and to prevent damage to this land on account of the raising of the river, it will be necessary to open up most of the ditches from the point of their present entrance to the river to the intended high water mark.

The turning of the Welland river into the canal will pollute the waters which are at present used by the towns of Welland, Thorold and Merritton, and by the city of St. Catharines for domestic purposes. This may necessitate the construction of extensive filtering plants, which scheme is not looked upon with favour by those interested. An alternative scheme to lay a pipe line from Lake Erie to the reservoirs

of the different municipalities, through which clean water would be continuously pumped, is under consideration, and appears to be the most feasible scheme available.

Between Port Robinson and Allanburg what is known as the deep cut (deepest cutting 80 feet) will be deepened and widened by cutting a slice off the western bank. Allanburg is now the junction of the present and old Welland canals, and the water required for the latter, which is quite considerable on account of the numerous power developments along it, is taken into the canal through a weir at this point.

In connection with the construction of the ship canal, it is proposed to close the present old canal entirely between Allanburg and Marlatts Bridge near Thorold, first building a new weir at the head of lock No. 25 of the present canal to supply the above mentioned water. A dam will then be thrown across the old canal at Allanburg, and the old bed of the canal between the dam and Marlatts Bridge will be utilized as a dumping ground in which to place the material removed from above water in widening the deep cut. This will form a very convenient dumping ground, and the old canal will become more self-contained, as at present the entrance works are situated at an inconvenient distance from the remainder of the canal.

If it is desired to continue navigation on the old canal, entrance may be had to it through lock No. 25 of the present canal when the ship canal is completed by making a short cut through the bank separating the two waterways.

A pair of twin guard gates are located on the proposed canal near the southerly limits of the town of Thorold, and a short distance north of them is located lock No. 7, the head of this lock being directly opposite the head of lock No. 24 on the present canal. That portion of the present canal between locks No. 25 and 24 together with a pond of about 27 acres formed by flooding the upper valley of the Ten Mile creek will be utilized as a regulating basin from which water to fill lock No. 7 will be drawn. This method of drawing water from a side pond instead of directly from the canal above avoids the formation of objectionable currents and surges in the canal and locks, and is the method adopted for filling all of the locks.

Below lock No. 7 is a short reach of canal with an adjacent side pond or regulating basin having a surface area of about 84 acres, and immediately below are located twin locks Nos. 6, 5 and 4 in flight. These three locks overcome a descent of 139½ feet. One flight will be used for down bound vessels and the adjoining flight for up bound, a double flight being required to save long delays in the passage of vessels through the canal.

The main line of the Grand Trunk railway between St. Catharines and Niagara Falls will cross over the foot of twin locks No. 4 by means of two short Bascule lift bridges.

The Welland division line of the Grand Trunk railway is situated just where the new locks are to be built, and it will be necessary therefore to divert it some distance to the west, and the diverted line will bear the same relation to the proposed canal as the present line does to the present canal, following up on the west side of the locks, but remaining on the west side of the canal for some distance above the present lock No. 25, when it crosses over the proposed canal on a Bascule lift bridge to the east side.

From lock No. 4 the proposed canal crosses the meadow to the north, following in part the bed of the Ten Mile creek till it crosses the present canal at the foot of lock No. 11 at an elevation of 382 feet above sea level, which is the level of the present canal at that point. This will enable small vessels which wish to do so, to use the Port Dalhousie entrance as at present, as far as lock No. 11.

Lock No. 3 is located immediately north of the present canal, and at its head on the east side is situated an equalizing basin or pond of 150 acres. Below No. 3 a heavy cutting is required through the village of Homer to the bed of the Ten Mile creek again, above Carleton street, and just below Carleton street lock No. 2 is located. It was difficult to find a location for this lock on account of the lack of rock for a

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foundation, but eventually a suitable foundation was found at the present site. The canal at the head of lock No. 2 is at an elevation of 335½ feet above sea level, and floods about 200 acres of land in and adjoining the bed of the Ten Mile creek. Below lock No. 2 the canal follows the bed of the creek to the lake, lock No. 1 being situated just below the lake road. The pond at the head of lock No. 1 covers an area of 107 acres.

The outer entrance piers in Lake Ontario are placed about one and one-half miles from shore, where the depth of water is 30 feet. A wide channel will be dredged from these piers to lock No. 1. The sides of this channel will be protected near the shore end by reinforced concrete cribs with concrete superstructure, alongside which vessels may lie. From the shore line of the lake to the outer entrance piers an embankment about 500 feet in width will be formed on either side of the channel from materials excavated from the canal between the lake and Thorold.

For the purpose of conveying this material from the different contracts to the lake, the Department will build a double track railway along the west side of the canal from the foot of the flight locks near Merritton to the lake, and temporary trestles will be built out in the lake on either side of the harbour from which to start the dumps. The railway will also be utilized to haul crushed stone from the site of the flight locks to locks Nos. 1, 2 and 3, where it will be used for the purpose of making concrete.

The contractor for the rock excavation from the site of the flight locks will, under his contract, be obliged to crush a sufficient quantity of the good rock taken from his excavation to supply all the crushed stone required for making all the concrete for the different locks and structures.

The lock walls will be 82 feet high above the top of the gate sills and including the necessary foundation work required below this level two of the locks will have walls 100 feet high.

The lock gates will be of the single leaf type, swinging on a hinge at one side of the lock, and resting when closed in a notch cut in the opposite wall, a single leaf thus spanning the whole width of the lock chamber. The gate at the foot of each lock will be 83 feet in height and 88 feet in length, and will weigh about 1,100 tons.

The valves and culverts in the walls are of large dimensions and will permit of the lock being filled in less than eight minutes. This will mean that the time of passage through the canal will be very much reduced below that required at present.

The canal will be divided into nine sections for contract and construction purposes.

The contractor for each section will be required to supply all plant and labour to efficiently carry out the work of excavation and the construction of all structures such as locks, weirs, substructures of bridges, entrance piers, &c. He will also supply all necessary materials required in the construction of the above excepting Portland cement and certain metal work which will be furnished by the Department.

The furnishing of Portland cement to the contractors has been found a very satisfactory method on other contracts with the Department and this method will be adopted in all contracts on the ship canal.

All steel and iron castings and other metal work which is standard for all locks, &c., will also be furnished to the different contractors to be placed in position in the concrete masonry of locks, weirs, bridges, &c.

The building and erection of the lock gates will form a separate contract.

The steel superstructure of bridges will be built under separate contracts.

The following estimated quantities will give an idea of the magnitude of the work:—

Rock excavation	6,000,000 cubic yards.
Earth "	40,000,000 "
Concrete	2,500,000 "

4 GEORGE V., A. 1914

A careful and conservative estimate places the total cost of the work at less than \$50,000,000.

The canal should be ready for navigation in five years.

I am, sir,

Your obedient servant,

J. L. WELLER,

Engineer in Charge.

W. A. BOWDEN, Esq.,

Chief Engineer,

Department of Railways and Canals,

Ottawa, Ont.

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HUDSON BAY RAILWAY.

ENGINEERING DEPARTMENT,

WINNIPEG, August 4, 1913.

Mr. W. A. BOWDEN,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

DEAR SIR,—I beg to report as follows upon the condition of the work on the Hudson Bay railway up to March 31, 1913.

Two location parties under Messrs. Lawledge and Silcox have completed the location of the railway to Port Nelson, subject to some local revisions which will be made the present summer.

The line finally adopted, recrosses to the left bank of Nelson river at Kettle rapids, where a good crossing has been secured about 1,000 feet in length over all, with a cantilever span of about 650 feet over the main channel.

With the exception of this crossing the work will be light. Ballast in considerable quantities has been found at convenient intervals between Manitou rapids and Port Nelson.

At the south end grading has been completed with the exception of a few small gaps, as far as Mile 70 and 90 per cent of the clearing as far as Thicket Portage, Mile 185.

Supplies sufficient to complete this work have been placed on the ground by the contractors and the whole 185 miles should be ready for track by the spring of 1914.

Arrangements are being made also to place supplies on the second contract from Thicket Portage to Split Lake Junction, and considerable progress is expected on this work before the spring of 1914.

An effort is also to be made to commence work on the third contract from Split Lake Junction to Port Nelson.

Track-laying will commence in May and this season should see something over 100 miles laid, depending upon the supply of ties, which have been proven somewhat difficult to obtain.

At the present time the contractors are endeavouring to increase the supply of ties, but it is difficult at present to say to what extent they will be successful as far as this season's work is concerned.

Yours truly,

J. ARMSTRONG,
Chief Engineer.

DARTMOUTH, N.S., 8th August, 1913.

W. A. BOWDEN, ESQ.,
Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

DEAR SIR,—I beg to report the progress made on the construction of the Dartmouth to Deans branch of the Intercolonial Railway, during the fiscal year ended March 31, 1913.

The length of the whole line, as originally located from end of I.C.R. track at Woodside to Deans Settlement is 73 miles. As it appeared that the same amount of traffic, and practically equal service to public, could be obtained without building the full distance, it was subsequently decided to make Upper Musquodoboit the eastern terminus, reducing the length to 67 miles.

For engineering purposes this was divided into seven residencies, each placed in charge of a resident engineer, with junior assistants, axemen, &c. An office was opened at Dartmouth; a Principal Assistant Engineer, Office Engineer, Auditor, and Draughtsman were appointed. Inspectors of concrete, ties, fencing and timber, were employed as required.

The contract with Messrs. M. P. and J. T. Davis (represented on the work by Messrs Cavicchi & Pagano) for the construction of the whole work, except steel bridge superstructure, station houses, water services and telegraph line, is dated 16th February, 1912. Clearing the right of way commenced at the Dartmouth end on 19th February, 1912, and subsequently at other points along the line, and was practically finished during 1912.

Grading commenced at Musquodoboit Harbour (mile 34) in March, 1912; at Lawrence town (mile 11 to mile 15); Porters Lake (mile 15 to mile 16); and West Chezzetcook (mile 21 to mile 22) in April; at Crawfords Falls (mile 41); Little River (mile 48); Middle Musquodoboit (mile 53 to mile 55); and Upper Musquodoboit (mile 65 to mile 67) in May; and at Woodside (mile 1); and Meaghers Grant (mile 43 to mile 46) in June. The Woodside work being done by steam shovel and train.

The parties having the work directly in hand at Lawrence town and Porters Lake, suspended work in May, 1912, and this part of the work remained idle until September, when steam shovel was installed, with light engine and cars. This steam shovel, and the one working between Woodside and Cole Harbour, and the force employed on the rock work in the granite section between Musquodoboit Harbour and Meaghers Grant continued all winter. Work at all other parts of line, except a very small force at Chezzetcook, closed down in December.

Concrete work commenced in June, 1912, and continued until suspended in November, by reason of frost.

The average daily force from June to October, on all classes of work was, 46 foremen, 30 mechanics and 427 labourers; in the earlier and later parts of the year, 39 foremen, 20 mechanics, and 359 labourers; the steam shovels, of course, being equivalent to a considerable force of additional labourers.

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The percentage of work done, of the different kinds, included in Messrs. Davis' contract, during the fiscal year, as compared with the estimate to complete the whole, were:—

	Per cent.
Clearing and grubbing..	63.4
Fencing and gates..	4.1
Solid rock excavation..	69.3
Loose rock excavation..	63.5
Common excavation (including overhaul)..	45.7
Borrow " "	30.0
Concrete..	47.8
Pile bridges (materials delivered only)..	53.7
Stone bank protection..	9.0
Native timber..	34.7
Ties..	35.0

equal to 48.9 per cent of the whole work comprised in the contract.

Of items not included in the contract the percentage completed or supplied were:—

	Per cent.
Location..	100
Engineering..	40.5
Right of way..	5.2
Rails and fastenings..	12.5

making the value of the whole work done and materials supplied equal to 31.6 per cent of the estimated cost to complete.

The progress of the work was hampered to some extent by wet weather during the summer of 1912; the season being in this respect less favourable than is usual in Nova Scotia.

I am, sir,

Your obedient servant,

W. A. HENDRY,
Engineer in Charge.

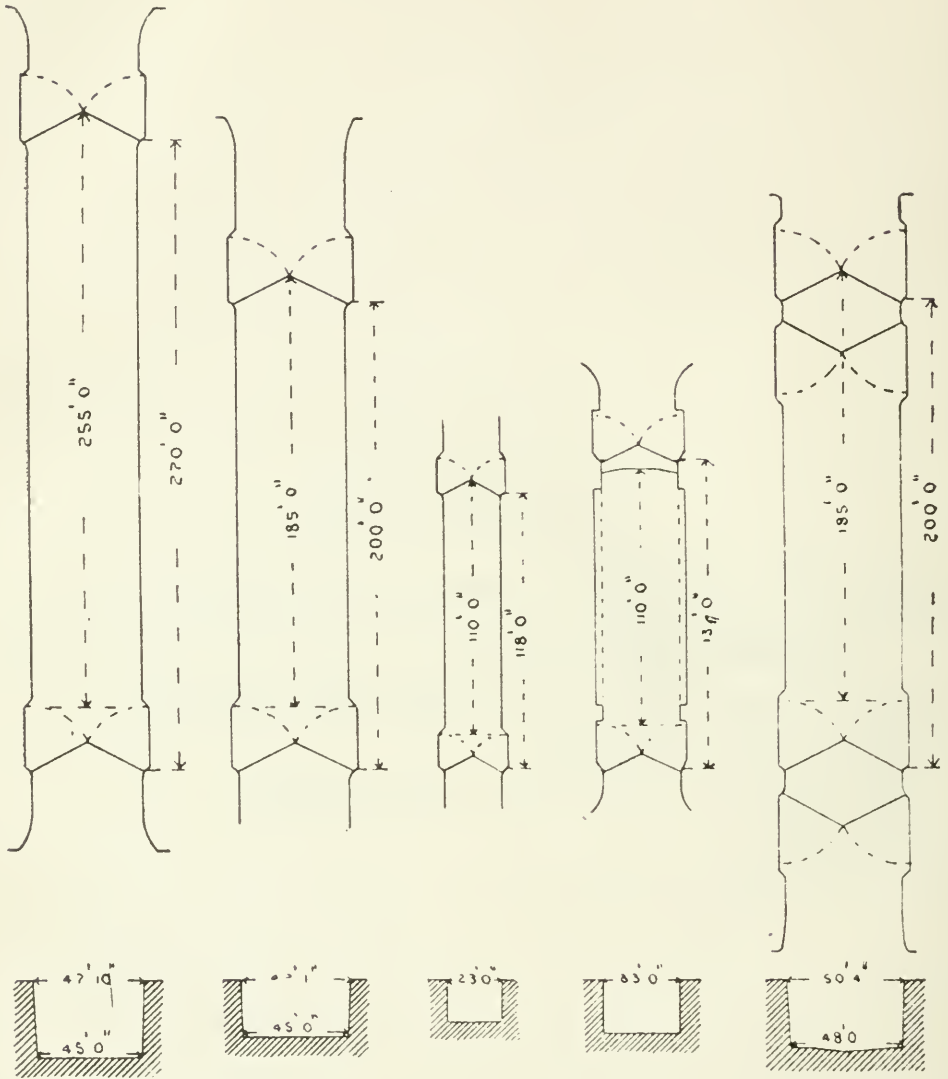
PART VII
CANALS

Diagrams showing dimensions of smallest lock on each canal, &c.

Dimensions and other features of the several canal works, and description of the intermediate water navigations:

1. Between Montreal and Port Arthur or Fort William, Lake Superior.
2. Montreal, Ottawa and Kingston.
3. River Richelieu and Chambly Canal to Lake Champlain.
4. Trent Canal.
5. St. Peter's Canal.

Plans and Sections showing Dimensions of the Smallest Lock on each



Lachine

St Anne,
St Ours,
Carillon,
& Grenville.

Chambly

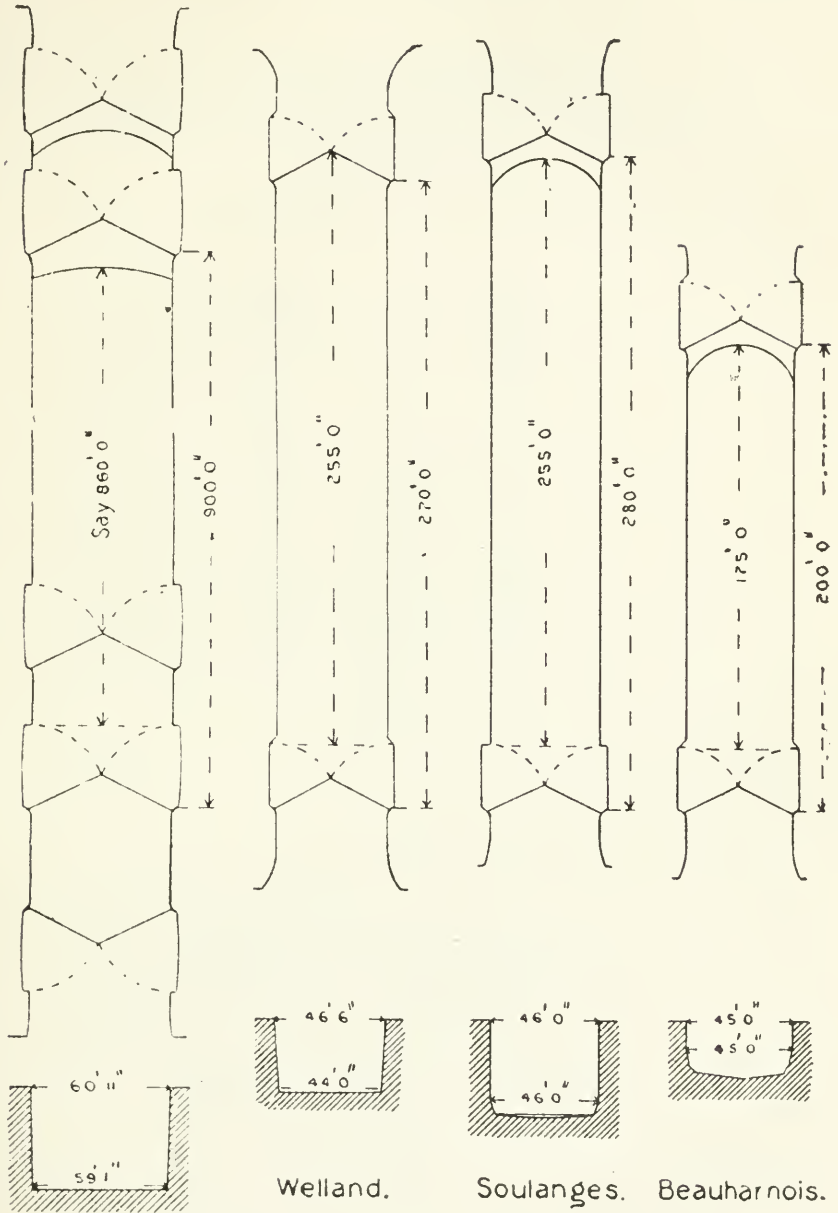
Rideau

St Peter's

There are no locks on the through route between Lake Superior and

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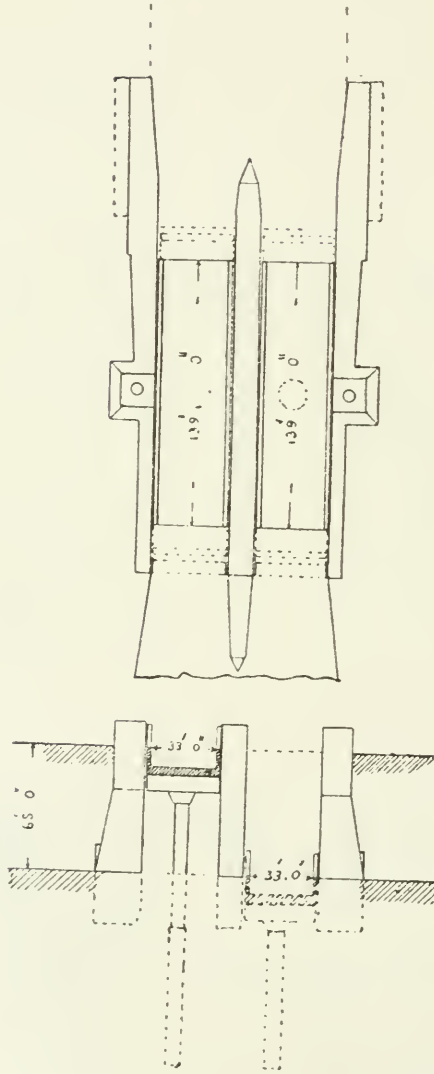
of the Canadian Canal System except the Trent Canal, which is uncompleted.



Sault Ste Marie.

Montreal of less dimension than those of the Welland Canal Locks.

TRENT CANAL

Hydraulic Lift-Lock at Peterborough
65 Feet Lift.

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CANALS

The following statements give in concise form the essential features of the government canal works and the intermediate water navigation.

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

First.—The through route between Montreal and Port Arthur or Fort William on the west shore of Lake Superior (14 feet minimum depth of water.)

	Statute Miles.
1. Lachine canal.	8½
Lake St. Louis and River St. Lawrence.	16
2. Soulanges canal.	14
Lake St. Francis and River St. Lawrence.	31
3. Cornwall canal.	11½
River St. Lawrence.	5
4. Farrans Point canal.	1¼
River St. Lawrence.	9½
5. Rapide Plat canal.	3½
River St. Lawrence.	4½
6. Galops canal.	7¼
River St. Lawrence and Lake Ontario.	228
7. Welland canal.	26¾
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, &c.	574
8. Sault Ste. Marie canal.	1¼
Lake Superior to Port Arthur or to Fort William.	272
Total.	1,214
To Duluth.	1,336
Chicago.	1,240

Second.—Montreal to International Boundary, near Lake Champlain.

	Statute Miles.
1. St. Lawrence river to Sorel.	46
2. Sorel, via Richelieu river, to St. Ours lock.	14
3. St. Ours lock.	½
4. Richelieu river, St. Ours lock, to Chambly canal.	32
5. Chambly canal.	12
6. Chambly canal to boundary line.	23
Total.	127½

Third.—Montreal to Ottawa.

	Statute Miles.
1. Lachine canal.	8½
2. Lake St. Louis.	15
St. Anne's lock at outlet of Ottawa river.	½
Lake of Two Mountains and Ottawa river.	27
3. Carillon canal.	¾
Ottawa river.	6¼
4. Grenville canal.	5¾
Ottawa river to Ottawa.	56
Total.	119¾

Fourth.—Ottawa to Kingston and Perth.

	Statute Miles.
1. Rideau canal, Ottawa to Kingston.	126 $\frac{1}{4}$
Perth Branch.—Rideau lake to Perth.	7
	<hr/>
Total.	133 $\frac{1}{4}$

Fifth.—Lake Ontario, at Trenton, to Lake Huron.

1. Trent canal,—not completed.

Sixth.—Atlantic Ocean to Bras d'Or Lakes, Cape Breton.

	Statute Miles.
1. St. Peter's canal.	$\frac{1}{2}$

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 Strait of Belle Isle to Port Arthur or Fort William on the west coast of Lake Superior, a distance of 2,217 statute miles. The distance to Duluth is 2,339 miles; the distance to Chicago, 2,243 miles. From the Strait of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 1,003 statute miles. From Quebec to Montreal the distance is 160 miles.

The control of the St. Lawrence ship channel, and the making of improvements thereto, are now under the Department of Marine and Fisheries, whose annual reports give full information as to the history and improvement of the channel. A 30-foot channel between Montreal and Father Point—with a width of 450 feet in the straight portions, and of from 600 to 750 feet in the bends between Montreal and Quebec, and of 1,000 feet everywhere below Quebec—has been practically completed. In 1909 the first work of deepening the ship channel to 35 feet was begun.

By means of channel improvements, Montreal has been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the several 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, Cornwall, Farrans Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 74 miles; total lockage (or height directly overcome by locks), 553 $\frac{1}{4}$ 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 48. The Soulanges canal takes the place of the Beauharnois canal, abandoned for navigation purposes, and the Murray canal is used only by the coasting vessels on Lake Ontario. It is not a part of the through route.

It is important to note that the enlargement of 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 vessels to be accommodated is limited to 255 feet. At Farrans 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. The lock at Sault Ste. Marie is 900 feet by 60 feet, with 18 feet 3 inches on the sills at lowest known water level.

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Access from Lake Erie to Lake Huron is obtained by way of the Detroit river, Lake St. Clair, and the St. Clair river, which have been deepened to a minimum of 21 feet, principally by the United States government.

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 canals, situated on the United States side of the River St. Mary. Improvements of the United States channels in River St. Mary through Hay lake, east of Sault Ste. Marie, have been carried on for several years past. The dredged areas now total 34 miles in length, with a minimum width of 300 feet, which is increased at angles and other critical points to 1,000 feet. The depth is 20 feet at the mean stage of water. In the year 1903 excavation was commenced to afford 21 feet at the lowest stage of water.

The improvement of Canadian channels from above Montreal to the head of Lake Superior is controlled by the Department of Public Works. Work is now under way to dredge the channel in the River St. Mary to 21.5 feet below L.W.L., the existing minimum depth being 18.75 feet below L.W.L. Existing depths elsewhere between Lakes Erie and Superior give a minimum of 21 feet below L.W.L. The Limekiln channel in the Detroit river has been deepened to 21 feet; and the United States government has opened the Livingstone channel in the same (Detroit river) with a depth of 22 feet.

The improvements at the harbours of Fort William and Port Arthur now under way will give a minimum depth of 25 feet below L.W.L. This depth exists at present over the channels leading to the principal wharves.

The provisions and maintenance of aids to navigation on all Canadian river and lake channels is controlled by the Department of Marine and Fisheries.

The Sault Ste. Marie, Welland, Cornwall, Soulanges and Lachine canals are well lighted throughout by electricity, and are electrically operated. The Farrans Point canal is lighted with acetylene gas.

Navigation, which is closed by ice during the winter months, opens about the end of April on the Great Lakes and St. Lawrence route. Ice-breaking steamers are now employed to lengthen the navigable season at Lake Superior and Georgian Bay terminals.

STATEMENT OF PRESENT MINIMUM DEPTH OF IMPROVED CHANNELS.

Father Point to Montreal.	30 feet.
Montreal to Port Colborne.	14 "
Port Colborne to Fort William.	18 $\frac{3}{4}$ "

LACHINE CANAL.

Length of canal.	8 $\frac{1}{2}$ statute miles.
Number of locks.	5
Dimensions of locks.	270 feet by 45 feet.
Total rise or lockage	45 feet.
Depth of water on sills, at two locks.	18 "
Depth of water on sills, at three locks.	14 "
Average 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 two lower north locks, however, have been lengthened to 270 feet, and have 16 $\frac{3}{4}$ feet of water on the sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. 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 bar the ascent of the River St. Lawrence. They are 986 miles distant from the Strait of Belle Isle.

SOULANGES CANAL.

Length of canal...	14 statute miles.
Number of locks—	
Lift...	4
Guard...	1
Dimensions of locks...	280 feet by 45 feet.
Total rise or lockage...	84 feet.
Depth of water on sills...	15 "
Breadth of canal at bottom...	100 "
Breadth of canal at water surface...	164 "

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascades rapids, Cedar rapids and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges canal the distance is sixteen miles.

CORNWALL CANAL.

Length of canal...	11 statute miles.
Number of locks...	6
Guard gates...	1
Dimensions of locks...	270 feet by 45 feet.
Total rise or lockage...	48 feet.
Depth of water on sills...	14 "
Breadth of canal at bottom...	90 "
Breadth of canal at water surface...	154 "

The old lift locks, 200 feet by 55 feet, are also available with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis 31 miles, which is navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's Landing.

WILLIAMSBURG CANALS.

The Farrans Point, Rapide Plat and Galops canals are collectively known as the Williamsburg canals.

FARRANS POINT CANAL.

Length of canal...	1¼ mile.
Number of locks...	1
New lock...	800 feet by 50 feet.
Old lock...	200 " 45 "
Total rise or lockage...	3½ feet.
Depth of water on sills of new lock...	14 "
Depth of water on sills of old lock...	9 "
Breadth of canal at bottom...	90 "
Breadth of canal at water surface...	154 "

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

RAPIDE PLAT CANAL.

Length of canal.	3 $\frac{3}{8}$ miles.
Number of locks.	2
Dimensions of locks.	270 feet by 45 feet.
Total rise or lockage.	11 $\frac{1}{2}$ feet.
Depth of water on sills.	14 "
Breadth of canal at bottom.	80 "
Breadth of canal at water surface.	152 "

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

From the head of Farrans Point canal to the foot of Rapide Plat canal there is a navigable stretch of 9 $\frac{1}{2}$ miles. The 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 $\frac{1}{2}$ miles.
Number of locks.	3
Dimensions of locks—	
Lift-lock at foot of canal.	800 by 50 feet.
Guard-lock at head of canal.	270 by 45 "
Lift-lock to pass vessels around Galops rapids only.	303 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 4 $\frac{1}{2}$ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western piers.	5 $\frac{1}{8}$ miles.
Breadth at bottom.	80 feet.
Breadth at water surface, low water, Lake Ontario.	124 "
Depth below low water, Lake Ontario.	11 "
Number of locks.	None.

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	1				
Number of locks—						
Guard	1	1				
Lift	26	25				
Dimensions	{ <table style="display: inline-table; vertical-align: middle;"> <tr><td>1 (tidal) 230 x 45</td></tr> <tr><td>1 lock 200 x 45</td></tr> <tr><td>1 lock 270 x 45</td></tr> <tr><td>24 locks 150 x 26½</td></tr> </table> } 270 feet x 45 feet.		1 (tidal) 230 x 45	1 lock 200 x 45	1 lock 270 x 45	24 locks 150 x 26½
1 (tidal) 230 x 45						
1 lock 200 x 45						
1 lock 270 x 45						
24 locks 150 x 26½						
Total rise or lockage	326¾ feet.	326¾ feet.				
Depth of water on sills	10¼ "	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 (6-ft. navigation only)	1,020 "
Number of locks—one at Aqueduct and one at Port Robinson	2
Dimensions of locks	150 x 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	{ <table style="display: inline-table; vertical-align: middle;"> <tr><td>1 of 150 by 26½ ft.</td></tr> <tr><td>1 of 300 by { 45 ft. lower.</td></tr> <tr><td> 28 ft. upper.</td></tr> </table> }	1 of 150 by 26½ ft.	1 of 300 by { 45 ft. lower.	28 ft. upper.
1 of 150 by 26½ ft.				
1 of 300 by { 45 ft. lower.				
28 ft. upper.				
Total rise or lockage	10 feet.			
Depth of water on sills	6 " only.			
Navigable depth of channel	9 "			

PORT MAITLAND BRANCH.

Length of canal	1¾ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Depth of water on sills	7½ feet.
Total rise or lockage	7 "
Navigable depth of channel	6 " only.

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

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From Port Dalhousie to Allanburg, $11\frac{3}{4}$ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg 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 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 274 miles, and to Duluth 397 miles.

SAULT STE. MARIE CANAL.

Length of canal, between the extreme ends of the entrance piers.	$1\frac{1}{30}$ miles or 7,472 feet.
Number of locks.	1
Dimension of locks.	900 feet by 60 feet at water level; width at lock bottom, 59 feet.
Depth of water on sills (at lowest known water level).	18 feet 3 inches.
Total rise or lockage (mean).	19 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.

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 $245\frac{3}{8}$ miles.

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

OTTAWA RIVER CANALS.

The Ste. Anne's Lock. Carillon Canal. Grenville Canal.

RIDEAU CANAL.

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.	Interme- diate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine Canal.	8½	
From Lachine to Ste. Anne's Lock.	15 7/8	23½
Ste. Anne's Lock and piers.		23
Ste. Anne's Lock to Carillon Canal.	27 3/8	50
The Carillon Canal.		51
From Carillon to Grenville Canal.	6¼	57 1/2
The Grenville Canal.	5¾	63 1/2
From the Grenville Canal to entrance of Rideau Navigation.	56	119 1/2
Rideau Navigation ending at Kingston.	126¼	245 1/2
" Perth Branch, from Rideau Lake to Perth.	7	195

STE. ANNE'S LOCK.

	New Lock.	Old Lock.
Length of canal.	¾ mile.	½ mile.
Number of locks.	1	1
Dimensions of locks.	200 x 45 feet.	190 x 45 feet.
Total rise or lockage	3 "	3 "
Depth on sills.	9 "	6 "

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 is a navigable stretch of 27 miles, through the Lake of Two Mountains and 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 "

the St. Ours lock to the basin at Chambly; thence, by the Chambly canal, to St. Johns, and up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, at the southern end of Lake Champlain, connection is obtained by means of the Champlain canal with the River Hudson, by which the city of New York is directly reached.

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

Sections of Navigation.	Interme- diate Distance.	Total Distances.
	Miles.	Miles.
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.....	$\frac{1}{2}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise or lockage.....	5 feet.
Depth of water on sills.....	7 "
Length of dam in 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
Lift lock No. 2.....	124 "
Lift locks Nos. 3, 4, 5, 6.....	118 "
Lift locks Nos. 7, 8, 9, combined.....	125 "
Total rise or lockage.....	74 "
Depth of water on sills.....	6 $\frac{1}{2}$ "
Breadth of canal at bottom.....	36 "
Breadth of canal at surface of water.....	60 "

} From 22 $\frac{1}{2}$
to 24 feet
wide.

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 the 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 155 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe. The route from Lake Simcoe to Georgian bay, Lake Huron has not yet been determined.

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 approximately 174 miles from Trenton.

The works by which the Trent navigation has been improved to date comprise short canals with locks at Hastings, Peterborough, Peterborough to Lakefield 7 locks, one being a hydraulic lift; Young's Point, Burleigh Falls, Lovesick, Buckhorn, Bobcaygeon, Fenelon Falls, Rosedale, and six locks between Balsam and Simcoe lakes, one being a hydraulic lift; also lock and dam at Lindsay.

Also dams at Healey Falls, Hastings, Peterborough, Peterborough to Lakefield, 6; Young's Point, Burleigh, Lovesick, Buckhorn, Bobcaygeon, Fenelon Falls, Rosedale, and three between Balsam and Simcoe lakes.

Bridges also have been built at many of the locks and at other places.

For convenience the canal may be divided into the following divisions, the lengths being given:—

ONTARIO-RICE LAKE DIVISION.

Embracing the canal and river navigation between Trenton, on the Bay of Quinté, to Rice lake, 56 miles.

The all-river route from Trenton, on the Bay of Quinté, to Rice lake was fully decided upon by the government during the session of 1907, and the work of construction was begun that fall. The improvement is carried out on the principle of damming the river at suitable points by means of dams, and connecting the pools thus created by means of locks and short stretches of canal. The locks on this division will be 175 feet long, 33 feet wide, with 8 feet 4 inches of water on the sills. In the reaches there will be a minimum depth of 9 feet of water. For the purpose of construction, this division of 56 miles has been divided into seven sections, all of which are under contract. Rice lake is 369 feet above low water level of Lake Ontario, which height will be overcome by 18 locks.

PETERBOROUGH-RICE LAKE DIVISION.

Embracing that stretch of river and lake navigation from the lower end of Rice Lake to Peterborough, 32 miles.

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This division is navigable with a minimum depth of 6 feet.

At Hastings are a concrete lock, replacing the old masonry lock, and a concrete dam, replacing the old timber structure which formerly existed at that point; these maintain navigation on the Trent River, Rice Lake and the Otonabee River to Peterborough, a distance of about 38 miles.

At Peterborough, 89 miles from Trenton, is a masonry lock and a concrete dam which maintain navigation through Little lake to lock No. 6 of the Peterborough-Lakefield division, a distance of about three-quarters of a mile.

PETERBOROUGH-LAKEFIELD DIVISION.

Embracing that stretch of river and canal navigation from Little lake at Peterborough to Lakefield, 10 miles.

Construction completed and canal in operation with a minimum depth of 6 feet for navigation.

From Peterborough to Lakefield, navigation is maintained on the Otonabee river by a series of concrete locks and timber dams as follows:—

Leaving Little lake through lock No. 6, in a distance of about half a mile, the hydraulic lift lock is reached, where there is a lift of 65 feet into a reach which extends to lock No. 5, about five miles from Peterborough, the last mile only of this reach being in the river; from here to Lakefield, locks 5, 4, 3, 2 and 1, with their respective dams, give navigation to Lakefield, about ten miles from Peterborough, or 99 from Trenton, and thence on five miles further to Young's Point.

KAWARTHA LAKES DIVISION.

Embraces that stretch of lake and river navigation from Lakefield to the entrance to the canal on the west shore of Balsam lake—62 miles.

Navigable with a minimum depth of 6 feet. Also in this division, may be included the Lindsay branch which embraces the Scugog lake and river from main channel on Sturgeon lake to Port Perry, the distance being about 30 miles, not included in the total 62 miles, above mentioned. A new lock and dam at Lindsay on this branch has recently been built.

At Young's Point, a masonry lock and timber dam maintain navigation through Clear and Stony lakes to Burleigh, a distance of about nine miles.

At Burleigh, a masonry lock of two lifts and concrete dam maintain navigation through Lovesick lake, about two miles, to Lovesick. A new concrete dam has recently been completed at Burleigh.

At Lovesick, a masonry lock and timber dam maintain navigation through Deer bay for about five miles to Buckhorn.

At Buckhorn, a masonry lock and new concrete dam maintain navigation for about 16½ miles through Buckhorn and Pigeon lakes to Bobcaygeon, 136 miles from Trenton, and also, as branches, maintain navigation from Buckhorn lake through Chemong lake to Bridgeworth, about 8 miles, and in the Pigeon river from Pigeon lake to Omemee, about 10 miles.

At Bobcaygeon, a masonry lock and two dams, one being recently rebuilt of concrete and the other a timber one, maintain navigation through Sturgeon lake and Fenelon river, a distance of about 14½ miles to Fenelon Falls.

At Fenelon Falls is a short canal, a masonry lock of two lifts and a timber dam which maintain navigation across Cameron lakes to Rosedale, a distance of about 3½ miles, to a new concrete lock of the same dimensions as those of the Ontario-Rice lake division.

At Rosedale, the new concrete lock and dam maintain navigation on Balsam lake, the summit level of the canal, which extends from Rosedale to the hydraulic

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lock at Kirkfield, a distance of twelve miles; half of this distance is through a canal connecting Balsam lake with the lock, which is about 166 miles from Trenton.

SIMCOE-BALSAM LAKE DIVISION.

Extends from Balsam lake to Gamebridge on Lake Simcoe—18.2 miles.

Construction completed and canal in operation with a minimum depth of 6 feet.

At the Kirkfield hydraulic lock is a drop of 50.44 feet from the summit level. From this point to Gamebridge on Lake Simcoe, 179 miles from Trenton, the route consists of canal and river reaches maintained by damming the Talbot river. There are five new concrete locks numbered 1, 2, 3, 4 and 5, with concrete dams at Nos. 1, 2 and 3.

HOLLAND RIVER DIVISION.

This contemplated the canalization of the Holland river between Lake Simcoe and Newmarket, 12.3 miles. It has not been completed, and work on it was discontinued in December, 1911.

The following is a list of locks now in use, with their dimensions, in order of location, from Hastings to Gamebridge on Lake Simcoe.

	Length between Hollow Quoins	Width.	Depth on Sill.	Lift.
	Ft.	Ft.	Ft.	Ft.
1 Lock at Hastings.....	175	33	8 4 in.	9
1 " at Peterborough.....	134	33	6	9
1 " No. 6, Peterborough—Lakefield Division.....	142	33	6	12
1 " at Peterborough, hydraulic lift lock No. 1.....	140	33	6	65
1 " No. 5, Peterborough—Lakefield Division.....	142	33	6	14
1 " No. 4, " " " ".....	142	33	6	12
1 " No. 3, " " " ".....	142	33	6	12
1 " No. 2, " " " ".....	142	33	6	10
1 " No. 1, " " " ".....	142	33	6	16
1 " at Young's Point.....	134	33	6	6
2 " at Burleigh, each 11½ feet.....	134 150	33	6	23
	{ Upper Lower			
1 " at Lovesick.....	134	33	6	4
1 " at Buckhorn.....	134	33	6	9
1 " at Bobcaygeon.....	134	33	6	7
2 " at Fenelon Falls, each 12 feet.....	134 150	33	6	24
	{ Upper Lower			
1 " at Rosedale.....	175	33	8 4 in.	4
1 " at Kirkfield, hydraulic lift No. 2.....	140	33	6	50.44
1 " No. 1, Simcoe—Balsam Lake Division.....	142	33	6	21
1 " No. 2, " " " ".....	142	33	6	14
1 " No. 3, " " " ".....	142	33	6	14
1 " No. 4, " " " ".....	142	33	6	14
1 " No. 5, " " " ".....	142	33	6	11
24				
1 " at Lindsay, Seugog Branch.....	142	33	6	6.5

ST. PETER'S CANAL, CAPE BRETON.

Length of canal	About 2,600 feet.
Breadth at water line	55 feet.
Lock	1 tidal lock, 4 pairs of gates.
Dimensions	200 feet by 48 feet.
Depth of water on sills	18 feet at lowest water.
Depth through canal	19 feet.
Extreme rise and fall of tide in St. Peter's bay	7 feet.

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. A new Atlantic entrance and lock, 300 feet by 45 feet, are now under construction. These will replace the existing lock and entrance.

PART VIII

MISCELLANEOUS STATEMENTS

Table of distances, Intercolonial and Prince Edward Island Railways.

INTERCOLONIAL RAILWAY.

- Expenses, gross earnings, freight tonnage, profit or loss, and passengers yearly since July 1, 1876.
- Earnings, passenger, freight, mails and sundries yearly since July 1, 1876.
- Earnings, yearly since July 1, 1876.
- Local and through freight, yearly since July 1, 1876.
- Local and through passengers, yearly since July 1, 1876.
- Coal carried from Nova Scotia collieries, yearly since July 1, 1876.
- Grain carried for shipment, yearly since July 1, 1876.
- Flour and meal carried, yearly since July 1, 1876.
- Grain carried, yearly since July 1, 1876.
- Lumber carried, yearly since July 1, 1876.
- Live stock carried, yearly since July 1, 1876.
- Raw and refined sugar carried, yearly since July 1, 1876.
- Fresh and salt fish carried, yearly since July 1, 1876.
- Ocean-borne goods carried, yearly since July 1, 1876.

WINDSOR BRANCH.

- Earnings, expenses and profits or losses, yearly from 1880.

PRINCE EDWARD ISLAND RAILWAY.

- Expenses, earnings, freight and passenger traffic and loss, yearly from 1875.

CANALS.

- Statement showing total cost of construction and enlargement from Montreal to Port Arthur.
- Statement showing total cost of construction and enlargement from Lachine to Ottawa.
- Statement showing total cost of construction and enlargement from Ottawa to Kingston.
- Statement showing total cost of construction and enlargement from St. Johns to Sorel.
- Statement showing total cost of construction and enlargement from Lake Ontario to Georgian Bay.
- Statement showing total cost of construction and enlargement from Atlantic Ocean to Bras d'Or Lakes.
- Freight traffic in 1911 and 1912.
- Dates of opening and closing of canals for the season of 1912.

INTERCOLONIAL RAILWAY.

The Intercolonial railway touches six Atlantic ocean ports, namely Pointe du Chêne, Pietou, Halifax, St. John, Sydney and North Sydney, as well as the River St. Lawrence ports of Lévis, opposite Quebec, and Montreal.

The total length of the road operated during the year ended March 31, 1913, was 1,467.73 miles.

The following are the through distances:—

	Miles.
Montreal to Halifax, via Lévis.	827
“ St. John, via Lévis.	740
“ Sydney, via Lévis.	990
“ North Sydney, via Lévis.	983

Freight is carried direct via St. Henri, which would reduce each of the above distances by 3 miles.

MAIN LINE AND BRANCHES.

	Miles.
Halifax to Truro.	61.87
Dartmouth Branch.	12.00
Truro to Moncton.	123.77
Moncton to St. John.	89.31
Pointe du Chêne Branch.	11.98
Moncton to Campbellton.	185.37
Campbellton to Ste. Flavie.	105.03
Indiantown Branch.	21.95
Ste. Flavie to Rivière du Loup.	83.29
Rivière Ouelle Branch.	6.19
Rivière du Loup to Pointe Lévis.	115.55
Hadlow to Chaudière Curve.	5.63
Chaudière to Ste. Rosalie.	115.53
St. Charles Junction to Chaudière Junction.	16.73
Nicolet Branch.	14.70
Dalhousie Branch.	6.28
Pietou to Oxford Junction.	69.39
Brown's Point to Stellarton.	11.90
Junction near New Glasgow to Pietou Landing.	8.18
Pugwash Junction to Pugwash.	4.54
Truro to Mulgrave.	122.30
Mulgrave to Point Tupper (Ferry).	0.80
Point Tupper to Sydney.	91.17
North Sydney Junction to Sydney Mines.	7.07
Fredericton to Loggieville.	124.37
Feron Junction to Sunny Brae.	12.52
	1,427.43

LEASED.

Length of main line from Pointe Lévis to Harlow.	1.48	
Chaudière Curve to Chaudière.	1.19	
Ste. Rosalie Junction to Montreal.	37.63	40.30
Total miles.		1,467.73

FREIGHT BRANCHES OWNED.

	Miles.
Switch near North street to D.W.T., Halifax.	0.85
Halifax Cotton Factory.	2.10
Dartmouth Station to end of line.	2.12
Sydney Station to wharf.	1.06
North Sydney Station to wharf.	0.82
Switch near Pictou landing to coal wharf.	0.75
Pictou Station to wharf.	0.15
Pictou Station to Copper Crown smelter.	0.72
Logan's Tannery siding.	0.48
Pugwash Station to wharf.	0.07
Sackville Wharf branch.	0.47
Dorchester Wharf Branch.	1.00
Moncton Wharf branch.	1.00
Courtenay Bay branch.	2.39
St. John water front extension.	0.44
St. John Station to Deep Water wharf.	0.28
Newcastle Wharf Branch.	1.75
Dalhousie Station to wharf.	0.50
Campbellton Wharf branch.	0.43
Rimouski Wharf Branch.	2.00
Trois Pistoles Spur.	2.38
Rivière du Loup Wharf Branch.	4.35
St. Pacôme Spur.	1.27
Nicolet Station to wharf.	2.08
Carmel Branch, main line to village.	1.05
Fort Lawrence Spur.	1.18
Wallace Spur.	2.00
Petit Rocher Spur to wharf.	1.35
	35.04

WINDSOR BRANCH.

This road extends from Windsor Junction, on the Intercolonial railway, to Windsor, N.S., a distance of 32 miles.

PRINCE EDWARD ISLAND RAILWAY.

	Miles.
Souris to Tignish.	166
Mount Stewart to Georgetown.	24
Charlottetown to Royalty Junction.	5
Emerald Junction to Cape Traverse.	13
Alberton to Cascumpec wharf.	1
Charlottetown to Murray Harbour.	52.3
Montague Junction to Montague.	6.2
Harmony to Elmira.	9.9
	277.4

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INTERCOLONIAL RAILWAY.

THE following table shows the working expenses, gross earnings, the tonnage of freight and number of passengers carried each year from July 1, 1876, to March 31, 1913.

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	552,710	618,957	
1878-79 ...	714	2,010,183	22	1,294,009	69			716,083	53	510,861	640,101	
1879-80 ...	829	1,603,439	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	45	2,079,262	66		9,605	18			838,956	779,994
1882-83 ...	840	2,360,373	27	2,370,910	10		17,547	18			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	989,986	957,228
1885-86 ...	946	2,589,999	67	2,450,093	88				133,905	79	1,023,788	932,880
1886-87 ...	977	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				276,847	73	1,218,877	1,136,272
1889-90 ...	971	3,560,575	74	3,012,739	87				847,835	87	1,368,819	1,219,233
1890-91 ...	1,091	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				1,338,080	1,292,878
1893-94 ...	1,142	2,981,671	98	2,987,516	17	5,838	29				1,342,710	1,301,062
1894-95 ...	1,142	2,936,902	74	2,940,717	95		3,815	21			1,276,816	1,352,664
1895-96 ...	1,142	3,012,827	62	2,957,670	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 ...	1,201	3,327,648	51	3,117,669	85				209,978	66	1,434,576	1,523,444
1898-99 ...	1,301	3,675,686	21	3,738,331	44	62,645	43				1,750,761	1,603,095
1899-1900 ...	1,301	4,431,404	69	4,552,071	71	120,667	02				2,151,208	1,029,754
1900-01 ...	1,301	5,460,404	64	4,972,235	87				488,186	77	2,111,310	2,517,295
1901-02 ...	1,301	5,574,563	30	5,671,385	91	96,822	61				2,385,816	2,186,226
1902-03 ...	1,315	6,196,653	19	6,324,323	72	127,670	53				2,790,737	2,404,230
1903-04 ...	1,321	7,239,982	04	6,339,231	43				900,750	61	2,664,149	2,663,156
1904-05 ...	1,446	8,508,826	75	6,783,522	83				1,725,303	92	2,782,257	2,810,960
1905-06 ...	1,446	7,881,914	36	7,643,829	90	61,915	54				3,156,189	2,737,160
1906-07 † ...	1,448	6,030,171	83	6,248,311	00	218,139	17				2,606,073	2,044,847
1907-08 ...	1,448	9,157,435	53	9,173,558	80	16,123	27				4,134,064	2,789,371
1908-09 ...	*1,447-13	9,328,021	55	8,527,069	46				800,952	09	3,573,972	2,907,232
1909-10 ...	1,447-13	8,645,070	33	9,268,234	99	623,164	66				3,927,240	3,122,347
1910-11 ...	1,455-63	9,595,976	79	9,863,783	40	267,806	61				4,101,400	3,232,895
1911-12 ...	1,468-15	10,591,035	84	10,593,785	84	2,750	00				4,536,599	3,416,553
1912-13 ...	1,467-73	11,984,482	69	11,984,482	69						5,203,469	3,763,115

† The year 1906-7 was nine months only; the Canadian fiscal year having been changed to close on March 31, instead of June 30.

* The railway was remeasured in this year.

‡ Of this total \$4,500 was paid for compassionate allowances by special vote of Parliament.

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INTERCOLONIAL RAILWAY.

STATEMENT of Earnings, yearly, from July 1, 1876, to March 31, 1913.

Year.	Miles in Operation.	Passenger Traffic.		Freight Traffic.		Mails and Sundries.		Total.	
		§	cts.	§	cts.	§	cts.	§	cts.
1876-7	714	460,368	15	607,564	99	86,512	21	1,154,443	33
1877-8	714	475,256	82	801,709	82	101,985	07	1,378,946	78
1878-9	714	451,893	29	752,490	85	88,715	55	1,294,009	69
1879-80	829	490,338	66	915,486	50	100,473	32	1,506,298	48
1880-1	840	545,114	48	1,113,872	21	101,407	23	1,760,493	92
1881-2	840	651,299	74	1,303,496	00	124,470	72	2,079,262	66
1882-3	840	741,992	72	1,487,601	98	141,326	49	2,379,910	10
1883-4	887	775,784	77	1,461,390	37	147,240	78	2,383,414	92
1884-5	941	747,285	13	1,542,052	10	151,566	35	2,441,203	66
1885-6	946	765,900	03	1,523,487	72	160,706	13	2,450,093	88
1886-7	977	828,328	28	1,677,971	59	153,817	06	2,660,116	93
1887-8	971	844,448	07	1,932,877	85	166,010	13	2,933,336	95
1888-9	971	906,246	77	1,900,094	44	152,460	09	2,967,801	00
1889-90	971	895,094	53	1,964,646	86	152,998	48	3,012,739	87
1890-1	1,094	962,316	88	1,853,629	88	160,448	62	2,977,395	38
1891-2	1,142	961,427	94	1,803,529	03	180,485	00	2,946,441	97
1892-3	1,142	1,002,912	74	1,868,853	84	184,468	80	3,065,499	09
1893-4	1,142	958,915	13	1,834,126	34	193,762	51	2,987,502	27
1894-5	1,142	963,914	44	1,782,608	54	194,194	97	2,940,717	95
1895-6	1,142	971,426	26	1,788,813	18	197,400	66	2,957,640	10
1896-7	1,145	979,005	57	1,687,050	42	199,472	03	2,866,028	02
1897-8	1,201	1,053,864	64	1,857,740	06	206,065	15	3,117,669	85
1898-9	1,315	1,167,453	16	2,348,096	58	222,781	70	3,738,331	44
1899-1900	1,315	1,404,469	87	2,912,790	52	234,811	32	4,552,071	91
1900-1	1,315	1,607,166	79	3,121,006	15	244,062	93	4,972,235	87
1901-2	1,315	1,770,941	13	3,644,513	42	255,931	36	5,761,385	91
1902-3	1,315	1,927,916	87	4,128,255	00	268,151	75	6,324,323	72
1903-4	1,321	2,021,568	40	4,041,122	48	276,540	55	6,339,231	43
1904-5	1,446	2,105,066	75	4,373,178	75	305,277	53	6,783,522	33
1905-6	1,446	2,297,716	52	5,019,805	53	326,307	85	7,643,829	90
1906-7	1,448	1,952,438	88	4,032,745	00	265,127	12	6,248,311	05
1907-8	1,448	2,711,416	98	6,034,493	45	407,643	37	9,173,358	80
1908-9	1,447	2,628,218	57	5,502,550	58	396,300	31	8,527,069	46
1909-10	1,447	2,765,884	66	6,048,884	18	453,466	15	9,268,234	99
1910-11	1,455	2,890,419	82	6,344,595	66	619,767	92	9,863,783	40
1911-12	1,468	3,017,304	63	7,008,300	49	568,180	72	10,593,785	84
1912-13	1,467	3,438,447	32	8,028,760	13	517,275	24	11,984,482	69

* As measured in this year.

† 1906-7, nine months only.

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INTERCOLONIAL RAILWAY.

STATEMENT showing the Number of Tons of Local and Through Freight carried, yearly, from July 1, 1876, to March 31, 1913.

Year.	Miles in Operation.	Local Freight.	Through Freight.	Total.
1876-7	714	The information for these		421,327
1877-8	714	years was destroyed		522,710
1878-9	714	when the general offices		510,861
1879-80	829	in Moncton were burned		561,924
1880-1	840			725,777
1881-2	840	571,784	267,272	838,956
1882-3	840	537,025	443,936	970,961
1883-4	887	584,581	424,658	1,009,237
1884-5	941	506,574	483,352	989,936
1885-6	946	580,076	443,712	1,023,788
1886-7	977	633,455	509,565	1,143,020
1887-8	971	727,599	561,224	1,288,823
1888-9	971	624,436	594,441	1,218,877
1889-90	971	756,696	612,123	1,368,819
1890-1	1,094	797,492	507,042	1,304,534
1891-2	1,142	750,783	513,792	1,264,575
1892-3	1,142	1,030,628	357,452	1,388,080
1893-4	1,142	966,114	376,596	1,342,710
1894-5	1,142	901,374	366,442	1,267,816
1895-6	1,142	1,101,229	368,389	1,379,618
1896-7	1,145	927,167	368,859	1,296,028
1897-8	1,201	1,053,569	381,007	1,434,576
1898-9	1,315	1,351,569	399,192	1,750,761
1899-1900	1,315	1,713,928	437,280	2,151,208
1900-1	1,315	1,633,671	477,639	2,111,310
1901-2	1,315	1,914,551	471,265	2,385,816
1902-3	1,315	2,239,993	550,744	2,790,737
1903-4	1,321	2,123,261	540,888	2,664,149
1904-5	1,446	2,119,528	662,729	2,782,257
1905-6	1,446	2,413,863	742,326	3,156,189
1906-7	1,448	1,996,869	609,204	*2,606,073
1907-8	1,448	3,227,425	906,629	4,134,054
1908-9		2,742,454	831,518	3,573,972
1909-10	†1,447 13	2,958,642	968,598	3,927,240
1910-11	1,455 63	3,085,487	1,015,965	4,101,452
1911-12	1,468 15	3,452,489	1,084,110	4,536,599
1912-13	1,467 73	3,913,373	1,290,096	5,203,469

* 1906-7, nine months only. † As remeasured in this year.

INTERCOLONIAL RAILWAY.

STATEMENT of the Number of Local and Through Passengers carried, yearly, from July 1, 1876, to March 31, 1913.

Year.	Miles in Operation.	Number of Local Passengers.	Number of Through Passengers.	Total.
1876-7.	714	The information for these		613,420
1877-8.	714	years was destroyed		619,957
1878-9.	714	when the general offices		640,101
1879-80.	829	in Moncton were burned		581,483
1880-1.	840			631,245
1881-2.	840	647,534	132,460	779,994
1882-3.	840	728,186	150,414	878,600
1883-4.	887	784,715	159,921	944,635
1884-5.	941	812,028	145,200	957,228
1885-6.	946	784,817	148,063	932,880
1886-7.	977	814,632	128,752	942,784
1887-8.	971	948,324	91,839	1,040,163
1888-9.	971	1,050,592	85,680	1,136,272
1889-90.	971	1,112,635	91,531	1,219,233
1890-1.	1,094	1,203,814	94,490	1,298,304
1891-2.	1,142	1,198,649	99,083	1,297,732
1892-3.	1,142	1,188,827	104,051	1,292,878
1893-4.	1,142	1,216,027	85,035	1,301,062
1894-5.	1,142	1,272,284	80,383	1,352,667
1895-6.	1,142	1,386,803	85,063	1,471,866
1896-7.	1,145	1,416,631	85,059	1,501,690
1897-8.	1,201	1,438,590	89,854	1,523,444
1898-9.	1,315	1,504,652	98,443	1,103,095
1899-1900.	1,315	1,878,858	112,896	1,791,754
1900-1.	1,315	1,905,599	119,696	2,025,295
1901-2.	1,315	2,061,196	125,030	2,186,226
1902-3.	1,315	2,555,013	149,217	2,404,230
1903-4.	1,321	2,447,843	215,313	2,663,156
1904-5.	1,446	2,589,928	221,032	2,810,960
1905-6.	1,446	2,491,472	245,688	2,737,160
*1906-7.	1,448	1,853,126	191,721	2,044,846
1907-8.	1,448	2,593,886	195,485	2,789,371
1908-9.	†1,447-13	2,656,217	251,020	2,907,237
1909-10.	1,447-13	2,873,547	248,777	3,122,324
1910-11.	1,455-63	2,968,435	264,460	3,232,895
1911-12.	1,468-15	3,126,922	289,631	3,416,553
1912-13.	1,467-73	3,448,411	314,704	3,763,115

* 1906-7, nine months only. † As re-measured in this year.

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The following table shows the number of Tons of Coal carried over the Inter-colonial railway from the Nova Scotia collieries to Ste. Rosalie, Montreal and St. John for points west thereof, and to local stations in each year since July 1, 1876.

Year.	For the West.			To Local Stations.	Total.
	Via Ste. Rosalie.	Via Montreal.	Via St. John.		
1876-7				103,420	103,420
1877-8				97,043	97,043
1878-9		300		112,232	112,532
1879-80		1,097		135,369	136,466
1880-1		6,102	4,022	174,483	184,607
1881-2		18,015	11,779	218,364	248,158
1882-3		12,837	22,206	227,380	262,423
1883-4		32,014	19,532	252,014	293,562
1884-5		133,440	1,773	213,791	349,004
1885-6		171,170	21,150	215,272	407,592
1886-7		192,871	27,536	233,178	455,585
1887-8		183,704	36,223	309,727	529,659
1888-9		160,026	27,923	338,538	526,487
1889-90		164,153	25,126	366,967	554,546
1890-1		113,996	60,213	344,829	498,038
1891-2		35,447	5,918	392,441	433,806
1892-3		136,808	3,775	402,653	543,296
1893-4		102,273	8,028	367,390	478,691
1894-5		67,082	7,865	310,253	385,200
1895-6		53,124	9,681	369,708	432,513
1896-7		38,395	12,305	331,469	382,172
1897-8		9,084	9,796	351,069	369,949
1898-9		4,647	5,399	484,163	494,206
1899-1900		3,495		599,714	603,289
1900-1		136			506,454
1901-2		1,131	5,763	3,640	546,986
1902-3	2,200	7,817	6,775	725,727	742,519
1903-4	2,260	637	513	691,346	694,761
1904-5	800	265	5,022	596,290	602,377
1905-6	7,542	1,625	661	610,444	620,272
*1906-7	1,737	2,808	3,252	624,833	632,630
1907-8	22	183	4,245	1,061,694	1,066,134
1908-9	514	945	4,243	909,050	914,752
1909-10	42	890	1,452	1,003,120	1,005,504
1910-11	90	180	633	983,921	984,824
1911-12	73		303	1,111,157	1,111,533
1912-13			425	1,216,636	1,217,061

* 1906-7, nine months only.

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TABLE showing the number of Bushels of Grain carried during each year over the Intercolonial railway for shipment since July 1, 1876.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-7.....				1895-6.....	Nil.	Nil.	Nil.
1877-8.....				1896-7.....	"	"	"
1878-9.....				1897-8.....	8,000	"	8,000
1879-80.....				1898-9.....	30,000	"	30,000
1880-1.....				1899-1900.....	13,239	"	13,239
1881-2.....				1900-1.....	147	"	147
1882-3.....	31,011		31,011	1901-2.....	Nil.	"	Nil.
1883-4.....	73,389		73,389	1902-3.....	"	"	"
1884-5.....	300,901		300,901	1903-4.....	147,438	"	147,438
1885-6.....	389,122		389,122	1904-5.....	Nil.	"	Neant.
1886-7.....	575,880		575,880	1905-6.....	*170,000		170,000
1887-8.....	69,021		69,021	1906-7.....			Nil.
1888-9.....	129,725		129,725	1907-8.....			"
1889-90.....	502,012		502,012	1908-9.....			"
1890-1.....	148,803	59,543	218,337	1909-10.....			"
1891-2.....	845,997	519,500	1,265,497	1910-11.....	*233,839	2,000	235,839
1892-3.....	156,306	197,666	352,975	1911-12.....	†122,734	1,215,574	1,338,308
1893-4.....	Nil.	8,026	8,026	1912-13.....	2,021,901		2,021,901
1894-5.....	"	Nil.	Nil.				

* Via Montreal. 1906-7, nine months only. † Via Halifax.

TABLE showing the number of Barrels of Flour and Meal carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Barrels.	Year.	Barrels.
1876-7.....	254,710	1895-6.....	822,097
1877-8.....	557,772	1896-7.....	847,701
1878-9.....	630,329	1897-8.....	987,701
1879-80.....	535,248	1898-9.....	1,157,250
1880-1.....	672,310	1899-1900.....	1,234,077
1881-2.....	692,095	1900-1.....	1,292,106
1882-3.....	983,916	1901-2.....	1,311,707
1883-4.....	817,134	1902-3.....	1,521,540
1884-5.....	935,977	1903-4.....	1,607,050
1885-6.....	761,127	1904-5.....	1,769,480
1886-7.....	763,894	1905-6.....	1,882,630
1887-8.....	871,838	1906-7.....	1,531,140
1888-9.....	948,514	1907-8.....	1,528,620
1889-90.....	1,116,050	1908-9.....	1,466,920
1890-1.....	1,013,129	1909-10.....	1,608,170
1891-2.....	954,015	1910-11.....	1,696,280
1892-3.....	856,913	1911-12.....	1,873,640
1893-4.....	944,967	1912-13.....	2,094,990
1894-5.....	938,351		

1906-7, nine months only.

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TABLE showing the number of Bushels of Grain carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Bushels.	Year.	Bushels.
1876-77.....	292,852	1895-96.....	1,064,385
1877-78.....	331,170	1896-97.....	1,093,499
1878-79.....	302,921	1897-98.....	1,551,372
1879-80.....	534,021	1898-99.....	2,595,353
1880-81.....	565,678	1899-1900.....	2,720,453
1881-82.....	560,253	1900-01.....	3,535,364
1892-83.....	1,195,601	1901-02.....	2,959,761
1883-84.....	654,673	1902-03.....	3,392,252
1884-85.....	734,902	1903-04.....	2,788,772
1885-86.....	849,800	1904-05.....	3,317,910
1886-87.....	1,018,395	1905-06.....	2,924,226
1887-88.....	1,219,035	1906-07.....	2,231,864
1888-89.....	1,256,158	1907-08.....	4,567,245
1889-90.....	2,610,202	1908-09.....	4,727,268
1890-91.....	2,890,921	1909-10.....	7,074,042
1891-92.....	3,776,677	1910-11.....	5,080,848
1892-93.....	1,514,619	1911-12.....	5,206,440
1893-94.....	1,304,684	1912-13.....	6,530,920
1894-95.....	1,036,384		

1906-7, nine months only.

TABLE showing the quantity of Lumber in feet carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Feet.	Year.	Feet.
1876-77.....	50,096,474	1895-96.....	226,332,715
1877-78.....	56,626,547	1896-97.....	243,355,725
1878-79.....	55,626,696	1897-98.....	354,093,816
1879-80.....	55,462,654	1898-99.....	306,554,031
1880-81.....	72,841,388	1899-1900.....	379,350,074
1881-82.....	78,356,418	1900-01.....	396,858,964
1882-83.....	104,633,417	1901-02.....	428,051,029
1883-84.....	131,120,948	1902-03.....	459,231,589
1884-85.....	138,493,675	1903-04.....	465,379,803
1885-86.....	117,186,512	1904-05.....	518,434,310
1886-87.....	161,801,763	1905-06.....	572,878,600
1887-88.....	137,755,272	1906-07.....	452,602,703
1888-89.....	199,507,777	1907-08.....	754,759,383
1889-90.....	210,886,071	1908-09.....	571,395,101
1890-91.....	184,188,324	1909-10.....	677,805,611
1891-92.....	175,474,340	1910-11.....	647,327,499
1892-93.....	181,211,013	1911-12.....	656,418,588
1893-94.....	200,507,949	1912-13.....	830,654,000
1894-95.....	202,247,269		

1906-7, nine months only.

TABLE showing the number of Live Stock carried during each year over the Inter-colonial railway since July 1, 1876.

Year.	Number.	Year.	Number.
1876-77.....	34,414	1895-96.....	64,051
1877-78.....	46,498	1896-97.....	72,082
1878-79.....	47,584	1897-98.....	89,301
1879-80.....	70,990	1898-99.....	109,821
1880-81.....	61,574	1899-1900.....	92,813
1881-82.....	73,479	1900-01.....	95,923
1882-83.....	68,338	1901-02.....	98,495
1883-84.....	60,090	1902-03.....	127,060
1884-85.....	70,785	1903-04.....	113,006
1885-86.....	74,498	1904-05.....	110,670
1886-87.....	82,896	1905-06.....	106,589
1887-88.....	98,302	1906-07.....	97,381
1888-89.....	85,960	1907-08.....	99,824
1889-90.....	80,771	1908-09.....	104,165
1890-91.....	95,529	1909-10.....	106,712
1891-92.....	87,889	1910-11.....	113,976
1892-93.....	93,369	1911-12.....	115,189
1893-94.....	73,203	1912-13.....	119,490
1894-95.....	72,106		

1906-7, nine months.

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TABLE showing the number of Tons of Ocean-borne goods to and from Europe carried over the Intercolonial railway during each year since July 1, 1876.

Year.	Via Ste. Rosalie and from the West.	Via Mon treal to and from the West.	Via St. John to and from the West.	To and from Local Stations.	Total.
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.....		9,716		23,835	33,551
1892-93.....		7,295		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.....		2,462	243	31,555	34,263
1899-1900.....		6,880	307	37,108	39,794
1900-01.....	322	7,780	1,142	155,514	163,838
1901-02.....	1,106	11,925	1,528	172,733	183,147
1902-03.....	817	21,377	1,194	124,695	138,631
1903-04.....	2,079	15,325	2,994	146,070	174,520
1904-05.....	284	17,217	3,683	85,853	105,149
1905-06.....	2,026	15,922	5,337	128,462	153,042
1906-07.....	1,384	16,652	436	110,447	128,219
1907-08.....	2,440	16,652	519	134,541	154,052
1908-09.....	2,487	23,402	649	119,913	146,451
1909-10.....	2,367	21,064	5,818	131,273	160,522
1910-11.....	7,220	27,607	6,927	130,776	172,530
1911-12.....	9,911	63,544	8,777	213,579	295,811
1912-13.....	13,144	74,870	11,114	192,012	291,140

1906-7, nine months.

TABLE showing the number of Tons of Raw and Refined Sugar carried over the Inter-colonial railway during each year since July 1, 1876.

Year.	Raw Sugar.					Refined Sugar.				
	Via Ste. Rosalie.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.
		Tons.	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			13,862		4,022		2,902	6,924
1881-82.....		13,256		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		3,988	8,392		7,674		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.....		6,390		8,913	16,303		6,778		6,125	12,903
1890-91.....		5,088	4,670	8,215	17,973		10,130	468	5,096	16,594
1891-92.....		7,142	3,960	10,535	21,637		12,633	7,647	12,414	32,721
1892-93.....				10,137	10,137		8,327	6,456	7,840	22,623
1893-94.....				6,775	6,775		17,729	6,967	8,885	33,581
1894-95.....				10,342	10,342		13,351	15,819	4,695	33,865
1895-96.....				9,824	9,824		15,138	13,734	11,309	40,181
1896-97.....				4,925	4,925		5,694	8,069	6,957	20,720
1897-98.....							6,624	8,821	10,989	26,534
1898-99.....							8,138	2,183	15,833	26,164
1899-1900.....		96			96		9,795	257	19,655	29,907
1900-01.....		489			489		14,791	12	10,615	25,821
1901-02.....		90		11,553	11,643	3,101	9,831	861	18,899	29,632
1902-03.....		194		17,137	17,331	3,183	5,763	1,636	20,529	31,111
1903-04.....	357	875		7,495	8,727	6,013	8,628	879	29,400	44,920
1904-05.....	602	603	78	1,495	15,684	1,446	7,107	224	23,937	31,764
1905-06.....		715	68	9,308	10,091	4,235	12,268	176	24,780	41,459
1906-07.....		394		14,671	15,065	1,998	5,898	2,374	13,927	24,197
1907-08.....		912		4,371	5,283	5,280	10,555	723	21,073	37,631
1908-09.....	6	1,705		6,817	8,528	5,095	8,906	979	21,527	36,507
1909-10.....	309	2,000		12,203	14,512	6,402	9,217	1,051	23,224	39,894
1910-11.....	532	1,293		24,166	25,991	6,326	9,368	947	25,026	41,667
1911-12.....	1,096	2,558		12,057	15,711	8,242	9,691	1,519	21,870	41,322
1912-13.....	1,380	14,030			15,410	8,678	9,640	1,422	23,684	43,244

1906-7, nine months only.

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TABLE showing the number of Tons of Fresh and Salt Fish carried over the Inter-colonial railway during each year since 1876.

Year.	Fresh Fish.					Salt Fish.				
	Via Ste. Rosalie.	Via Montrea	Via St. John	To Local Stations	Total.	Via Ste. Rosalie.	Via Montreal	Via St. John	To Local Stations	Total.
	Tons.	Tons.	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	3,346
1878-79		471	1,336	817	2,624		988	1,038	1,048	2,974
1879-80		519	1,462	453	2,334		1,612	2,238	959	4,809
1880-81		498	1,879	920	3,297		1,418	937	1,051	4,406
1881-82		475	1,919	907	3,951		4,031	1,066	2,487	7,584
1882-82		542	384	393	1,319		3,229	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	1,655	902	4,216		1,680	3,047	3,376	7,103
1886-87		1,278	1,572	2,008	4,859		3,236	569	1,747	5,552
1887-88		1,533	1,477	1,031	4,041		2,617	470	1,069	4,193
1888-89		2,474	2,000	1,870	63,44		3,070	7,746	2,994	13,810
1889-90		2,385	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		2,075	1,849	5,285	10,209
1895-96		1,966	3,059	1,316	6,344		1,863	1,087	2,791	5,741
1896-97		3,307	3,115	1,286	7,708		2,158	1,176	2,536	5,889
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	5,583		1,651	1,198	3,625	5,474
1899-1000		2,547	2,706	3,686	8,939		2,421	1,563	2,658	6,643
1900-01	37	2,009	3,207	4,125	9,393	860	3,416	1,346	4,643	9,768
1901-02	219	3,013	4,373	5,477	13,082	283	3,250	1,413	5,196	10,042
1902-03	149	2,269	3,040	4,842	10,289	493	2,808	1,615	6,579	11,495
1904-05	779	1,939	3,588	5,002	11,068	225	2,359	564	5,848	8,996
1905-06	284	2,748	2,439	7,706	13,177	683	2,740	346	6,994	10,763
1906-07	320	2,882	3,712	7,400	14,314	307	3,159	416	6,348	10,227
1907-08	199	3,288	1,353	6,224	11,061	661	2,856	1,976	7,031	12,527
1908-09	312	2,965	2,794	6,946	13,017	668	4,078	1,632	4,866	11,244
1909-10	547	3,965	2,616	6,525	14,110	697	3,759	806	6,706	14,868
1910-11	1,216	4,300	2,733	6,161	14,110	893	3,590	1,993	9,130	15,546
1911-12	1,476	4,213	1,917	6,686	14,292	4,250	4,060	425	10,108	18,843
1912-13	1,490	4,572	3,928	7,294	17,284	909	5,795	2,902	8,529	18,135

1912-13, nine months only.

WINDSOR BRANCH.

This road is operated by the Dominion Atlantic Railway Company (formerly the Windsor and Annapolis Railway Company), under a lease which covers also running powers over the Intercolonial railway between Windsor Junction and Halifax. The company retains two-thirds of the gross earnings, and the government receives one-third of the gross earnings, for maintaining the way and works.

Year.	Miles in oper- ation.	One-third gross earnings.	Proportion credited to line Windsor Junction to Halifax.		Proportion credited to the Windsor Branch.		Main- tenance expenses.		Profit.		Loss.	
			\$	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	21,052 19	13,090 55	7,953 64						
1882-83	32	31,199 77	8,095 88	24,113 89	23,163 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 09	25,327 58	26,042 33	.....					714 75	
1886-87	32	32,242 85	6,689 39	24,553 55	24,040 33	513 22						
1887-88	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61						
1889-90	32	39,544 19	9,281 73	30,162 46	18,982 82	11,179 64						
1890-91	32	39,519 56	9,284 48	38,508 35	28,931 71	1,303 42						
1891-92	32	42,891 23	9,382 38	30,235 13	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	8,839 23	32,475 47	17,645 09	15,330 38						
1894-95	32	50,703 84	11,626 29	39,077 64	14,640 07	24,437 57						
1895-96	32	47,456 74	10,894 91	36,561 82	16,476 46	20,985 37						
1896-97	32	54,298 81	13,695 58	40,603 23	10,821 04	29,782 19						
1897-98	32	48,892 21	11,665 57	37,226 64	18,181 09	14,045 61						
1898-99	32	56,314 51	13,840 48	42,474 04	12,873 06	29,660 94						
1899-1900	32	62,266 61	14,925 18	47,351 43	12,891 56	34,459 87						
1900-01	32	62,523 20	15,261 34	47,261 89	16,862 66	30,399 23						
1901-02	32	65,315 38	15,710 79	49,604 59	16,376 27	33,228 32						
1902-03	32	56,417 38	13,856 57	42,560 81	17,843 19	24,717 62						
1903-04	32	72,708 54	19,074 49	53,634 05	24,281 09	29,352 96						
1904-05	32	66,798 46	16,759 79	50,038 67	26,863 16	23,175 51						
1905-06	32	65,936 66	16,484 16	49,452 50	17,485 97	31,966 53						
1906-07	32	61,597 30	16,156 78	45,440 52	15,425 32	30,015 20						
1907-08	32	76,471 58	20,041 17	56,430 41	37,912 11	18,518 20						
1908-09	32	75,781 86	19,750 47	56,031 33	36,234 55	19,796 78						
1909-10	32	81,861 73	21,207 75	60,653 98	23,549 90	37,104 08						
1910-11	32	64,781 89	15,590 46	48,191 43	17,797 98	30,393 45						
1911-12	32	99,996 10	26,819 50	73,176 60	33,854 05	39,322 55						
1912-13	32	93,235 40	24,988 70	68,246 70	29,970 62	38,276 08						

1906-7, nine months only.

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PRINCE EDWARD ISLAND RAILWAY.

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.	
		\$	c.	\$	c.				\$	c.
1875-76	199	214,930	43	118,060	96	96,869	47	28,358	93,964
1887-77	199	228,595	25	130,664	92	97,930	33	41,639	93,478
1877-78	199	221,599	46	135,899	60	85,699	89	38,668	111,428
1978-79	199	223,313	12	125,855	99	97,457	21	38,923	105,046
1879-80	199	164,640	55	113,851	11	50,789	44	37,208	90,533
1880-81	199	228,259	97	137,267	54	90,922	43	48,315	118,436
1881-82	199	252,808	41	146,170	42	106,637	99	51,920	117,162
1882-83	199	236,428	13	144,504	12	91,924	01	51,841	118,988
1883-84	211	211,207	01	158,588	06	52,618	95	57,346	130,423
1884-85	211	216,744	34	155,584	36	61,159	98	57,913	120,374
1885-86	211	204,237	37	155,303	37	48,934	00	63,589	103,067
1886-87	211	229,639	95	158,365	62	71,276	33	59,603	131,246
1887-88	211	247,539	44	171,369	56	76,189	89	55,682	152,780
1888-89	211	266,485	85	160,971	78	105,524	07	52,604	133,099
1889-90	211	257,990	08	174,258	05	83,732	03	59,511	145,598
1890-91	211	289,706	38	157,442	69	132,263	69	51,065	139,389
1891-92	211	226,422	17	162,690	42	63,731	75	56,718	132,111
1893-94	211	226,891	06	158,533	83	68,857	23	53,577	123,727
1894-95	211	232,105	19	149,634	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	131,498
1897-98	211	231,418	74	158,950	61	72,468	13	57,539	156,510
1898-99	211	218,053	01	165,021	03	53,040	98	57,968	129,667
1899-1900	211	220,931	81	174,738	73	46,193	08	62,227	147,471
1900-01	211	261,766	24	195,833	48	67,883	76	73,696	157,793
1901-02	210	270,159	97	197,999	97	72,160	00	74,381	184,748
1902-03	209	269,737	82	217,714	24	41,923	58	80,582	205,265
1903-04	209	335,695	44	234,390	03	101,305	41	86,286	224,517
1904-05	209	370,464	44	217,330	61	153,133	83	75,969	235,194
1905-06	261	294,253	16	237,270	57	36,982	59	87,162	371,092
1906-07	267	282,148	50	215,534	97	67,713	53	67,144	232,256
1907-08	267	399,947	79	304,579	83	95,267	96	97,250	317,828
1908-09	267.5	400,330	00	311,319	63	69,010	78	106,090	332,738
1909-10	267.5	427,283	73	319,074	74	108,208	99	105,741	251,038
1910-11	267.5	424,104	00	337,419	55	86,684	45	108,263	356,761
1911-12	267.5	449,962	91	367,203	39	82,759	52	120,218	388,076
1912-13	267.5	489,972	34	389,474	07	100,498	27	122,784	433,888

1906-7, nine months only.

CANALS.

STATEMENT showing the total cost of construction of the individual Dominion canal works and connecting waters, up to March 31, 1913.

Route from Montreal to Lake Superior.

	Original Construction.	Enlargement of Canals.	Improvements to St. Lawrence River and Lakes.	Totals.
	\$ cts.	cts.	\$ cts.	\$ cts.
Lachine Canal.....	2,589,532 85	10,815,438 11		13,404,970 96
Lake St. Louis.....			298,176 11	298,176 11
Soulanges Canal.....	7,696,439 46			7,696,439 46
Beauharnois Canal.....	1,636,690 26			1,636,690 26
Lake St. Francis.....			75,906 71	75,906 71
Cornwall Canal.....	1,945,624 73	5,297,179 48		7,242,804 21
Williamsburg Canal.....	1,320,655 54	13,896 26		1,334,551 80
Farrans Point Canal.....		877,090 57		877,090 57
Rapids Plat Canal.....		2,158,242 00		2,158,242 00
Galops Canal.....		6,120,300 14		6,120,300 14
Galops Rapids.....			1,039,895 65	1,039,895 65
St. Lawrence River and reaches			711,238 93	711,238 93
North Channel.....			1,718,778 83	1,718,778 83
Murray Canal.....	1,248,946 71			1,248,946 71
Welland Canal.....	7,693,824 03	21,557,126 98		29,250,951 01
Sault Ste. Marie Canal.....	4,987,498 24			4,987,498 24
Totals.....	29,119,211 82	46,839,273 54	3,843,996 33	79,802,481 59

Route from Lachine to Ottawa.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Ste. Anne's Lock.....	134,456 51	1,035,759 12	1,170,215 63
Carillon and Grenville Canals.....	63,053 64	4,119,639 32	4,182,692 96
Culbute Canal (superseded).....	382,391 46		382,391 46
Total.....	579,901 61	5,154,798 44	5,734,700 05

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

Route from Ottawa to Kingston.

	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Rideau Canal.....	4,127,454 21		4,127,454 21
Tay Canal.....	489,599 23		489,599 23
Total.....	4,617,053 44		4,617,053 44

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Route from St. Johns, P.Q., to Sorel.

—	Original Construction.	Enlargement.	Total.
	\$ cts.	cts.	\$ cts.
Chambly Canal	637,214 66	91,784 83	728,999 49
St. Ours Lock.....	121,537 65	4,306 28	125,843 93
Total	758,752 31	96,091 11	854,843 42

Route from Lake Ontario to Georgian Bay.

—	Original Construction.	Enlargement.	Total.
	\$ cts.	cts.	\$ cts.
Trent Canal.....	12,464,651 64	.....	12,464,651 64
Total.....	12,464,651 64	.....	12,464,651 64

Route from Atlantic Ocean to Bras d'Or Lakes.

—	Original Construction.	Enlargement.	Total.
	\$ cts.	cts.	\$ cts.
St. Peter's Canal—Cape Breton	248,762 84	399,784 30	648,547 14
Total.....	248,762 84	399,784 30	648,547 14

4 GEORGE V., A. 1914

COMPARATIVE STATEMENT of Tons of Freight which passed through the canals in seasons of 1911 and 1912.

Name of Canal.	Season of 1911.	Season of 1912.	Number of trips of vessels.	
			Season of 1911.	Season of 1912.
			Tons.	Tons.
Sault Ste. Marie	30,951,709	39,669,655	6,781	7,856
Welland.....	2,537,629	2,851,915	2,480	2,905
St. Lawrence.....	3,105,708	3,477,188	9,923	11,006
Chambly.....	599,829	618,415	4,008	3,705
St. Peter's.....	75,298	74,809	1,260	1,213
Murray.....	163,457	170,081	1,440	1,085
Ottawa.....	320,071	392,350	2,413	3,059
Rideau.....	172,227	169,133	3,062	2,969
Trent.....	57,290	77,150	4,165	3,998
St. Andrew's*.....	47,135	93,549	423	1,260
Total	38,030,353	47,587,245	35,955	39,056

*This is a lock and dam on the Red River, between Winnipeg and Winnipeg, built and operated by the Department of Public Works.

TABLE showing the dates of opening and closing of the canals for the season of 1912.

	Navigation Opened 1912.	Navigation Closed 1912.
Lachine.....	May 1.....	December 5
Soulanges.....	April 23.....	" 6
Grenville.....	May 1.....	November 30
Carillon.....	" 1.....	" 30
Ste. Anne's.....	April 25.....	" 30
Chambly.....	May 1.....	" 30
St. Ours.....	" 1.....	" 30
Cornwall.....	April 29.....	December 10
Williamsburg {	Farrans Point.....	" 13
	Rapide Plat.....	" 13
	Galops.....	" 13
Murray.....	" 22.....	" 16
Welland.....	" 22.....	" 19
Sault Ste. Marie.....	" 24.....	" 19
Rideau {	At Ottawa.....	May 1.....
	At Kingston.....	" 1.....
Trent {	Lake Simcoe to Fenelon Falls.....	" 8.....
	Fenelon Falls to Lakefield.....	" 3.....
	Lakefield to Peterborough.....	" 20.....
St. Peter's.....	At Peterborough to Healey Falls.....	April 23.....
	" 22.....	December 1
		January 11, 1913.

PART IX
ACTS AUTHORIZING RAILWAY SUBSIDIES
IN FORCE MARCH 31, 1913



9-10 EDWARD VII.

CHAP. 51.

An Act to authorize the granting of subsidies in aid of the construction of the lines of railway therein mentioned.

[Assented to 4th May, 1910.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may grant a subsidy of \$3,200 Subsidies for railways. 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:—

1. For a line of railway from Tusket Wedge to a point on the Halifax and South Western Railway at or near Riverdale station, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 27; not exceeding 8 miles.

2. To the Halifax and South Western Railway Company, for a line of railway from Lunenburg to Bridgewater via Upper La Have, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 28; not exceeding 12 miles.

3. To the Inverness Railway and Coal Company, for a line of railway from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 17; not exceeding 37 miles.

4. To the Margaree Coal and Railway Company, for a line of railway from a point at or near Orangedale, on the Intercolonial Railway, thence by the east side of Lake Ainslie and Ste. Rosa, to Chimney Corner Cove, not exceeding 46 miles; and for a line of railway from a point on the Intercolonial Railway between Orangedale and Point Tupper to Caribou Cove on Inhabitants Bay or River, not exceeding 4 miles; in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 18; not exceeding in all 50 miles.

5. For a line of railway from a point on the Dominion Atlantic Railway to the Government pier or wharf at Canning, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 7; not exceeding 1 mile.

6. For a line of railway from Brazil Lake on the Dominion Atlantic Railway to Kemptville, Nova Scotia, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 16; not exceeding 11 miles.

7. To the Dominion Atlantic Railway Company, for a line of railway from Centreville on the Dominion Atlantic Railway, westerly to Weston, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 30; not exceeding 15 miles.

8. For a line of railway from a point on the Intercolonial Railway at or near Dartmouth, in the county of Halifax, to a point at or near Deans Settlement, in the county of Halifax, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 21; not exceeding 80 miles.

9. For a line of railway from a point at or near Deans settlement, in the county of Halifax, to a point at or near Melrose, in the county of Guysborough, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 22; not exceeding 52 miles.

10. For a line of railway from a point at or near New Glasgow, in the county of Pictou, to a point at or near Melrose, in the county of Guysborough, and from the said point at or near Melrose to Guysborough, in the county of Guysborough, with a branch line to Country Harbour, in the county of Guysborough, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 23; not exceeding in all 116 miles.

11. To the International Railway Company of New Brunswick, for $3\frac{1}{2}$ miles of its railway, being the distance which the subsidy granted by chapter 63 of 1908, section 1, item 15, is short of covering.

12. For a line of railway from Grand Falls to St. John, New Brunswick, in lieu of the subsidies granted by chapter 40 of 1907, section 1, items 2, 3 and 10, respectively, and in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 69; not exceeding 228 miles.

13. For a line of railway from Connors, at the terminus of the Temiscouata Railway, to a point on the boundary line between New Brunswick and Quebec, at the foot of Beau Lake, in lieu

of

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of the subsidy granted by chapter 40 of 1907, section 1, item 25; not exceeding 18 miles.

14. To the York and Carleton Railway Company, for a line of railway from its present terminus to a point on the National Transcontinental Railway, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 33; not exceeding 9 miles.

15. For a line of railway from a point on the Canadian Pacific Railway at or near Plaster Rock to Riley Brook, in lieu of the subsidy granted by chapter 63, of 1908, section 1, item 31; not exceeding 28 miles.

16. To the Atlantic, Quebec and Western Railway Company, for a line of railway from Paspébiac to Gaspé, as near the shore as practicable, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 9, for a line between the points above mentioned; not exceeding 102 miles.

17. To the Canadian Northern Quebec Railway Company, for a line of railway from a point at or near Arundel to a point in the municipality of the united townships of Preston and Hartwell, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 11, for a line of railway between the points above mentioned; not exceeding 30 miles.

18. For a line of railway from Roberval westward towards James Bay, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 9; not exceeding 100 miles.

19. To the Quebec and Lake St John Railway Company, for the following lines of railway:—

(a) from Valcartier station to St. Catherine, not exceeding 3·8 miles;

(b) from Valcartier station towards Gosford, not exceeding 5½ miles;

(c) from the end of the 35th mile of the branch to La Tuque, on the River St. Maurice, to La Tuque Falls, not exceeding 5 miles;

(d) from La Tuque Falls to the mouth of the River Croche, not exceeding 5 miles;

(e) from a point on the La Tuque branch to the steamboat landing near La Tuque, not exceeding 1·6 miles;

(f) from Herbertville to St. Joseph d'Alma; not exceeding 10 miles;

(g) from Chicoutimi south or southeast; not exceeding 5 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, items 43, 44 and 72, respectively; not exceeding 35·9 miles.

20. To the Quebec and New Brunswick Railway Company, for a line of railway from Chaudière Junction to a point at or near the International boundary, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 25; not exceeding 62 miles.

21. To the Eastern Townships Railway Company, for a line of railway from the Intercolonial Railway at St. Leonard's

Junction

Junction to Dudswell, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 41; not exceeding 36 miles.

22. To the L'Avenir and Melbourne Railway Company for a line of railway from Melbourne to Drummondville, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 71; not exceeding 28 miles.

23. To the Lotbinière and Megantic Railway Company, for a line of railway to extend its railway southerly from a point at or near Lyster, in Megantic county, to or towards a point at or near Lime Ridge, in the township of Dudswell, not exceeding 50 miles; and for a line of railway from a point on its line in the township of Inverness, to a point at or near the bridge over the St. Lawrence River at or near Quebec; not exceeding 30 miles; in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 19; not exceeding in all 80 miles.

24. For a line of railway from Joliette to or near Lake Manuan, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 9, not exceeding 60 miles.

25. For a line of railway from St. Joachim towards Seven Islands, including branches to Murray Bay and Baie St. Paul, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 11; not exceeding 170 miles.

26. For a line of railway from a point at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 26; not exceeding 15 miles.

27. To the Ha Ha Bay Railway Company, for a line of railway from a point at or near Jonquières village to Baie des Ha Ha, via Laterrière village, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 24; not exceeding 24 miles.

28. To the St. Mary's and Western Ontario Railway Company, for a line of railway from Embro to Exeter, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 60; not exceeding 36 miles.

29. To the Manitoulin and North Shore Railway Company for the following lines of railway:—

(a) from a point on the said company's line of railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway; not exceeding 76 miles;

(b) from Little Current thence crossing the Canadian Pacific Railway, at or near Stanley, and thence to Sudbury; not exceeding 88 miles;

(c) from a point at or near Sudbury, northerly, not exceeding 30 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 51; not exceeding in all 194 miles.

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30. To the Algoma Central and Hudson Bay Railway Company for the following lines of railway:—

- (a) from Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the district of Algoma, not exceeding 200 miles;
- (b) from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway, not exceeding 25 miles;
- (c) from a point on the Canadian Pacific Railway, northerly, towards the National Transcontinental Railway, not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 43 of 1906, section 1, item 2, and chapter 63 of 1908, section 1, item 61; not exceeding in all 275 miles.

31. To the Bracebridge and Trading Lake Railway Company, for a line of railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 8; not exceeding 16 miles.

32. To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the National Transcontinental Railway, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 63, for 18 miles; not exceeding 22 miles.

33. To the Canadian Northern Quebec Railway Company, for a line of railway from Montreal to Hawkesbury, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 48; not exceeding 65 miles.

34. To the Nipigon Railway Company for the following lines of railway:—

- (a) from a point at or near Nipigon station on the line of the Canadian Pacific Railway to Nipigon Lake; not exceeding 30 miles;
- (b) from a point on Nipigon Bay of Lake Superior to a point on the west of Lake Helen on the line of the Nipigon Railway; not exceeding $3\frac{1}{2}$ miles;
- (c) from a point on the line of the Nipigon Railway at or near the crossing of the French River to a point on Lake Jesse, by way of Cameron's Falls; not exceeding $1\frac{1}{2}$ miles;
- (d) from a point on the north shore of Lake Nipigon, northerly; not exceeding 45 miles.

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 4; not exceeding in all 80 miles.

35. To the Ontario, Northern and Timagami Railway Company, for a line of railway from a point at or near Sturgeon Falls, in a northwesterly direction, to a point on the westerly shore of Lake Timagami, in the district of Nipissing, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 6; not exceeding 50 miles.

36. For a line of railway from Sharbot Lake or Bathurst station, in the province of Ontario, or between these points, via

Lanark village, to Carleton Place, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 3; not exceeding 41 miles.

37. To the Erie, London and Tillsonburg Railway Company, for a line of railway from Port Burwell to London, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 29; not exceeding 35 miles.

38. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Baneroff, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 41; not exceeding 51 miles.

39. To the Kingston, Smith's Falls and Ottawa Railway Company, for a line of railway from Kingston to Ottawa, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 19; not exceeding 101 miles.

40. To the Pacific, Northern and Omineca Railway Company, for a line of railway from Edmonton, northwesterly, to or towards the Peace River, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 51; not exceeding 110 miles.

41. To the Southern Central Pacific Railway Company, for the following lines of railway:—

(a) from a point two miles west of Pincher station on the Crow's Nest Pass branch of the Canadian Pacific Railway, northeasterly; not exceeding 10 miles;

(b) from a point two miles west of Pincher station on the Crow's Nest Pass branch of the Canadian Pacific Railway, southwesterly; not exceeding 40 miles;

the said subsidies being granted in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 37; not exceeding in all 50 miles.

42. To the Kettle River Valley Railway Company, for the following lines of railway:—

(a) from Midway to a junction near Merritt with the Nicola, Kamloops and Similkameen Railway; not exceeding 250 miles;

(b) from a point on the Company's line of railway near Coldwater River to a point on the Fraser River; not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 40 of 1907, section 1, item 18, and chapter 63 of 1908, section 1, items 58 and 59, respectively; not exceeding in all 300 miles.

43. To the Kootenay Central Railway Company, for a line of railway from Golden towards the International boundary via Windermere and Fort Steele, thence crossing the Crow's Nest Pass Railway, at or near Elko; in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 31; not exceeding 186 miles.

44. To the Esquimalt and Nanaimo Railway Company, for a line of railway from a point on its main line of railway, at or near Duncan's to Cowichan Lake, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 67; not exceeding 24 miles.

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45. For a line of railway from Montreal to a point on the National Transcontinental Railway, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 49; not exceeding 200 miles.

46. To the Little Nation River Railway Company, for a line of railway from Papineauville, on the Canadian Pacific Railway, towards Lake Nominig, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 70; not exceeding 30 miles.

2. 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 nor the cost of 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 the Department of Railways and Canals, 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.

3. The subsidies hereby authorized towards the construction of any railway shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) With respect to (b) and (c), part one way, part the other.

4. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council 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, 1910, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines shall be subject to the approval of the Governor in Council.

As to running powers.

5. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada 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 the railway so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

Proviso.

Transportation of Government supplies, etc.

6. Every company receiving a subsidy under this Act, its successors and 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, materials and mails over the portion of the lines 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 Board of Railway Commissioners for Canada; 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 the subsidy received by the company under this Act.

Production of accounts.

7. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any

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any of the 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.

8. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

As to
Canadian
steel rails.

9. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

Mode of
payment of
certain
railway
subsidies.

Proviso.

(a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;

(b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;

(c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.

2 GEORGE V.

CHAP 7.

An Act to aid the construction of the Canadian Northern Alberta Railway.

[Assented to 1st April, 1912.]

WHEREAS, by chapter 6 of the statutes of 1910, authority ^{Preamble.} was given to the Governor in Council to aid and assist the construction of the line of railway of the Canadian Northern Alberta Railway Company, hereinafter called "the Company," by guaranteeing the principal and interest of the bonds, debentures, debenture stock or other securities of the Company to the extent of thirteen thousand dollars per mile for the first fifty miles of the line so aided, and for the remainder of the said line to an amount of twenty-five thousand dollars per mile, not exceeding in all one hundred and fifty miles, as in the said Act set out, and the Governor in Council, pursuant to the said authority, has granted such aid accordingly; and whereas the Company has authority, under the said Act, to construct and operate a line of railway from a point at or near Edmonton or Strathcona to a point in the province of British Columbia in or near the Yellowhead Pass, and fifty miles west of the boundary of the said province: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Alberta Railway Aid Act, 1912.* ^{Short title.}

2. His Majesty on behalf of the Dominion of Canada, hereinafter called "the Dominion," may aid and assist the construction and completion of a line of railway of the Company extending from a point on the line of the railway of ^{Aid authorized.} of

of the Company one hundred and fifty miles westerly from St. Albert, thence in a westerly direction to the boundary of the province of British Columbia at or in the Yellowhead Pass, for a distance not exceeding one hundred and fifteen miles, by guaranteeing the principal and interest of the bonds, debentures, debenture stocks and other securities, hereinafter called "securities," secured as hereinafter mentioned, of the Company, to the extent of thirty-five thousand dollars per mile of the said line of railway so aided, not exceeding in all one hundred and fifteen miles; the interest upon the said securities to be paid at the rate of three and one-half per cent per annum, payable half yearly, the principal to be payable in fifty years from the passing of this Act.

3. The said securities so guaranteed shall be secured by a deed or deeds of trust by way of mortgage or charge to a trustee or trustees, approved of by the Governor in Council, and such deed or deeds of trust shall respectively grant a first mortgage or charge upon the said line of railway so aided, and the right of way, station grounds, or other real estate and interest therein, buildings and other structures and improvements, rolling stock and equipment, plant, machinery, tools, supplies, materials and other personal properties, present and future, acquired for the purposes of the said line so aided, and in connection with operating, repairing and maintaining it, and the tolls, incomes and revenues of the Company arising and to arise from the said line, and the rights, privileges, franchises and powers of the Company now or hereafter held with respect to and in connection with the said line and the operation, maintenance and repair thereof.

4. The kind of securities to be guaranteed as aforesaid, and the forms thereof, and the form and terms of the deed or deeds of trust securing them, and the times and manner of the issue of securities and the disposition of the moneys to be raised thereon by sale, pledge or otherwise, pending the expenditure of such moneys for the purposes of the line of railway so aided, and the forms and manner of guarantee, shall be such as the Governor in Council approves, and such terms, provisions and conditions may be included in such deed or deeds of trust as the Governor in Council deems expedient or necessary.

5. The said guarantee shall be signed by the Minister of Finance, or such officer as is designated by the Governor in Council to sign it; and upon being so signed the Dominion shall become liable as guarantor for the payment of the principal and interest of the securities so guaranteed, according

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according to the tenor thereof, and the said payment shall form a charge upon the Consolidated Revenue Fund.

6. Any moneys paid by the Dominion under any guarantee herein provided for shall be held to be paid in discharge of the liability of the Dominion and not in discharge of the liability of the Company under the securities so guaranteed, or under any deed of trust securing them, and the moneys so paid shall be held to be still secured by the said securities and deed of trust, and the Dominion shall be subrogated in and to all the rights of the holders of such securities, the interest upon or the principal of which has been paid by the Dominion, and the Dominion shall, with respect to all moneys so paid, be in all respects in the position of security holders with respect to whose securities default has been made in payment to the extent of the moneys paid by the Dominion.

Liability of Dominion discharged by payments

7. The decision of the Governor in Council as to the length of the mileage of the said line of railway so to be aided shall, for the purposes of this Act, be final.

Length of lines.

8. The books of the Company shall at all times be open for inspection for and on behalf of the Dominion by any person named in that behalf by the Governor in Council or the Minister of Finance.

Inspection of books.

9. The Canadian Northern Railway Company shall, by guarantee included in the said deed or deeds of trust, or in some other instrument agreed to by the Governor in Council or the Minister of Finance and the last named company, in such form as the Governor in Council approves, guarantee to the Dominion the due payment by the Company of the principal and interest of all securities issued and guaranteed under the provisions of this Act, according to the tenor and effect of such securities respectively, and in accordance with the terms of the said deed or deeds of trust, and shall also guarantee to the Dominion the due payment by the Company of all loss or costs which the Dominion may sustain or be put to in enforcing, after default, the provisions of the said deed or deeds of trust against the line of railway and premises thereby mortgaged and charged.

Guarantee by Canadian Northern Railway.

Principal and interest.

Costs of default.

10. The line hereby aided, as set forth or described in section 2 of this Act, shall be constructed and completed according to the following specifications:—

Standard of construction.

Bridges over rivers and large streams are to be of concrete and steel construction and to be built to the classification of the Heavy Standard Specification of the Department of Railways and Canals, dated one thousand nine hundred and eight.

Bridges.

Bridges

Trestles. Bridges of pile or frame trestle may be constructed over
Culverts. small streams which can be taken care of by culverts, such
culverts to be constructed within a reasonable time after
the line is put in operation, of which time the Governor in
Council shall be the sole judge.

Rails. The line of railway shall be laid with steel rails, not less
than eighty pounds to the lineal yard, with standard
fastenings.

Curves and
grades. The maximum curvature shall not be of less radius than
seven hundred and sixteen feet, and the grades against
east bound traffic shall not exceed five-tenths of one per
cent, or 26·40 feet per mile; or six-tenths of one per cent,
or 31·68 feet per mile, against west-bound traffic; provided
that under exceptional conditions, with the consent of the
Governor in Council, less radius of curvature and heavier
grades may be allowed, on the recommendation of the
chief engineer of the Department of Railways and Canals,
approved by the Minister of Railways and Canals, but in
no case shall the curvature exceed five hundred and seventy-
three feet radius, or the gradients exceed 52·80 feet to the
mile.

2 GEORGE V.

CHAP. 8.

An Act respecting aid toward the construction of the Canadian Northern Alberta Railway.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Alberta Railway Act, 1912.* Short title.

2. The aid and assistance which, under *The Canadian Northern Alberta Railway Act, 1910*, (hereinafter called "the said Act"), the Governor in Council was authorized to give to the Canadian Northern Alberta Railway Company (hereinafter called "the Company") in respect of the construction of the one hundred and fifty miles of the line of railway therein described (hereinafter called "the old line") may, notwithstanding anything in the said Act, be applied to the first one hundred and fifty miles of the Company's line of railway at present constructed or located running from St. Albert, in the province of Alberta, in a generally westerly direction toward the Yellowhead Pass, such last mentioned one hundred and fifty miles being hereinafter referred to as "the new line." Aid to company may be applied to new line.

3. The Governor in Council may cause to be executed by the Minister of Finance, or such other officer as the Governor in Council may designate, an instrument, in form approved by the Governor in Council, supplementary to the deed of trust, by way of mortgage or charge, made under the authority of the said Act and dated the twenty-second

day

day of March one thousand nine hundred and eleven, (herein called the original mortgage), for the purpose of giving effect to the provisions of this Act.

Securities
already issued
to be a
charge on
new line

4. Upon the execution of such instrument by the Company and the Minister of Finance, or the other person as aforementioned, the securities issued under the original mortgage shall form a charge upon the new line instead of upon the old line, and the proceeds of the guaranteed securities issued under the original mortgage shall thereupon be applied in and toward the construction of the new line.

Trustees
to execute.

5. The trustees of the original mortgage shall concur with the Company and the Governor in Council in executing, or causing to be executed, the supplementary instrument aforementioned.

Amendment
of contract
for construction.

6. Upon the passing of this Act the contract made between His Majesty the King and the Company, dated the second day of September, one thousand nine hundred and eleven, in respect of the construction of the line of railway aided under the said Act may be amended by the parties thereto so as to provide for the construction and completion of the new line instead of the line therein mentioned, and the several parties to the said contract and to the original mortgage are hereby authorized and empowered to execute the several documents and make the several amendments necessary to carry into effect the intent of this Act.

2 GEORGE V.

CHAP. 9.

An Act to authorize the granting of a Subsidy to the Canadian Northern Pacific Railway Company in aid of the construction of the railway therein mentioned.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Pacific Railway Aid Act*. Short title.

2. The Governor in Council may grant a subsidy of twelve thousand dollars per mile to the Canadian Northern Pacific Railway Company towards the construction of a railway from a point at Yellowhead Pass to Vancouver and the mouth of the Fraser river, not exceeding five hundred and twenty-five miles. Subsidy authorized.

3. The said subsidy shall be payable out of the Consolidated Revenue Fund of Canada and may, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:— Manner and conditions of payment.

- (a) upon the completion of the work subsidized; or,
- (b) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; the cost for the purposes of this paragraph to be determined by the Governor in Council; or,
- (c) upon the progress estimates on the certificate of the chief engineer of the Department of Railways and

and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) with respect to (b) and (c), part one way part the other.

Time for construction limited.

4. The said railway, unless already commenced, shall be commenced within two years from the first day of August, nineteen hundred and twelve, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals. and specified in a contract between the said Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location of the said railway shall be subject to the approval of the Governor in Council.

Contract for construction.

Location.

Transportation of Government supplies, etc.

5. The said Company, its successors and assigns, and any person or company controlling or operating the said railway or portion thereof, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the railway 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 Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the said Company with a sum equal to three per cent per annum on the amount of the subsidy received by the Company under this Act.

Production of accounts.

6. As respects the railway for which such subsidy is granted the Company at any time owning or operating it 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.

Canadian steel rails, materials, and rolling stock.

7. The Governor in Council may make it a condition of the granting of the subsidy herein provided that the said Company shall lay the railway with new steel rails and fastenings made in Canada, and shall purchase all materials and

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and supplies required for the construction of the railway, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

2 GEORGE V.

CHAP. 48.

An Act to authorize the granting of Subsidies in aid of the construction of the railways and bridges therein mentioned.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Railway Subsidies Act, 1912.* Short title.

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:—

1. For a line of railway from Liverpool, via Milton, to Caledonia, Nova Scotia, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 5; not exceeding 30 miles.

2. For a line of railway from St. John to Grand Falls, New Brunswick, exclusive of a railway bridge across the Kennebecasis

Kennebecasis River, at or near Perry Point, and two railway bridges across the St. John River, one at or near Mistake and one at or near Andover; in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 12; not exceeding 228 miles.

3. To the L'Avenir and Melbourne Railway Company for a line of railway from Melbourne to Drummondville, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 22; not exceeding 28 miles.

4. To the Ha Ha Bay Railway Company for the following lines of railway:—

(a) from a point on the Quebec and Lake St. John Railway in the township of Jonquières, at or near St. Mathias, to Ha Ha Bay; not exceeding 20 miles;

(b) from Labrosse Junction to the Saguenay River, northerly through the town of Chicoutimi; not exceeding 5 miles;

(c) from La Terrière Junction, southerly, to Lake Kenogami, via La Terrière village; not exceeding 12 miles.

(d) from a point on the Ha Ha Bay Railway, at or near Bagotville village, easterly, to the village of St. Alexis; not exceeding 3 miles;

the said subsidies sub-items (a), (c) and (d) being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 27; and the subsidy sub-item (b) being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 19, sub-item (g); not exceeding in all 40 miles.

5. For a line of railway at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 26; not exceeding 15 miles.

6. To the Interprovincial and James Bay Railway Company, for a line of railway from a point on the Lake Temiscamingue Colonization Railway at or near Timiskaming to or towards the De Quinze River; in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 42; not exceeding 50 miles.

7. To the Canadian Northern Quebec Railway Company, for a line of railway from a point at or near Arundel to a point in the municipality of the united townships of Preston and Hartwell, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 17; not exceeding 30 miles.

8. To the Quebec and Saguenay Railway Company, for the following lines of railway:—

(a) from St. Joachim, northeasterly; not exceeding 62.8 miles;

(b) from a point 62.8 miles northeasterly from St. Joachim towards Seven Islands; not exceeding 107.2 miles;

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the said subsidies being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 25; not exceeding in all 170 miles.

9. For a line of railway from a point at or near Montreal to a point at or near Mile 837 west of Moncton on the National Transcontinental Railway, in lieu of subsidy granted by chapter 51 of 1910, section 1, item 45; not exceeding 200 miles.

10. To the Algoma Central and Hudson Bay Railway Company, for the following lines of railway:—

(a) from Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the district of Algoma; not exceeding 200 miles;

(b) from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway; not exceeding 25 miles;

(c) from a point on the Canadian Pacific Railway, northerly, towards the National Transcontinental Railway; not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 30; not exceeding in all 275 miles.

11. To the Algoma Eastern Railway Company (formerly the Manitoulin and North Shore Railway Company) for the following lines of railway:—

(a) from a point on the said company's line of railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway; not exceeding 76 miles;

(b) from a point at or near Sudbury, northerly; not exceeding 30 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 29, sub-items (a) and (c) respectively; not exceeding in all 106 miles.

12. To the Tillsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Ingersoll to Stratford, or to a point on the Grand Trunk Railway between Berlin and Stratford, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 12; not exceeding 35 miles.

13. To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the National Transcontinental Railway, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 32; not exceeding 22 miles.

14. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 38; not exceeding 51 miles.

15. To the Canadian Pacific Railway Company, for a line of railway from a point at or near Teulon to a point on

the Icelandic River, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 27; not exceeding 35 miles.

16. To the Vancouver, Westminster and Yukon Railway Company, for a line of railway from Vancouver via Second Narrows of Burrard Inlet, northerly, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 55; not exceeding 100 miles.

17. To the Kootenay Central Railway Company, for the following lines of railway:—

(a) from Golden via Windermere and Fort Steele to a point on the British Columbia Southern Railway at or near Jukeson; not exceeding 175 miles;

(b) from a point on the British Columbia Southern Railway at or near Caithness towards the International boundary; not exceeding 25 miles;

the said subsidies being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 43; not exceeding in all 200 miles.

18. To the Kettle Valley Railway Company, for a line of railway from a point at or near Grand Forks to a point 50 miles up the North Fork, and East or West Fork of North Fork, of Kettle River, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 1; not exceeding 50 miles.

19. To the Esquimalt and Nanaimo Company, for the following lines of railway:—

(a) from Wellington to Alberni; not exceeding 60 miles;

(b) from a point at or near McBride Junction to or towards the village of Sandwich; not exceeding 45 miles;

(c) from the village of Sandwich to Campbell River; not exceeding 38 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 40 of 1907, section 1, item 20, and chapter 63 of 1908, section 1, item 35; not exceeding in all 143 miles.

20. For a line of railway from a point on the Esquimalt and Nanaimo Railway, near Campbell River, towards Fort George, on the line of the Grand Trunk Pacific Railway, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 54; not exceeding 100 miles.

21. To the Fredericton and Grand Lake Coal and Railway Company, for a line of railway from a point on the Intercolonial Railway at Gibson to a point at or near Minto, together with a branch line from a point on the above mentioned line to Marysville; not exceeding 35 miles.

22. To the Great Northern Mining and Railway Company, Limited, for a line of railway from Little River through Belle Marche to Eastern Harbour; not exceeding 3 miles.

23. To the Southampton Railway Company, for a line of railway from a point at or near Millville to a point on the St. John River near the Pokiok Bridge; not exceeding 13 miles.

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24. To the Northern New Brunswick and Seaboard Railway Company, for a line of railway from the Drummond mines, at Austin Brook, a branch of the Nipisiguit River above Great Falls, in the county of Gloucester, to a point on the Intercolonial Railway, and from such point to Alston Point, on the north side, or to Caron Point, on the south side of the entrance to Bathurst Harbour in the said county; not exceeding 26 miles.

25. To the North Shore Railway Company, for the following lines of railway:—

(a) from a point at or near Adamsville, in the county of Kent, to a point at or near Snowshoe Lake in the said county, connecting with the Grand Trunk Pacific Railway; not exceeding 20 miles;

(b) from Beersville, in the county of Kent, via Roxton, to a point at or near Richibucto Head, in the said county; not exceeding 20 miles;

not exceeding in all 40 miles.

26. For a line of railway from a point at or near Rosevale in the County of Albert to Stoney Creek in the said county, and thence to the city of Moncton; not exceeding 22 miles.

27. To the Quebec Central Railway Company, for the following lines of railway:—

(a) for an extension of its line of railway from a point (30 miles from St. George) in the parish of St. Justine, county of Dorchester, to a point in the parish of St. Sabine, in the county of Bellechasse; not exceeding 1·34 miles;

(b) for an extension of its line of railway from a point (31·34 miles from St. George) in the parish of St. Sabine, county of Bellechasse, to a point in the township of Dionne, county of L'Islet; not exceeding 50 miles; not exceeding in all 51·34 miles.

28. To the Canada and Gulf Terminal Railway Company, for a line of railway from Matane, easterly, to Gaspé Basin; not exceeding 200 miles.

29. To the Grand Lake and Bell River Railway Company, for a line of railway from a point on the National Transcontinental Railway, at or near Bell River, thence following the direction of Bell River to Twenty-one Mile Bay, an arm of Grand Lake, or to Rabbit Lake on the Ottawa River, in the county of Pontiac; not exceeding 45 miles.

30. To the St. Charles and Huron River Railway Company, for a line of railway from a point on the main line of the Quebec and Lake St. John Railway, at Indian Lorette station, thence up the valley of the St. Charles River in a northerly direction to Stoneham; not exceeding 7·5 miles.

31. For a line of railway from a point on the National Transcontinental Railway, at or near Mile 837 west of Moncton,

Moncton, in a northerly and northwesterly direction, to a point at or near the mouth of the Nottaway River on James Bay; not exceeding 300 miles.

32. To the Simcoe, Grey and Bruce Railway Company, in respect of fifty miles of its proposed railway between the towns of Kincardine and Orillia, the said fifty miles to include that portion of the said line connecting the towns of Owen Sound and Meaford.

33. To the Algoma Central and Hudson Bay Railway Company, for a line of railway from a point fifty miles northerly from the junction of its line of railway with the Canadian Pacific Railway, northerly to a junction with the National Transcontinental Railway; not exceeding 65 miles.

34. To the Rainy River Radial Railway Company, for a line of railway from a point on the northern boundary of the state of Minnesota at or near the town of Fort Frances, to a point on the Lake of the Woods, at or near the mouth of Little Grassy River; not exceeding 50 miles.

35. To the Lake Erie and Northern Railway Company, for the following lines of railway:—

(a) from the town of Galt to Port Dover; not exceeding 58 miles;

(b) from the town of Paris (on the line from the town of Galt to Port Dover) to the village of Ayr; not exceeding 10 miles;

not exceeding in all 68 miles.

36. To the Bruce Mines and Algoma Railway Company, for a line of railway from a point on its line of railway at or near Rock Lake Mine in a generally northerly and easterly direction to or towards a point on the main line of the Canadian Pacific Railway near the crossing of the said railway of the Winneboga River; not exceeding 50 miles.

37. To the Manitoba and North Western Railway Company, for a line of railway from a point at or near Hamiota to a point at or near Birtle; not exceeding 30 miles.

38. To the Alberta Pacific Railway Company, for a line of railway from a point at or near the town of Cardston in a northwesterly direction via Pincher Creek to a point on the Crow's Nest Pass Branch of the Canadian Pacific Railway Company at or near Lundbreck, thence northerly and west of the Porcupine Hills towards Calgary; not exceeding 100 miles.

39. To the Burrard Inlet Tunnel and Bridge Company, for the following lines of railway:—

(a) from the town of Eburne on the Fraser River to a point at or near the mouth of Seymour Creek on the north shore of the Second Narrows; not exceeding 10 miles;

(b) from a point at or near Seymour Creek on the north shore of the Second Narrows to Deep Cove on the north arm of Burrard Inlet; not exceeding 5 miles;

(c)

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(c) from a point at or near Seymour Creek on the north shore of the Second Narrows to a point on Horseshoe Bay; not exceeding 14 miles;

(d) from a point at or near Pender street in the city of Vancouver to a point at or near lot 264, North Vancouver; not exceeding 3 miles;

not exceeding in all 32 miles.

40. To the Caribou, Barkerville and Willow River Railway Company, for a line of railway from a point on the Grand Trunk Pacific Railway, at or near Eagle Lake, to a point on the Caribou Road at or near the town of Barkerville; not exceeding 107 miles.

41. To the Naas and Skeena Rivers Railway Company, for a line of railway from the Nasoga Gulf or some other point on the waters of the Portland Inlet or Naas River to or towards the anthracite coal deposits on the Skeena River near Ground Hog Mountain; not exceeding 100 miles.

42. To the Kettle Valley Railway Company, for a line of railway from a point at or near Penticton on Okanagan Lake to a point on the International boundary; not exceeding 50 miles.

43. To the Calgary and Fernie Railway Company, for a line of railway from a point at or near the city of Calgary in the province of Alberta, in a southwesterly direction, via Kananaskis Pass and the headwaters of the Elk River to or towards the city of Fernie, in the province of British Columbia; not exceeding 100 miles.

44. To the Grand Trunk Pacific Railway Company, for a line of railway from Harte southwesterly into the city of Brandon; not exceeding 25 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction and completion of the bridges also hereinafter mentioned, that is to say:—

Subsidies for
bridges.

1. To the Vancouver, Westminster and Yukon Railway Company, towards the construction and completion of a railway bridge across Burrard Inlet, in lieu of the subsidy granted by chapter 63 of 1908, section 2, item 6; not exceeding \$350,000.

2. To the Canadian Pacific Railway Company (lessees of the Calgary and Edmonton Railway Company) towards the construction and completion of a bridge over the Saskatchewan River connecting Strathcona and Edmonton, 15 per cent upon the amount expended thereon, in lieu of the subsidy granted by chapter 63 of 1908, section 2, item 2; not exceeding \$126,000.

3. To the Canadian Pacific Railway Company, towards the construction and completion of a bridge over the Saskatchewan River at Outlook, Saskatchewan, 15 per cent upon

upon the amount expended thereon; not exceeding \$115,000.

4. To the Kettle Valley Railway Company, towards the construction and completion of a railway bridge over the Fraser River, near Hope, British Columbia; not exceeding \$250,000.

5. To the Caribou, Barkerville and Willow River Railway Company, towards the construction and completion of all its railway bridges (about twenty in number) over the Willow River, 25 per cent upon the total amount expended thereon; not exceeding \$95,000.

6. To the Grand Trunk Pacific Railway Company, towards the construction and completion of a railway bridge over the Assiniboine River at the city of Brandon, 25 per cent upon the amount expended thereon; such bridge to be completed without unnecessary delay.

“Cost”
defined.

4. 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 nor the cost of 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 the Department of Railways and Canals, 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.

How
subsidies
shall be
paid.

5. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon the completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made

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made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) With respect to (b) and (c), part one way, part the other.

6. The subsidies hereinbefore authorized to be granted Conditions. to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railway and bridges respectively; all the lines and the bridges 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, 1912, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

7. The granting of such subsidies and the receipt thereof As to running powers. by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada 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 the railway and bridges so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

8. Every company receiving a subsidy under this Act, Transportation of Government supplies, etc. its successors and 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, materials and mails over the portion of the lines in respect of which it has

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 Board of Railway Commissioners for Canada; 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 the subsidy received by the company under this Act.

Production
of accounts.

9. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or bridges 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 or bridge, the cost of operating it, and the earnings thereof.

As to
Canadian
steel rails.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridges, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

Mode of
payment of
certain
railway
subsidies.

11. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the Company, and upon the report of the chief engineer of the Department of Railways and Canals and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion

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completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

- (a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;
- (b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;
- (c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.

3-4 GEORGE V.

CHAP. 10.

An Act to authorize the granting of subsidies in aid of the construction of certain lines of railway of the Canadian Northern Ontario Railway Company and the Canadian Northern Alberta Railway Company respectively.

[Assented to 6th June, 1913.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may grant a subsidy of six thousand four hundred dollars per mile to the Canadian Northern Ontario Railway Company, towards the construction of a railway from the city of Toronto, in the province of Ontario, to the city of Ottawa, in the said province, not exceeding two hundred and fifty miles.

Subsidy authorized for Toronto to Ottawa line.

2. The Governor in Council may grant a subsidy of twelve thousand dollars per mile towards each of the under-mentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) namely:—

For Ottawa to Port Arthur, and Edmonton to Yellowhead Pass.

- (a) to the Canadian Northern Ontario Railway Company, for a line of railway from the city of Ottawa, in the province of Ontario, to the city of Port Arthur in the said province; not exceeding 910 miles;
- (b) to the Canadian Northern Alberta Railway Company for a line of railway from the city of Edmonton, in the province of Alberta, to the boundary of the province of British Columbia at or in the Yellowhead Pass; not exceeding 260 miles.

How
subsidies
shall be paid.

3. The subsidies hereby authorized shall be payable out of the Consolidated Revenue Fund of Canada and may, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows;—

- (a) upon completion of the work subsidized; or,
- (b) by instalments, on the completion of each ten-mile section of the railway; in the proportion which the cost of such completed section bears to that of the whole work undertaken; the cost for the purpose of this paragraph to be determined by the Governor in Council; or,
- (c) upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) with respect to (b) and (c), part one way, part the other.

Time for
construction
of railway
limited.

4. The lines, for the construction of which subsidies are hereby granted, shall be completed within a reasonable time, not to exceed three years from the first day of August, nineteen hundred and thirteen, to be fixed by the Governor in Council, and shall also be constructed and completed to the satisfaction of the Governor in Council.

Conditions
as to
running
powers.

5. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada 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 the railway so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized; provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council as he deems just and proper.

Transporta-
tion of
Government
supplies, etc.

6. The Companies receiving subsidies under this Act, their successors and assigns, and any person or company controlling or operating the railways or portions of the railways subsidized under this Act, shall each year furnish to the

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the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines 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 Board of Railway Commissioners for Canada; and in and toward the payment of such charges the Government of Canada shall be credited by the company with a sum equal to three per cent on the amount of the subsidy received by the company under section 1 of this Act and on the amount of the subsidy up to six thousand four hundred dollars per mile received by the Company under section 2 of this Act.

7. As respects the railways for which subsidies are granted by this Act, the company at any time owning or operating any of the 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. Books to be produced.

8. No subsidy shall be granted under this Act unless and until there shall have been issued and transferred upon the books of the Canadian Northern Railway Company to the Minister of Finance and Receiver General of Canada, in trust for His Majesty, shares in the common stock of the Canadian Northern Railway Company of the par value of seven million dollars, which said stock and all rights appurtenant thereto shall be held for the benefit of His Majesty absolutely, and shall be deemed to be fully paid up, non-assessable and not subject to calls; provided that the said stock or any part thereof may be disposed of under the authority of Parliament upon such terms and conditions as it may determine and the proceeds of the sale thereof paid into the Consolidated Revenue Fund of Canada. Transfer of stock to Crown.
Proviso.

9. The Canadian Northern Railway Company is hereby authorized and empowered to issue and transfer to the Minister of Finance and Receiver General of Canada, in trust as aforesaid, from and out of the authorized capital shares of its common stock of the par value of seven million dollars fully paid up and non-assessable and not subject to calls as aforesaid, upon the consideration of the Governor in Issue of stock in return for subsidies.

Council

4 GEORGE V., A. 1914

Council undertaking to grant to the Canadian Northern Ontario Railway Company and the Canadian Northern Alberta Railway Company the subsidies referred to in section 2 of this Act upon the terms aforesaid, and such stock when so issued and transferred shall be deemed fully paid without further or other consideration.

3-4 GEORGE V.

CHAP. 46.

An Act to authorize the granting of Subsidies in aid of the construction of the railways and bridge therein mentioned.

[Assented to 6th June, 1913.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Railway Subsidies Act, 1913.* Short title.

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:—

1. To the Margaree Coal and Railway Company, Limited, for the following lines of railway:—

(a) from a point on the Intercolonial Railway near Orangedale to St. Rose; not exceeding 46 miles;

(b) from a point on the Intercolonial Railway near McIntyre lake to Caribou cove, Port Malcolm, Richmond county; not exceeding 4 miles;

the said subsidies being granted in lieu of subsidy granted by chapter 51 of 1910, section 1, item 4; not exceeding 50 miles.

2. To the Northern New Brunswick and Seaboard Railway Company, for a line of railway from the Drummond Mines at Austin brook, a branch of the Nipisiguit river above Great Falls in the county of Gloucester to a point on the Intercolonial Railway where it intersects the branch line from Bathurst station to Bathurst Harbour, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 24; not exceeding 16·9 miles.

3. To the Tobique and Campbellton Railway Company, for a line of railway from Plaster Rock along the Tobique river to Riley brook, in lieu of subsidy granted by chapter 51 of 1910, section 1, item 15; not exceeding 28 miles.

4. To the St. John and Quebec Railway Company, for a line of railway from Andover to St. John, New Brunswick, exclusive of a railway bridge across the St. John river, at or near Mistake, and a railway bridge across the Kennebecasis river at or near Perry Point; in lieu of subsidy granted by chapter 48 of 1912, section 2, item 2; not exceeding 200 miles.

5. To the Lotbinière and Megantic Railway Company for a line of railway from a point at or near Lyster in Megantic county to a point at or near Lime Ridge in the township of Dudswell in the county of Wolfe, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 23, for a line of railway between the points above mentioned; not exceeding 60 miles.

6. For a line of railway from a point on the Canadian Pacific Railway at or near Scotstown or Megantic to the International boundary, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 19; not exceeding 35 miles.

7. To the Little Nation River Railway Company for a line of railway from a point between Thurso and Montebello on the line of the Canadian Pacific Railway, northerly, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 46; not exceeding 30 miles.

8. To the Erie, London and Tillsonburg Railway Company, for a line of railway from Port Burwell to London, passing through or near Vienna, Calton, Aylmer, Kingsmill and Belmont, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 37; not exceeding 35 miles.

9. To the Tillsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Ingersoll north to a junction with the St. Mary's and Western Ontario railway at Embro, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 12; not exceeding 10·38 miles.

10. To the Canadian Pacific Railway Company, for a line of railway from Gimli to a point on the Icelandic river
at

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at or near Riverton, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 39, for a line between the points above mentioned; not exceeding 30 miles.

11. To the Canadian Pacific Railway Company, for a line of railway from Moosejaw, in a northwesterly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 40; not exceeding 123 miles.

12. To the Alberta Central Railway Company, for a line of railway from Red Deer to Rocky Mountain House, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 38; not exceeding 70 miles.

13. To the Kettle Valley Railway Company, for the following lines of railway:—

(a) from Merritt to Penticton Wharf; not exceeding 145 miles;

(b) from a point on the line between Merritt and Penticton Wharf, at or near Penticton, to Midway; not exceeding 135 miles;

(c) from a point on the line between Merritt and Penticton Wharf, about 25 miles south of Merritt, to a point on the Fraser river near Hope station; not exceeding 55 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 42; not exceeding in all 335 miles.

14. To the Calgary and Fernie Railway Company for a line of railway from Michel or Sparwood, in a northerly direction via the headwater of the Elk river and Kananaskis Pass to a point at or near the city of Calgary, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 43; not exceeding 100 miles.

3. The Governor in Council may grant the subsidy hereinafter mentioned towards the construction and completion of the bridge hereinafter mentioned, that is to say:—

Subsidy
for bridge.

To the Burrard Inlet Tunnel and Bridge Company towards the construction and completion of a bridge over the Second Narrows of Burrard Inlet, as authorized by chapter 74 of 1910, in lieu of the subsidy granted by chapter 48 of 1912, section 3, item 1; not exceeding \$350,000.

4. 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 or the cost of terminals or the cost of right of way

"Cost"
defined.

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 the Department of Railways and Canals, 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.

How
subsidies
shall be
paid.

5. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon the completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) With respect to (b) and (c), part one way, part the other.

Conditions.

6. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges respectively; all the lines and the bridges 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, one thousand nine hundred and thirteen, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals and

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and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

7. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada 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 the railway and bridges so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

8. Every company receiving a subsidy under this Act, its successors and 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, materials and mails over the portion of the lines 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 Board of Railway Commissioners for Canada; 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 the subsidy received by the company under this Act.

9. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or bridges shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and

and vouchers showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

As to
Canadian
steel rails.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridges and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

Mode of
payment of
certain
railway
subsidies.

11. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

- (a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;
- (b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;
- (c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.

3-4 GEORGE V.

CHAP 53.

An Act to authorize the granting of Subsidies to the Government of the Province of Ontario in aid of the construction of the Temiskaming and Northern Ontario Railway.

[Assented to 6th June, 1913.]

WHEREAS the Government of the province of Ontario Preamble. has constructed a line of railway known as the Temiskaming and Northern Ontario Railway, from North Bay on the Canadian Pacific Railway, and at a junction with the Toronto line, so called, of the Grand Trunk Railway, to Cochrane on the Grand Trunk Pacific Railway, and several branches thereof, and has them under operation; and whereas the line of railway from North Bay to Cochrane makes a through connection for the Transcontinental Railway with Toronto, and also with Montreal and Quebec, and being, as such, a work of national and not merely provincial utility: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Temiskaming and Northern Ontario Railway Aid Act.* Short title.

2. The Governor in Council may grant to the Government of the province of Ontario, in consideration of its having constructed each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), a subsidy not exceeding \$6,400 per mile:—

Subsidies to Government of Ontario for construction of railways.

- (i) For the line of railway from North Bay on the Canadian Pacific Railway to Cochrane on the Grand Trunk Pacific Railway; not exceeding 252·8 miles.

(ii)

- (ii) For the following branch lines of railway:—
- (a) From Englehart to Charlton; not exceeding 7·8 miles;
 - (b) From Cobalt to Kerr Lake; not exceeding 3·9 miles;
 - (c) From Iroquois Falls to Timmins; not exceeding 33·2 miles;
 - (d) From Earlton to Elk Lake City; not exceeding 28·5 miles;
 - (e) From Iroquois Falls Station to Iroquois Falls; not exceeding 7·25 miles.

How
subsidies
shall be paid.

3. The subsidies hereby authorized shall be payable out of the Consolidated Revenue Fund of Canada at the option of the Governor in Council, and may be paid upon the certificate of the chief engineer of the Department of Railways and Canals as to the mileage constructed, in such manner and in such amounts, and subject to such conditions, if any, as the Governor in Council deems expedient.

Commence-
ment of Act.

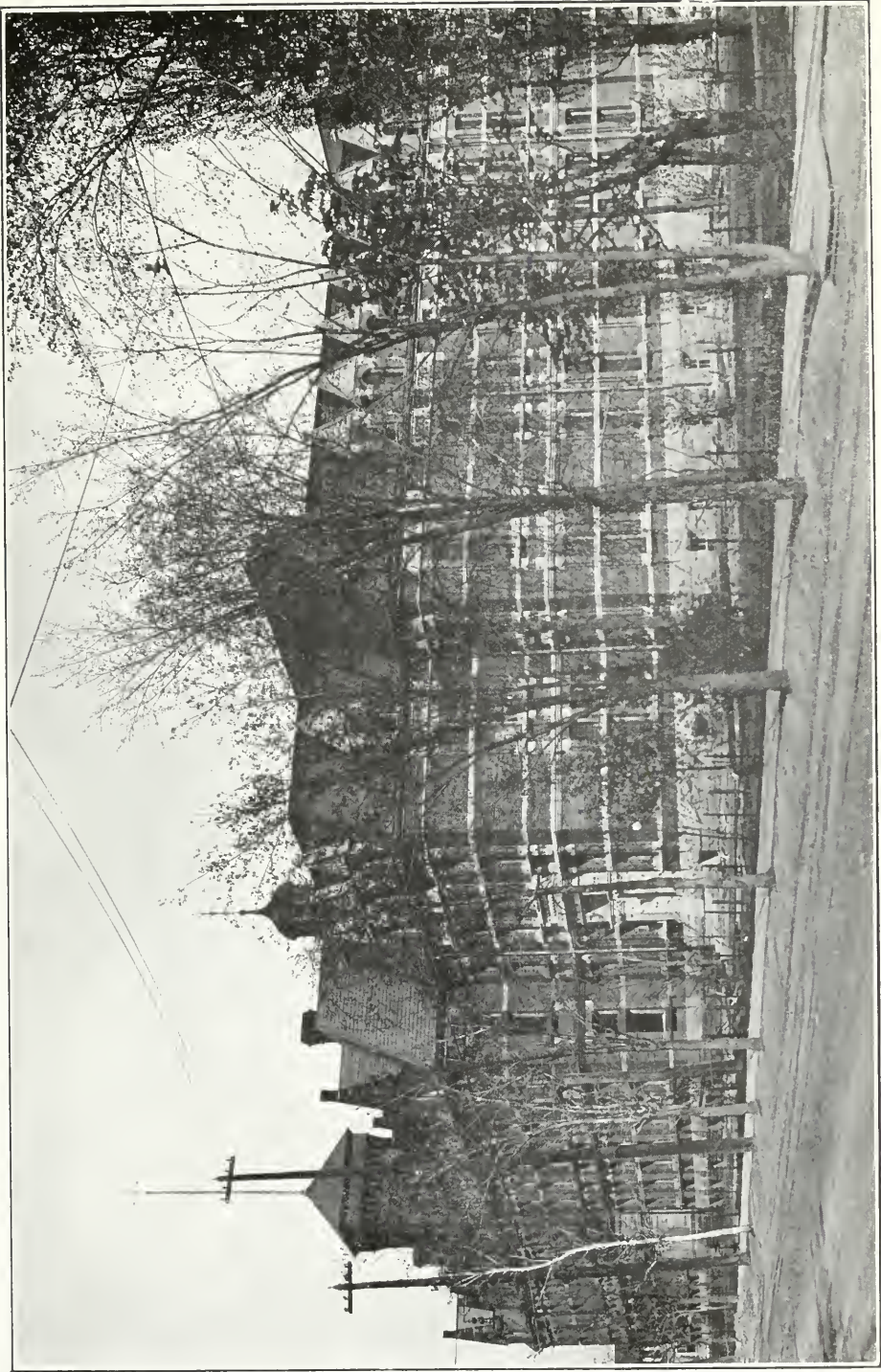
4. This Act shall come into force on a day to be fixed by proclamation of the Governor in Council published in *The Canada Gazette*.

PART X

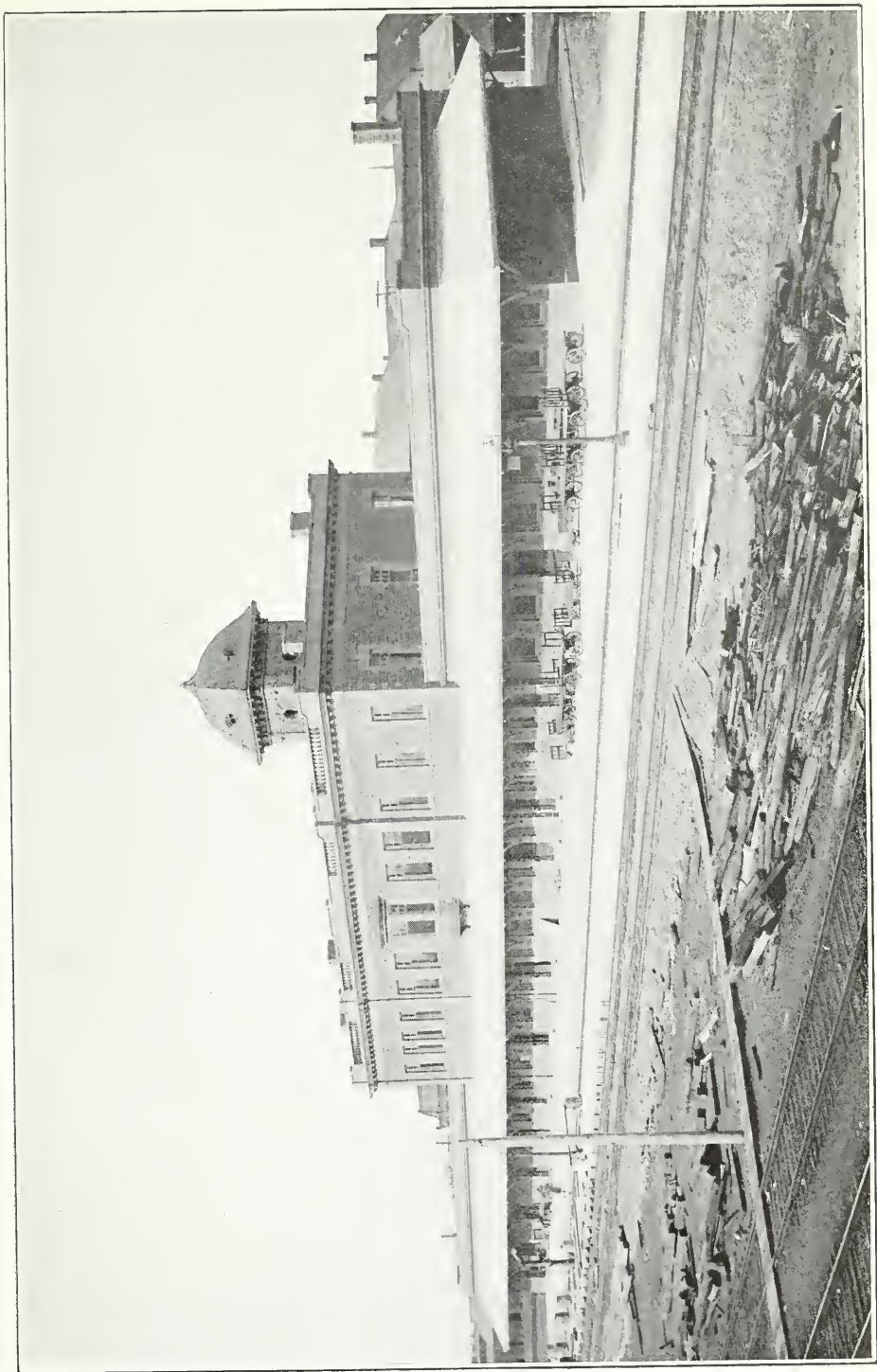
PHOTOGRAPHS, MAPS AND PLANS

PHOTOGRAPHS, MAPS AND PLANS.

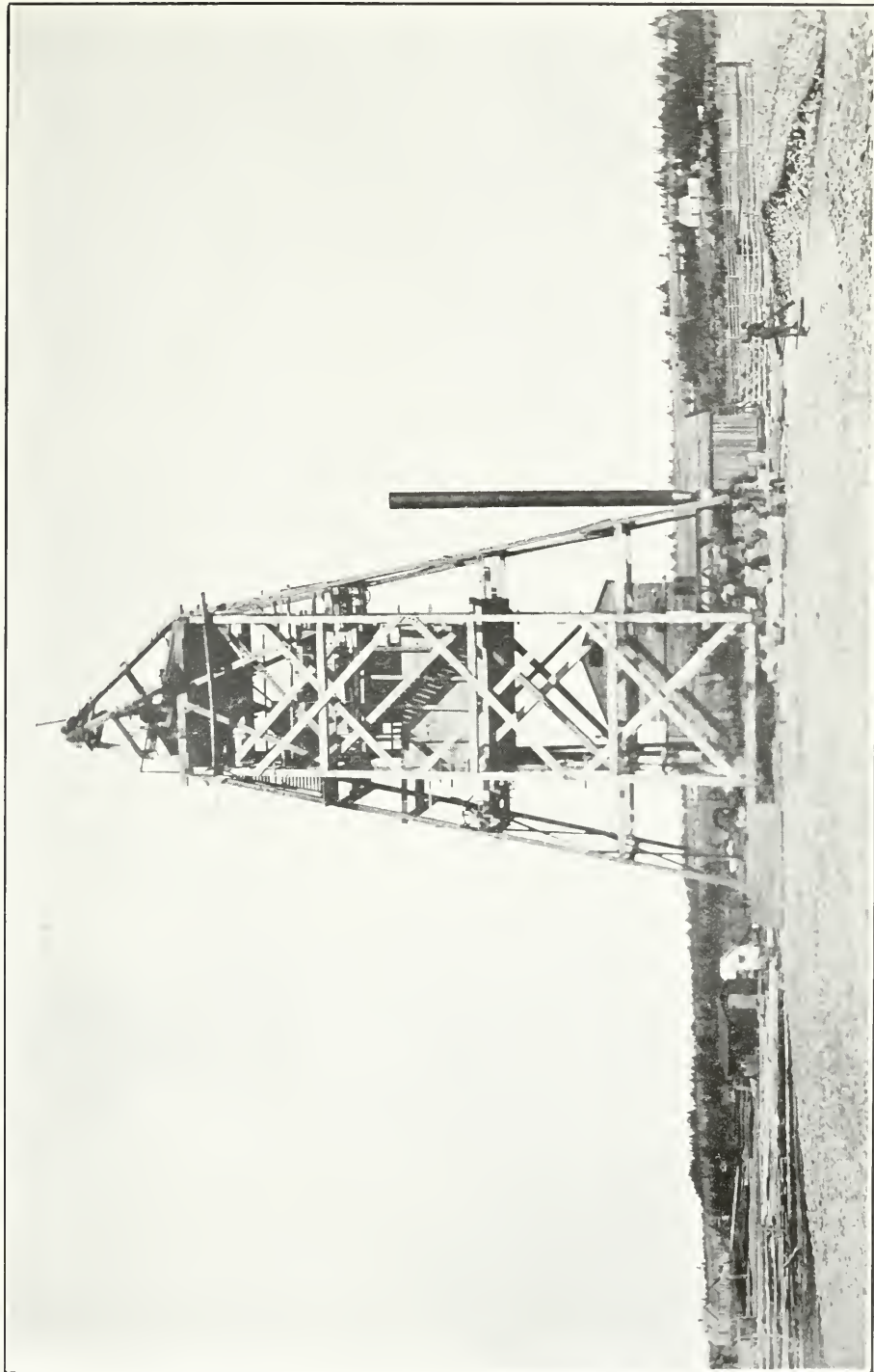
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- " XXX. Trent Canal, Ontario—Rice Lake division, Section 6, looking southeast at dam 14.
Trent Canal—Lower entrance to Lock No. 13, Ontario—Rice Lake division.
- " XXXI. Trent Canal—Lower entrance to Locks 16 and 17, Ontario—Rice Lake division.
Trent Canal—Lower entrance to lock at Hastings.
- " XXXII. Trent Canal, Ontario—Rice Lake division, new dam at Hastings from north end of old dam.
Trent Canal—Down stream view of Burleigh Falls new dam.
- " XXXIII. Trent Canal—Lakefield—Balsam Lake division up stream view of new Burleigh Falls dam.
Trent Canal—Lakefield—Balsam Lake division. Burleigh Falls new dam, looking north.
- " XXXIV. Trent Canal—Crow River Weir. Submerged dam.
- " XXXV. St. Peter's Canal, Cape Breton—Works of improvement in progress.
- " XXXVI. Prince Arthur's Landing (now Port Arthur) Lake Superior. Arch erected on the wharf to welcome the Governor General Lord Dufferin in 1874.
- " XXXVII. Main street, Winnipeg, 1872. The third shanty on the right was the private office of the Provincial Attorney General.



General Offices of the Intercolonial Railway at Moncton, N.B.



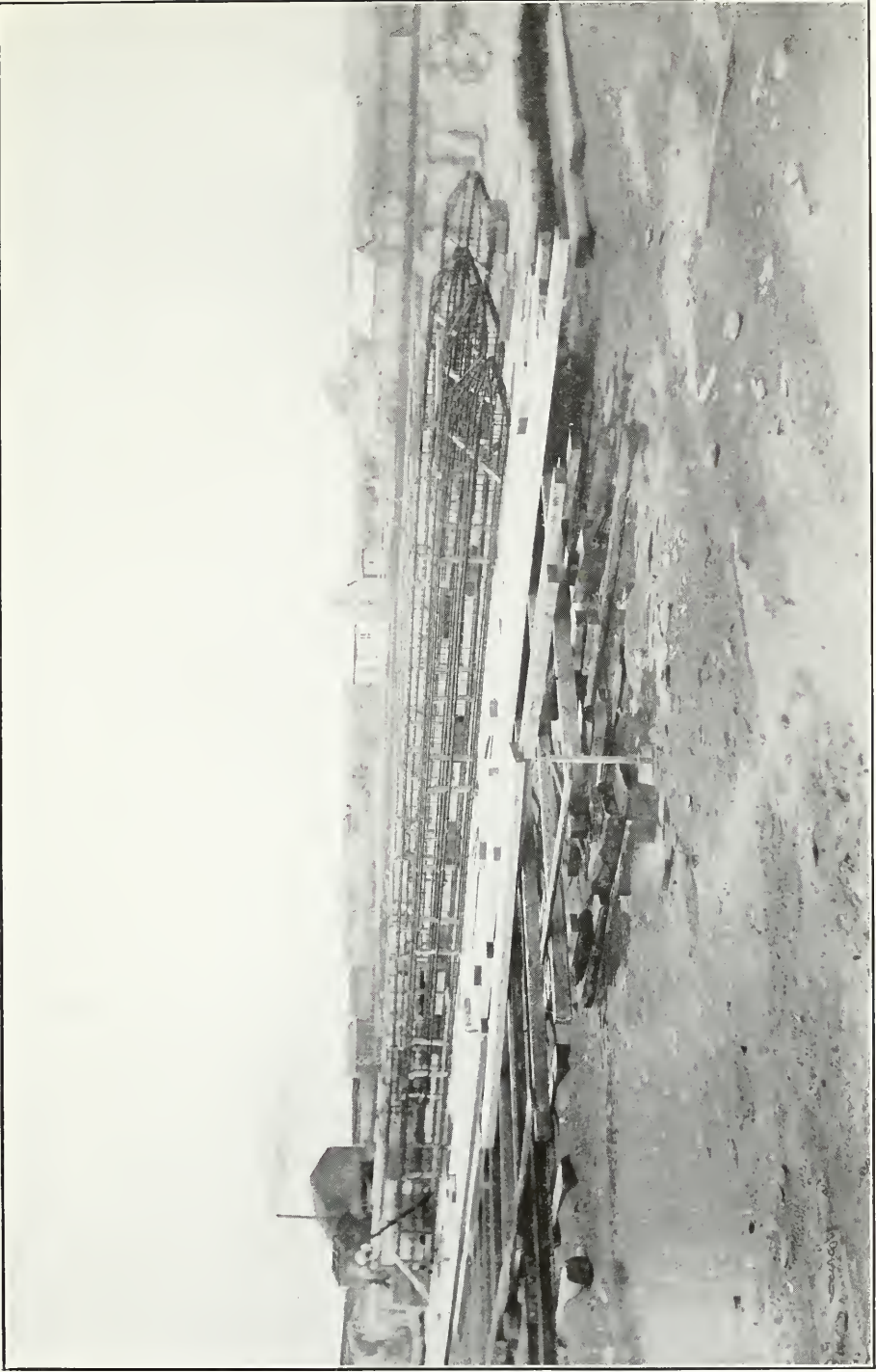
Intercolonial Railway—New Station Building at Truro, N.S.



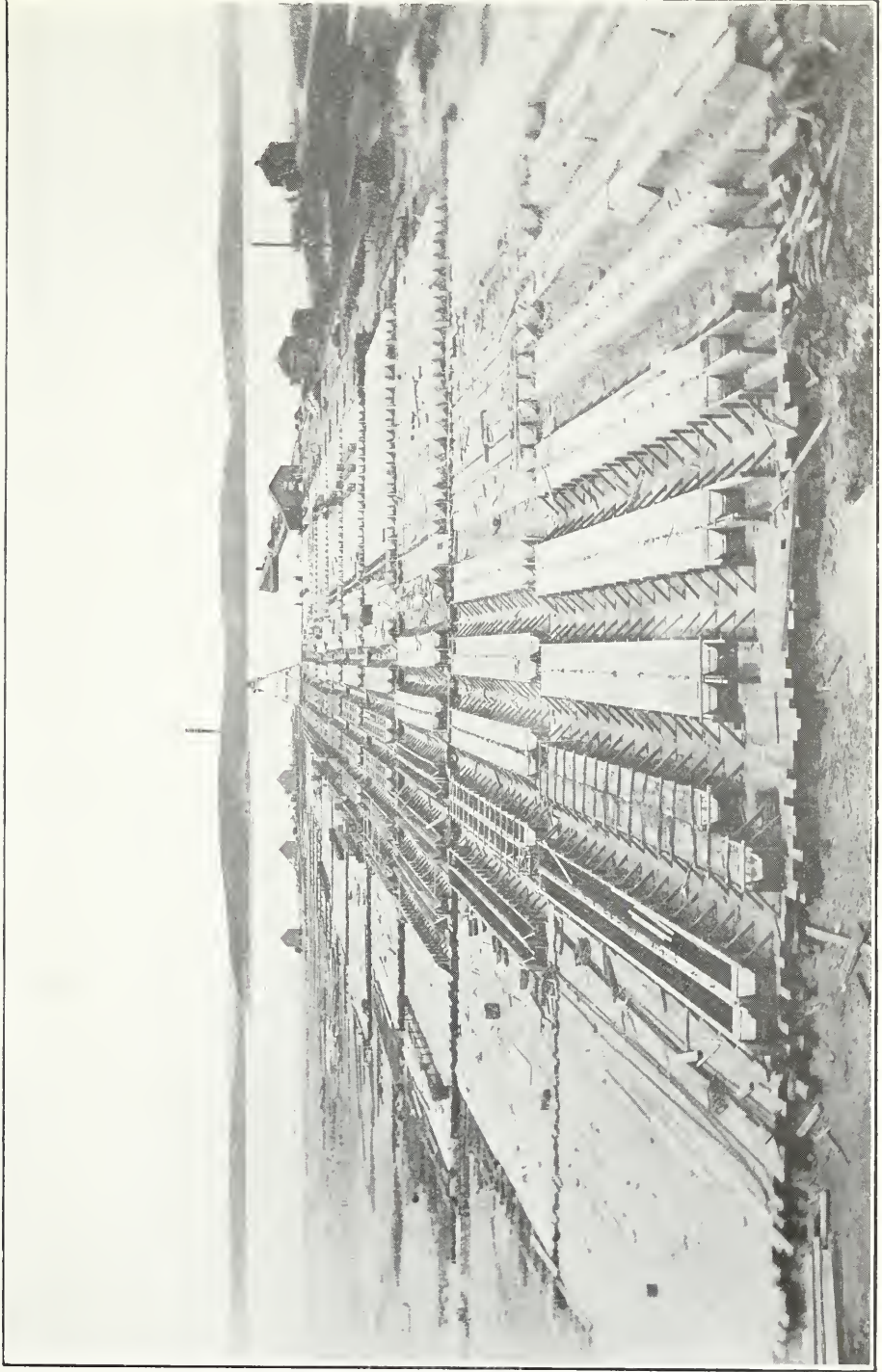
I. C. R. Halifax Terminal.—Concrete mixing tower.



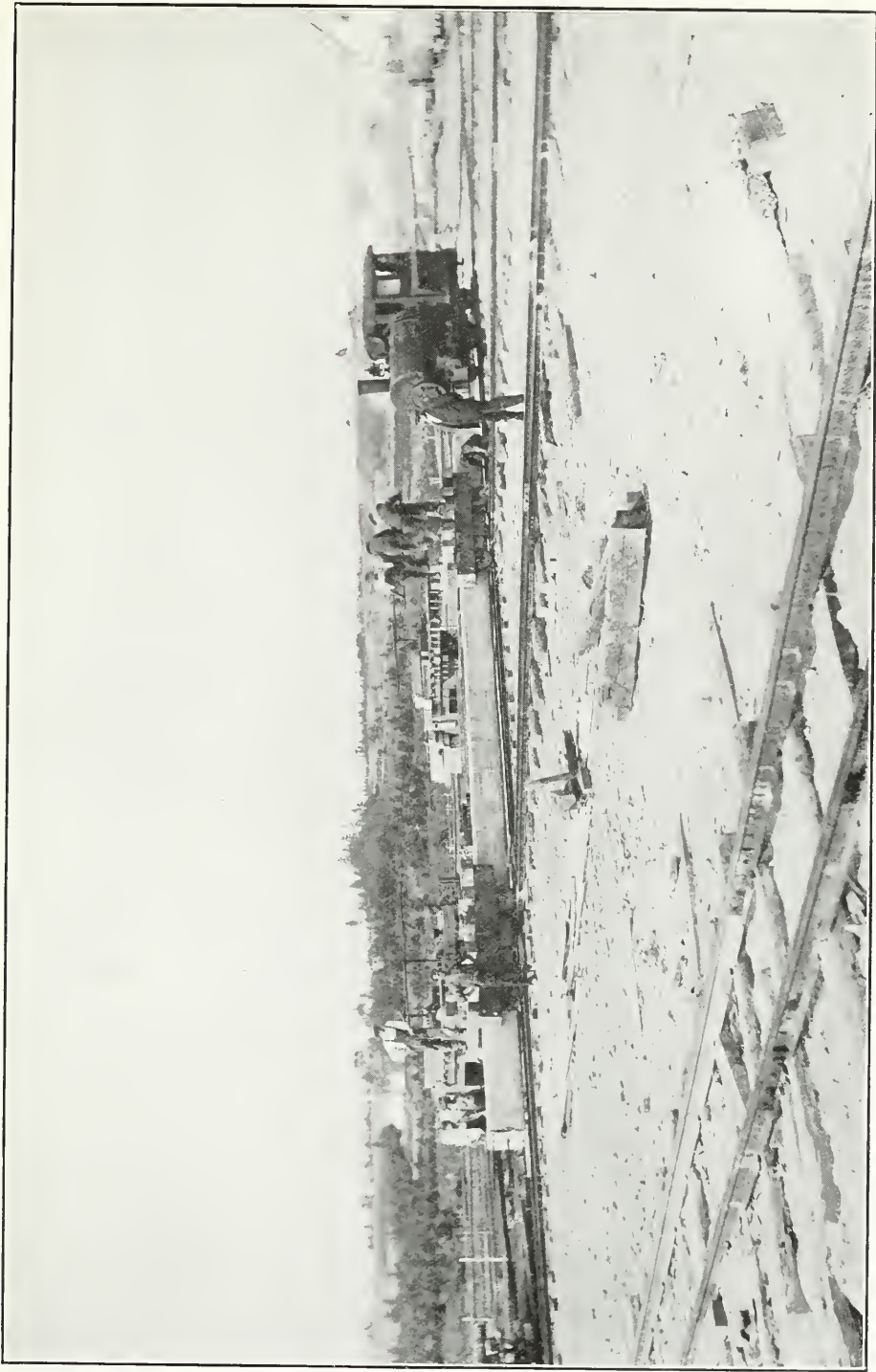
I. C. R. Halifax Terminals—Concrete mixing plant.



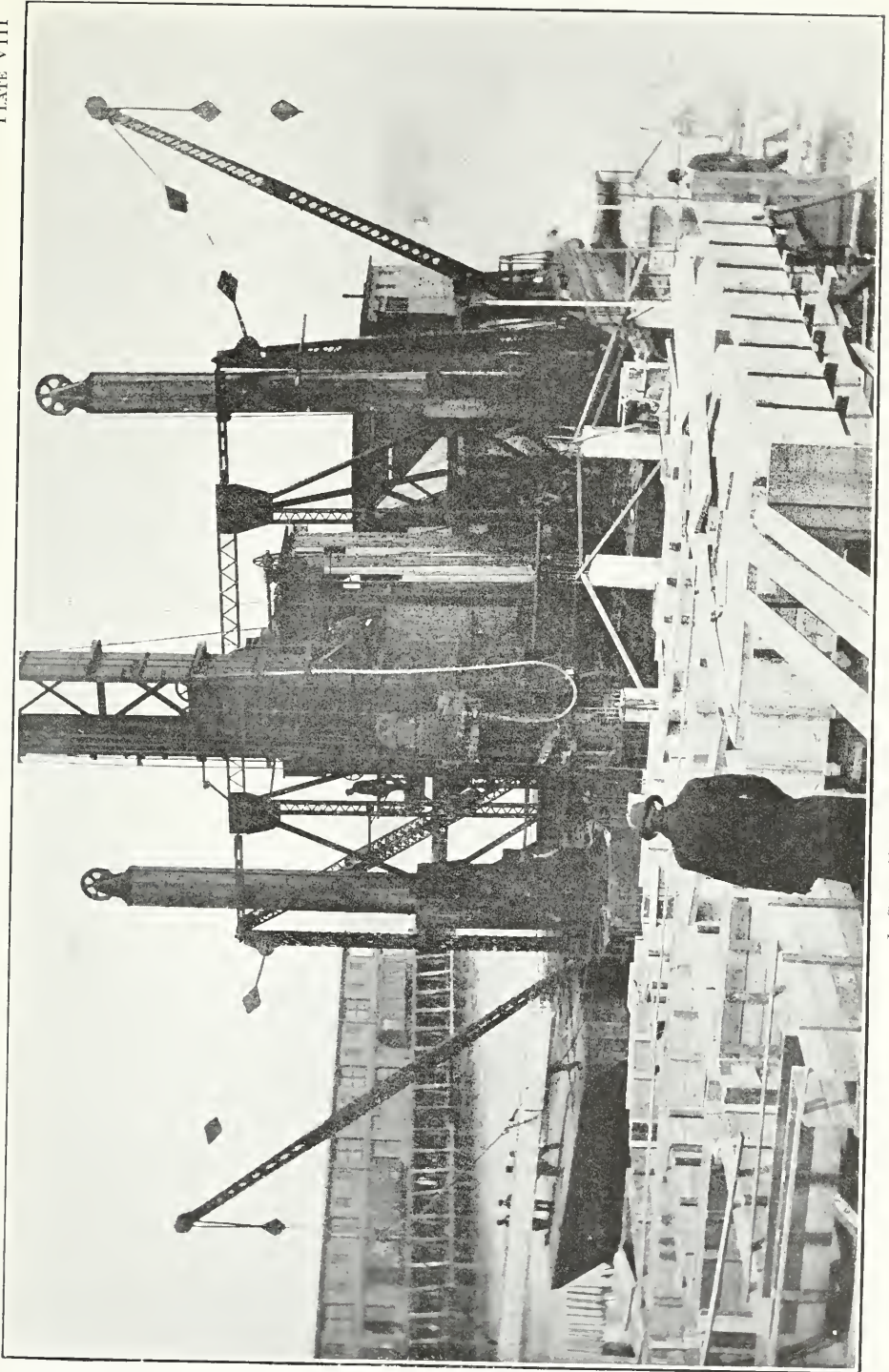
I. C. R. Halifax Terminals—Reinforcement for concrete piles.



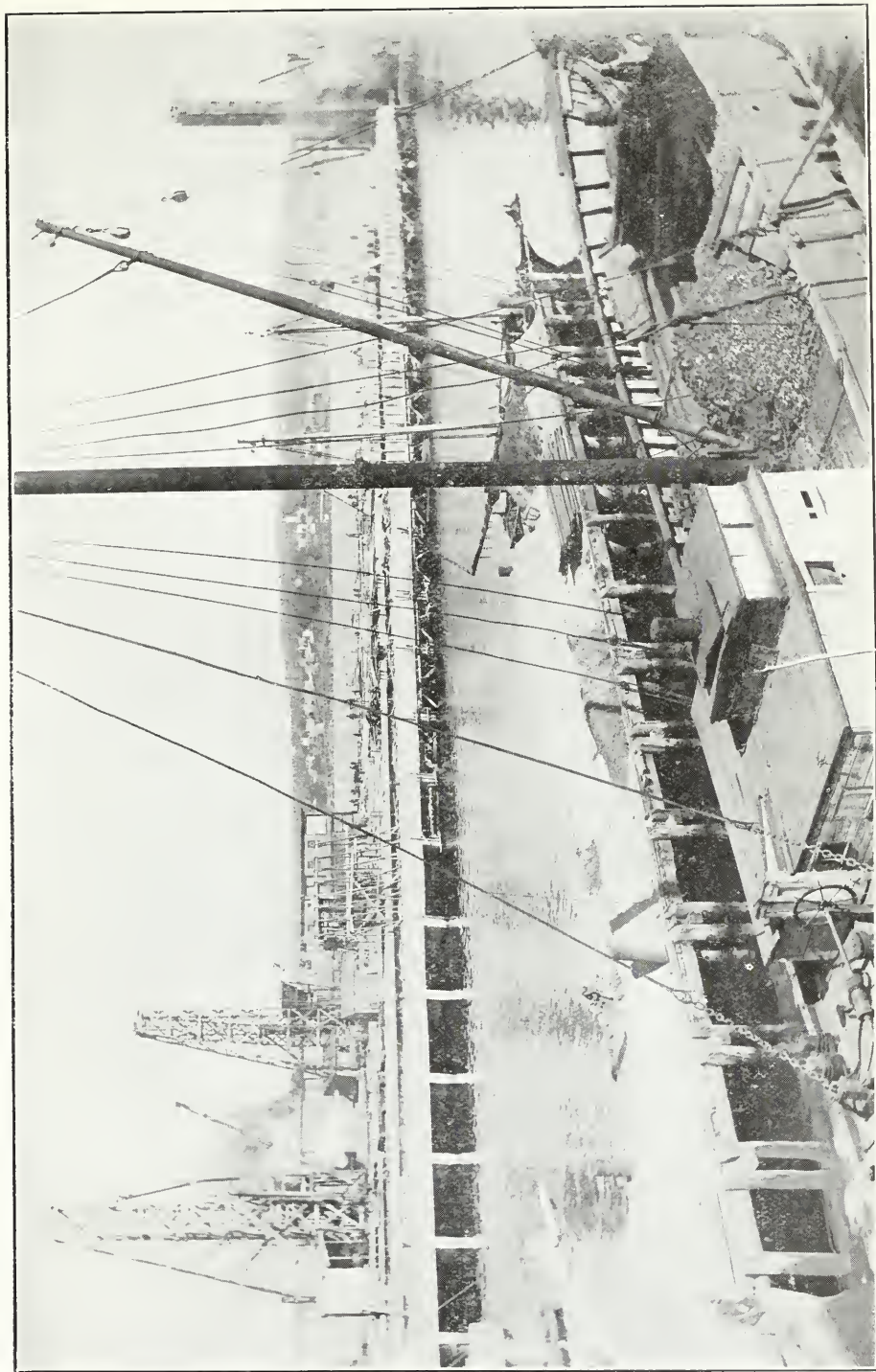
I. C. R. Halifax Terminals—Contractors' concrete pile making yard.



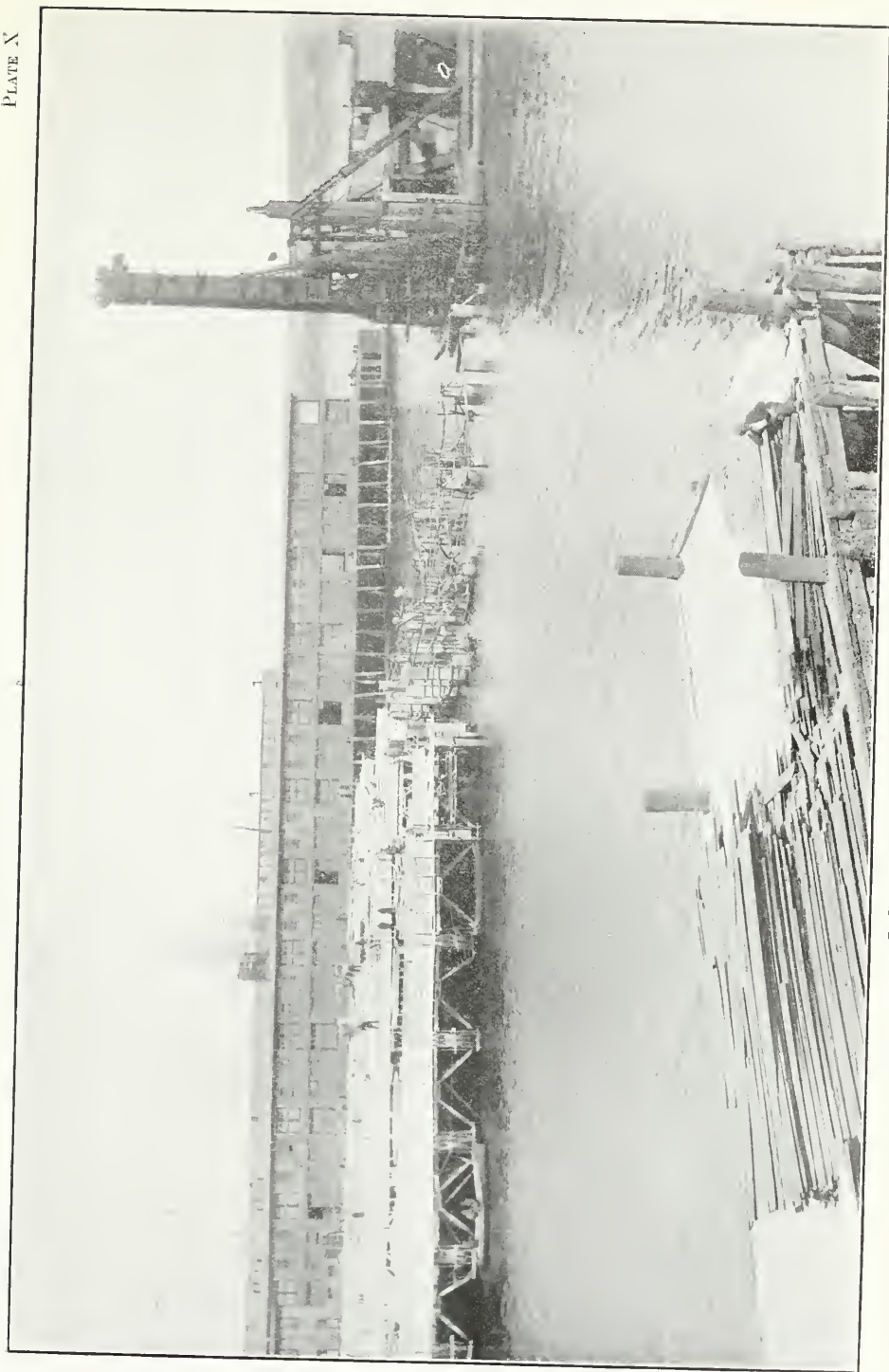
I. C. R. Halifax Terminals—Conveying concrete piles.



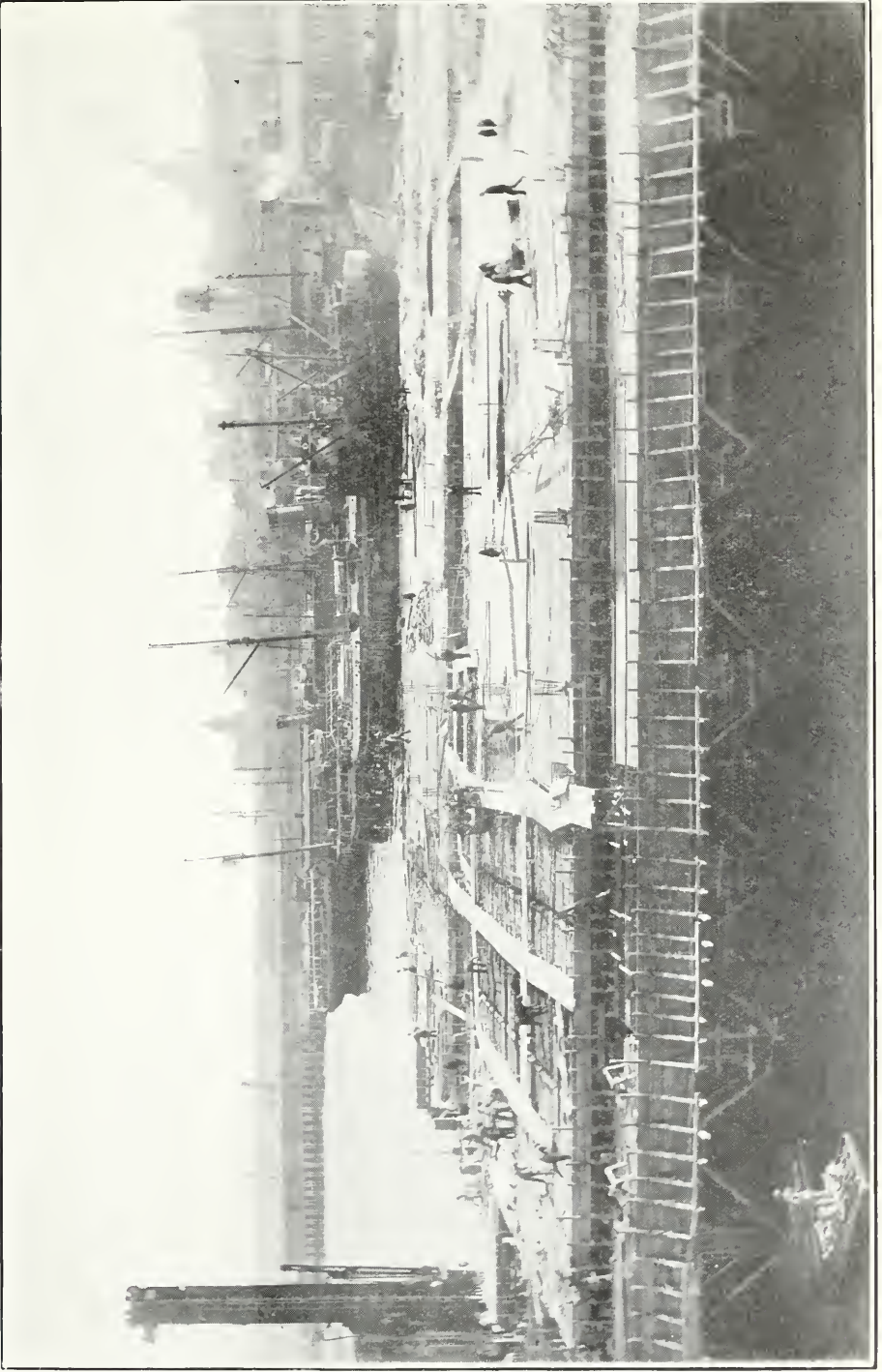
I. C. R. Halifax Terminals—Pile-driving and form work.



I. C. R. Halifax Terminals—View of pier, No. 2, looking north.



I. C. R. Halifax Terminals-- Pier No. 2, looking north.

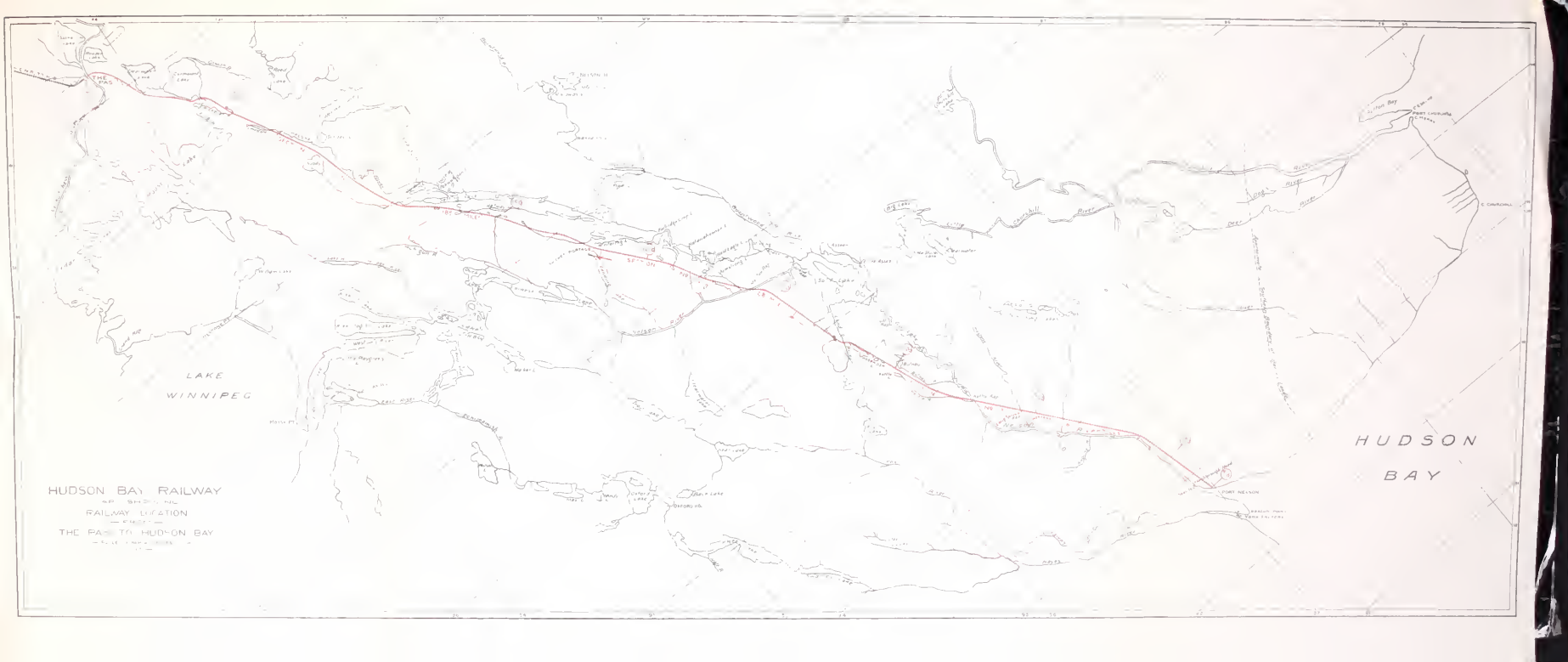


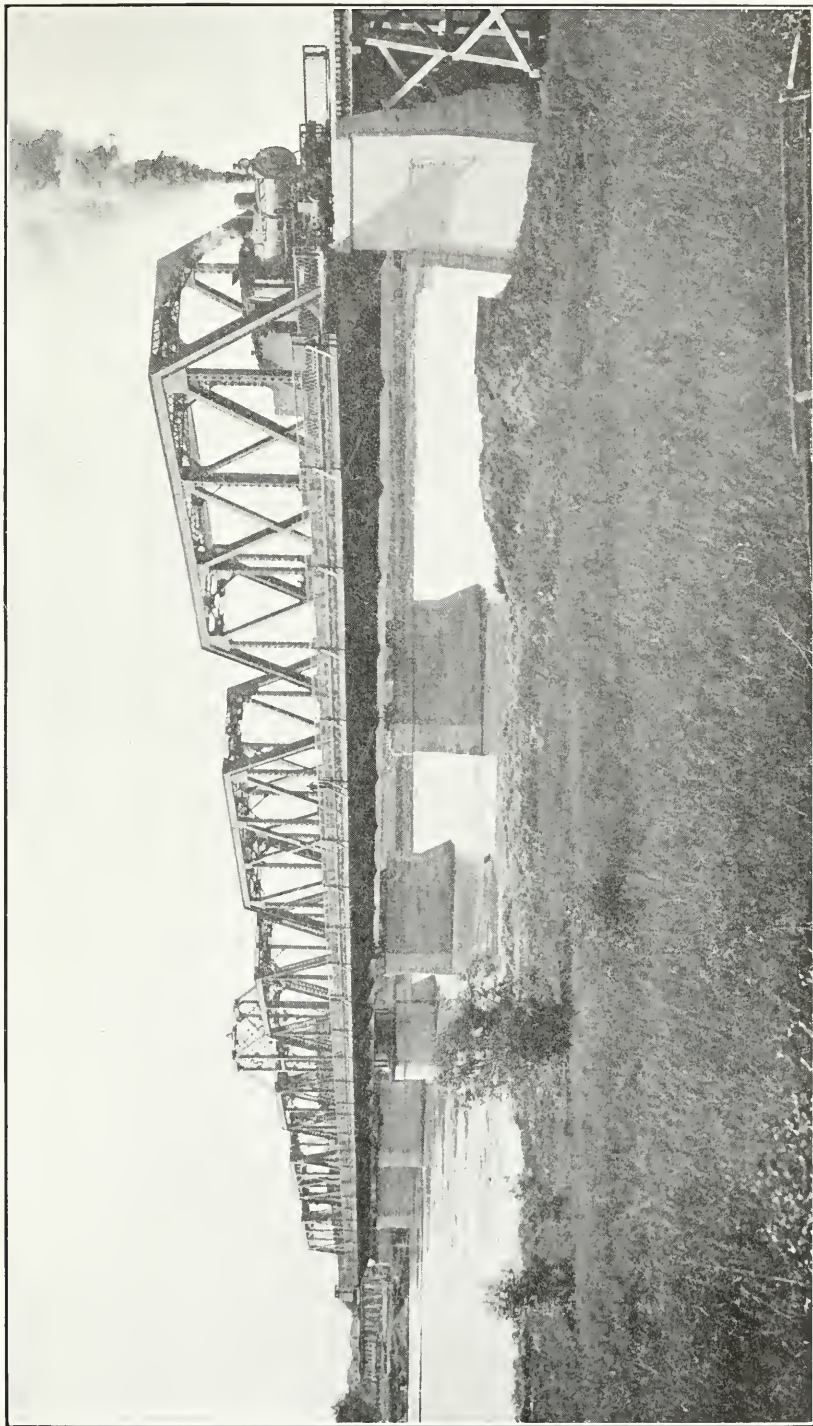
I. C. R. Halifax Terminals--Pier No. 2, looking south.

HUDSON BAY RAILWAY
AS SHOWN
RAILWAY LOCATION
THE PASS TO HUDSON BAY

LAKE
WINNIPEG

HUDSON
BAY





Hudson Bay Railway—Bridge across the River Saskatchewan at the Pas.



Hudson Bay Railway—Track laying from car.



Hudson Bay Railway—Log house camp Port Nelson.



Hudson Bay Railway—Dining camp, Port Nelson.



Hudson Bay Railway—Stockhouse at Port Nelson.



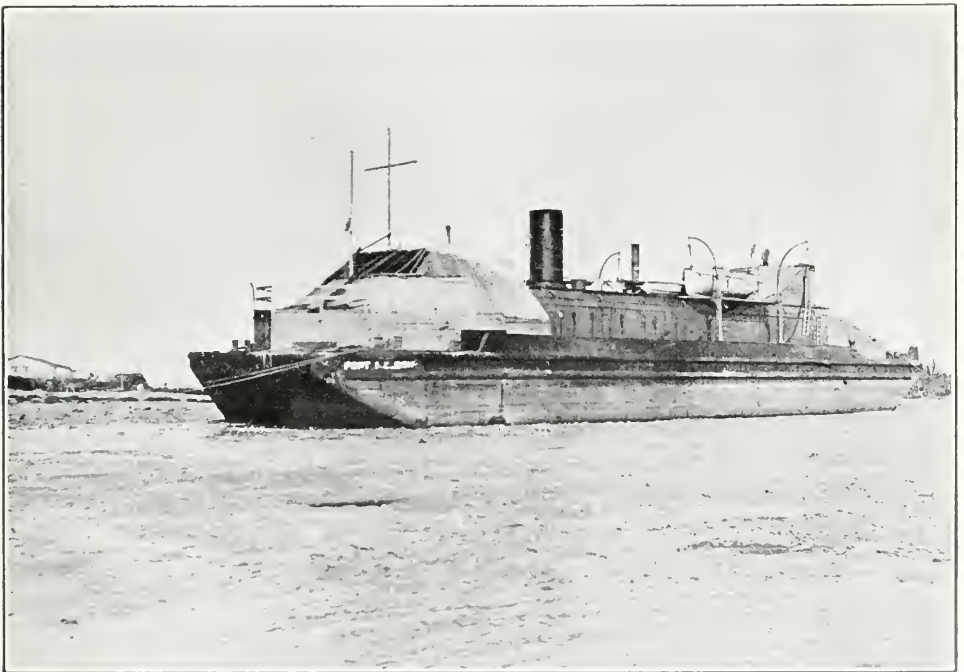
Hudson Bay Railway—Material yard, Port Nelson.



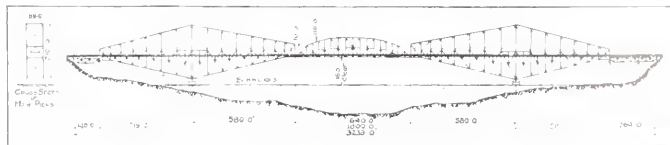
Hudson Bay Railway—Landing materials and supplies at the wharf, Port Nelson.



Hudson Bay Railway—Lighter at temporary wharf, Port Nelson.

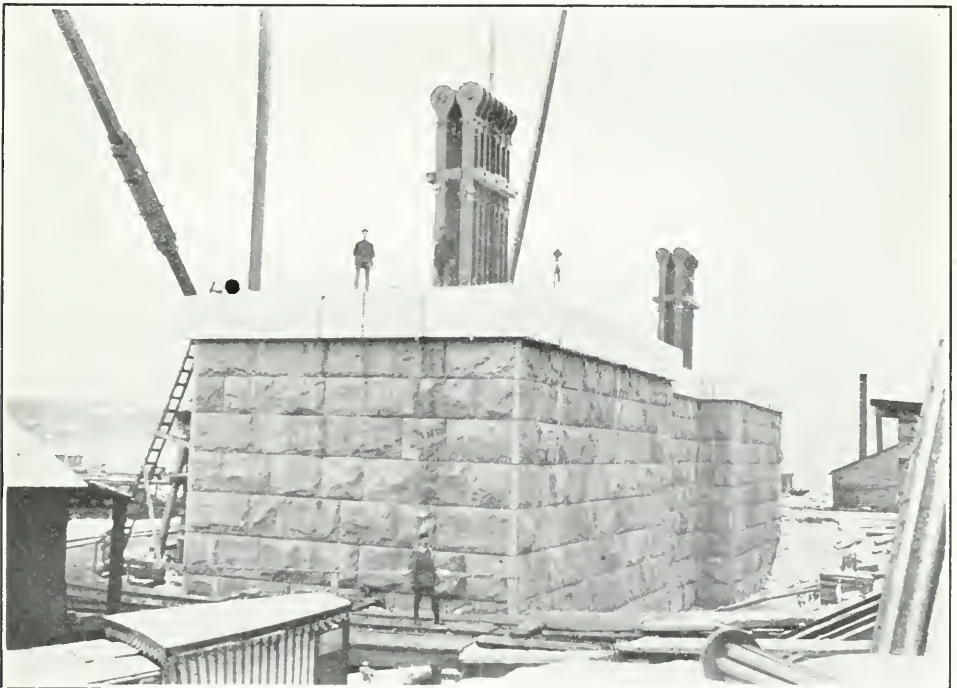


Hudson Bay Railway—Suction dredge at Port Nelson, Hudson Bay.





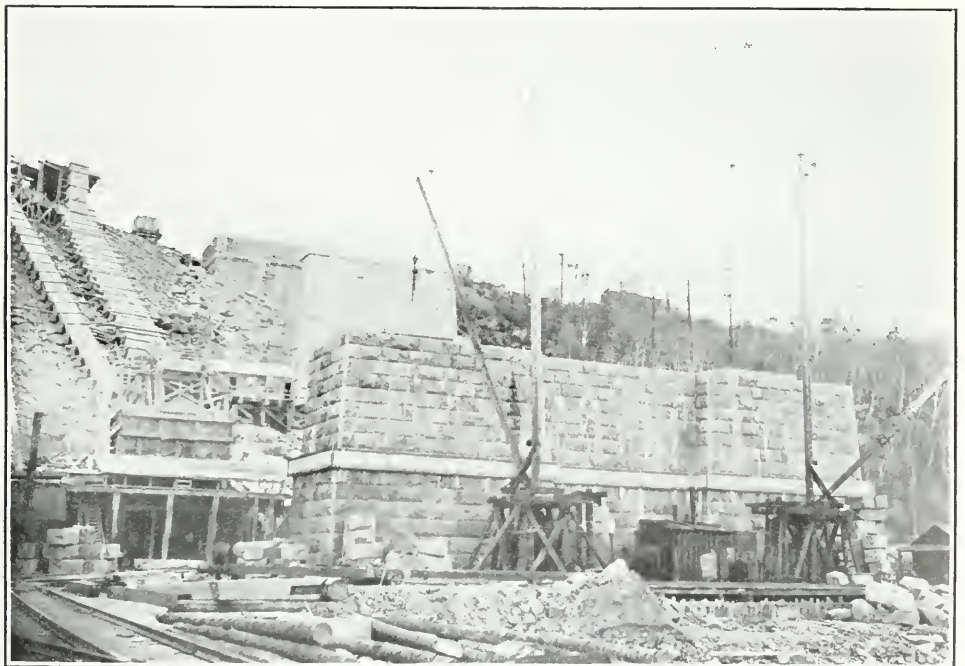
Quebec Bridge—General view of plant on south shore.



Quebec Bridge—North anchor pier, showing anchorage eye bars extending above pier.



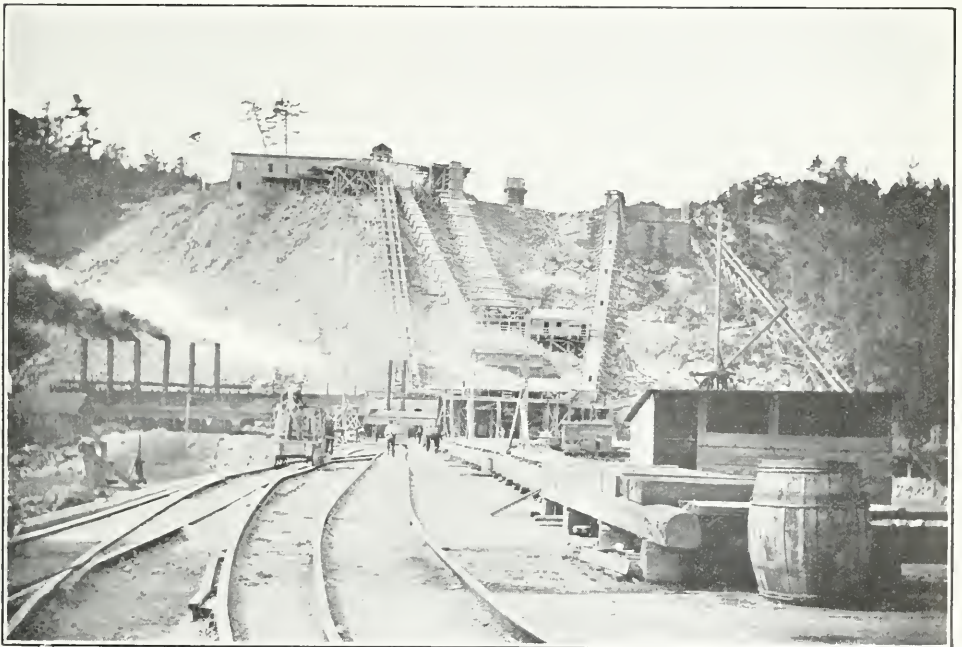
Quebec Bridge—North anchor pier and plant about north main pier.



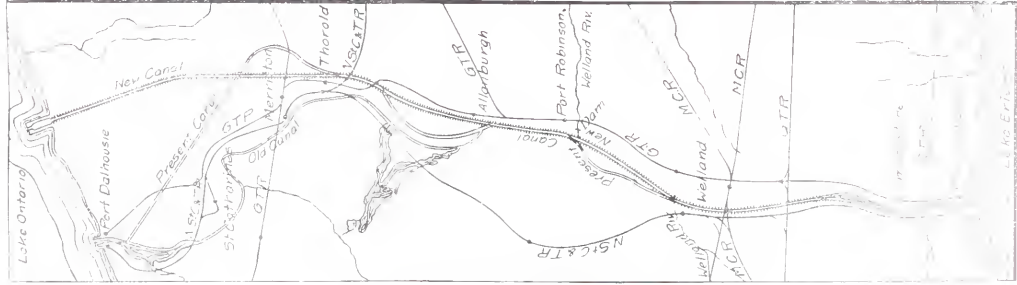
Quebec Bridge—North anchor pier and north intermediate pier.

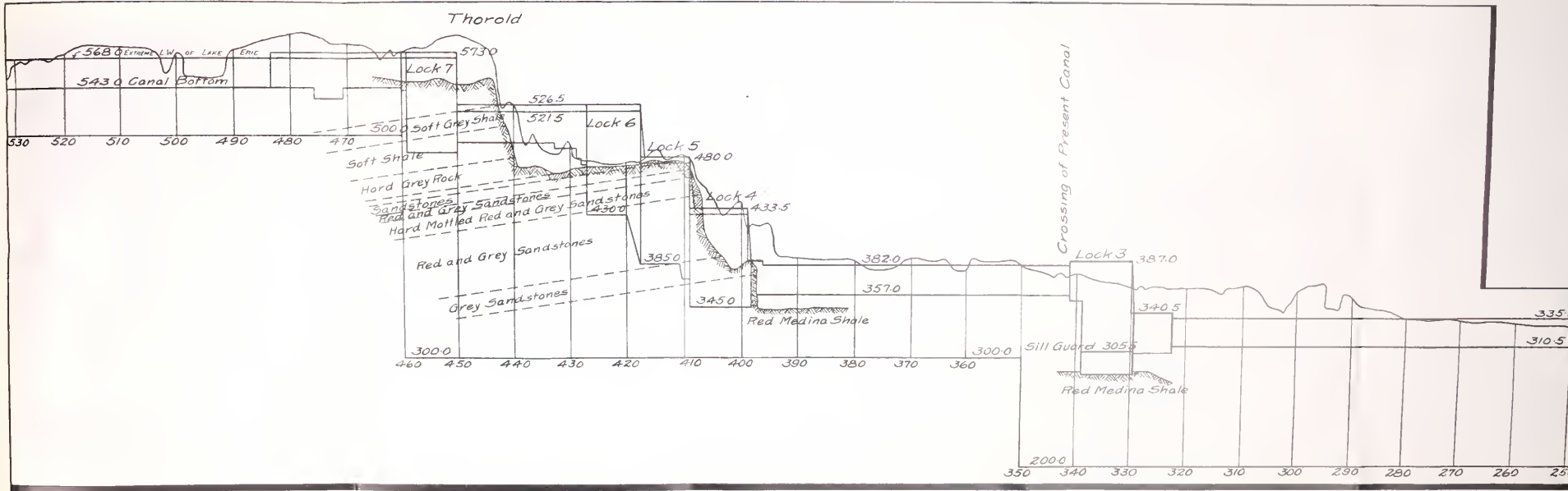


Quebec Bridge—North main pier in course of construction.

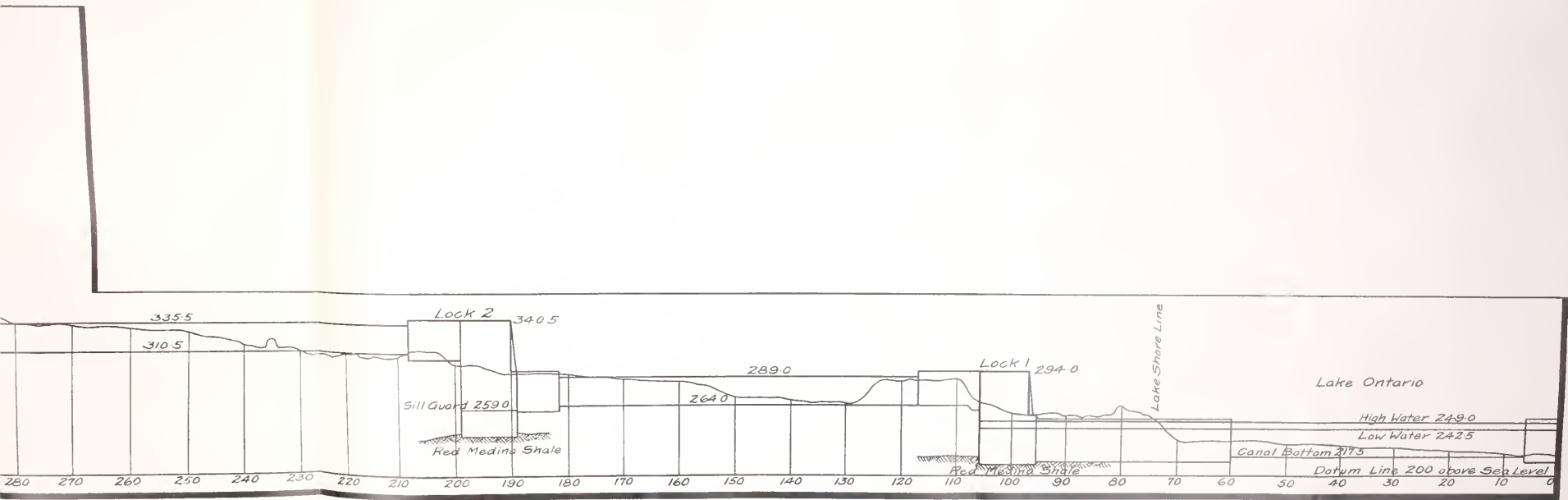


Quebec Bridge—Boiler, compressor and mixing plants, north side.



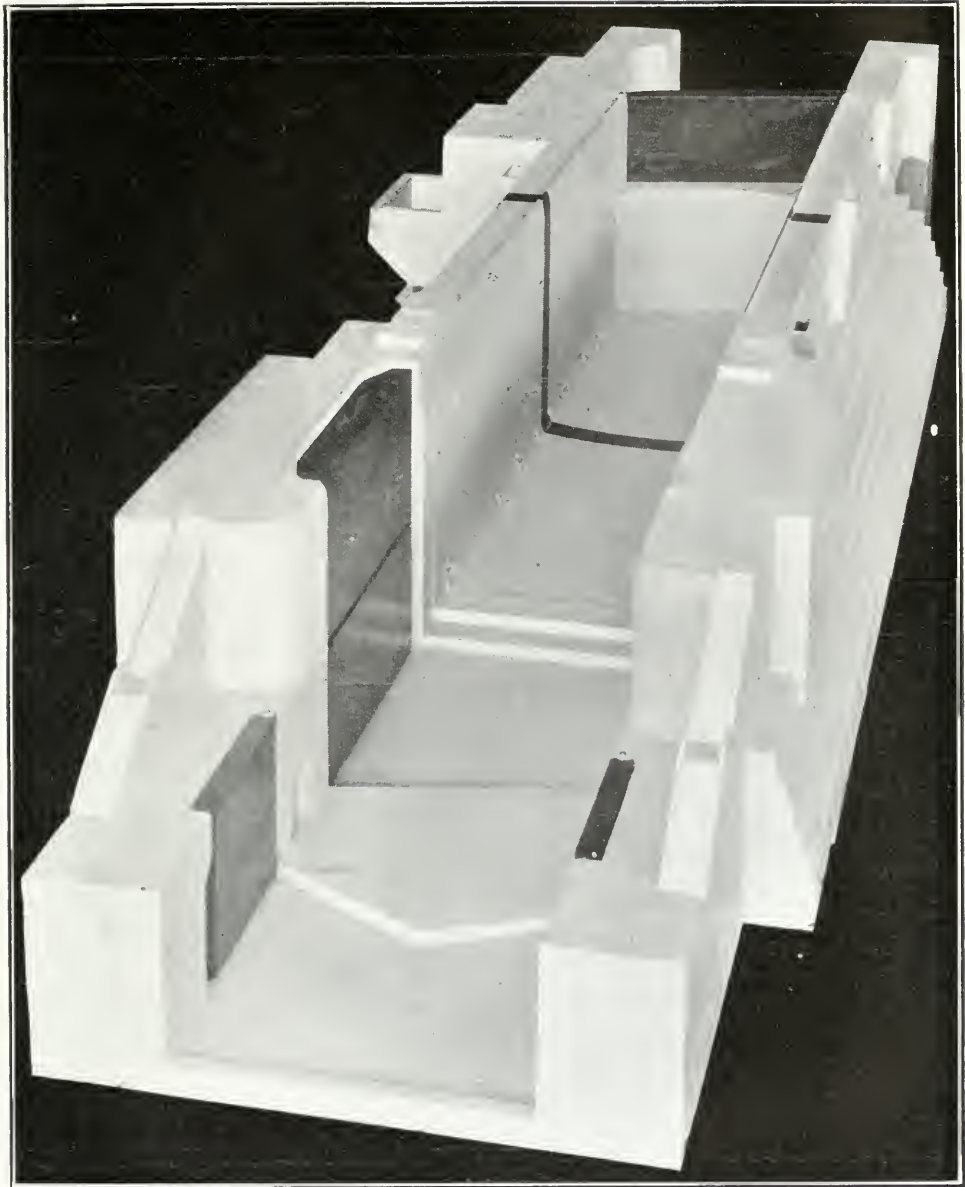


PROFILE OF LOCK SECTION OF NEW WELL

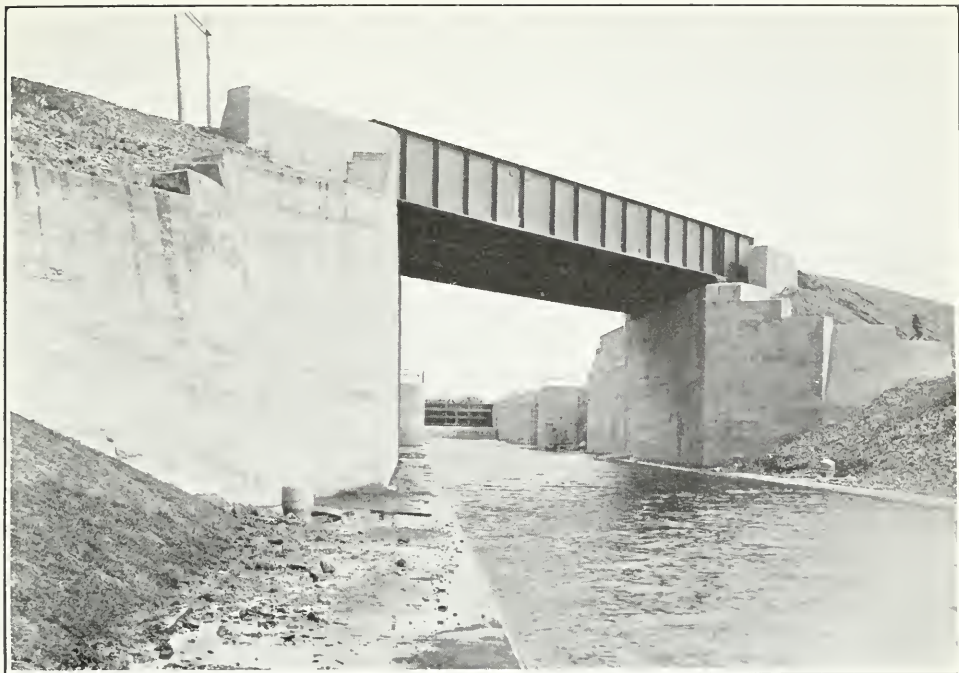


SECTION OF NEW WELLAND SHIP CANAL

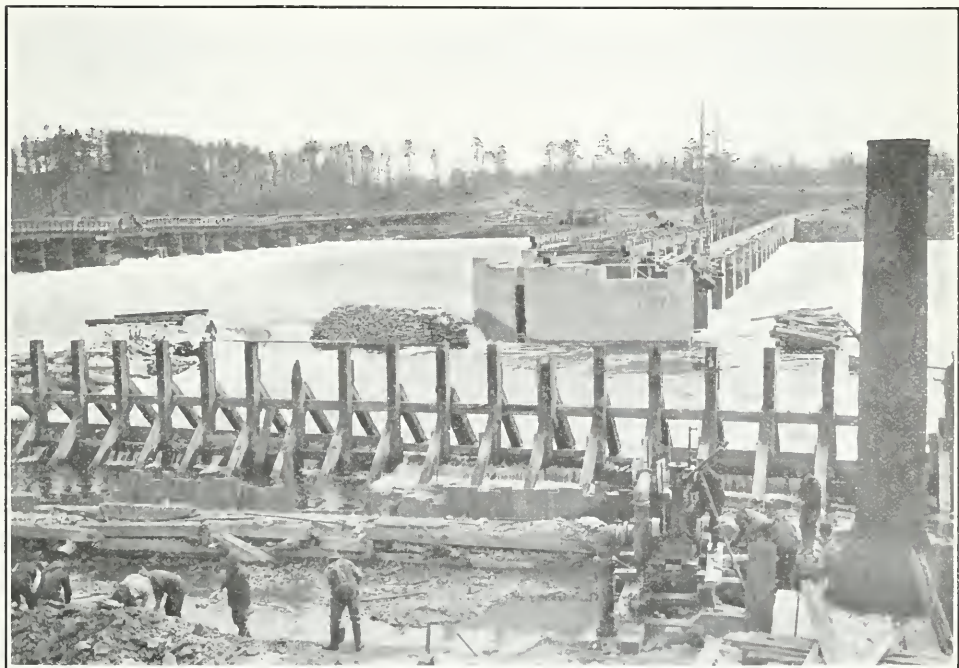




New Welland Ship Canal—Model of Lock No. 1, upper and lower entrances. The middle portion (460 feet) is omitted.



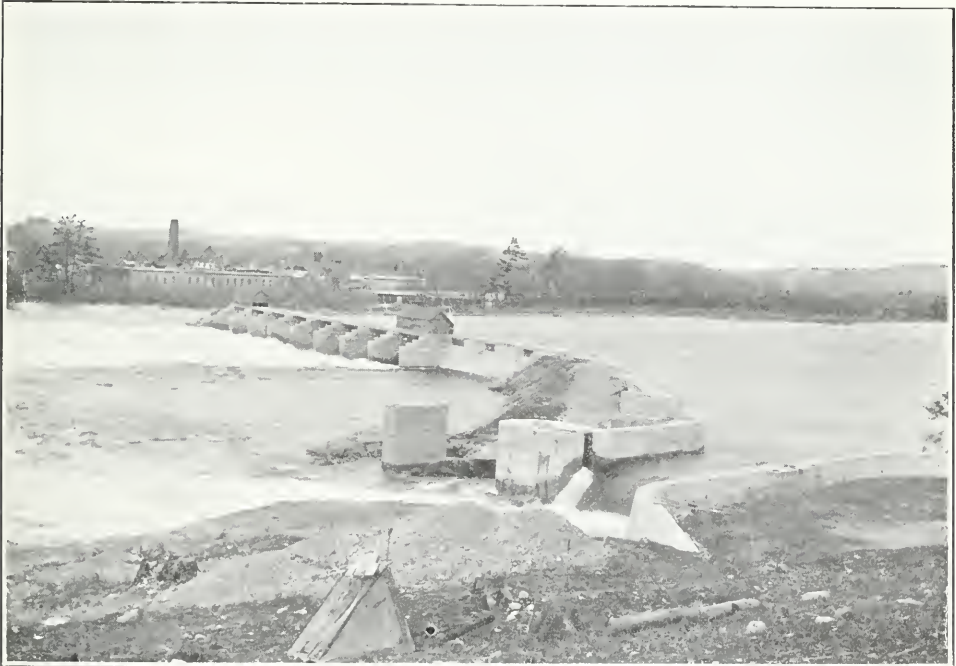
Trent Canal--G. T. R. bridge over canal at Trenton.



Trent Canal - Dam No. 1, Ontario - Rice Lake Division.



Trent Canal, Ontario—Rice Lake division dam 5, with coffer dam for power house.

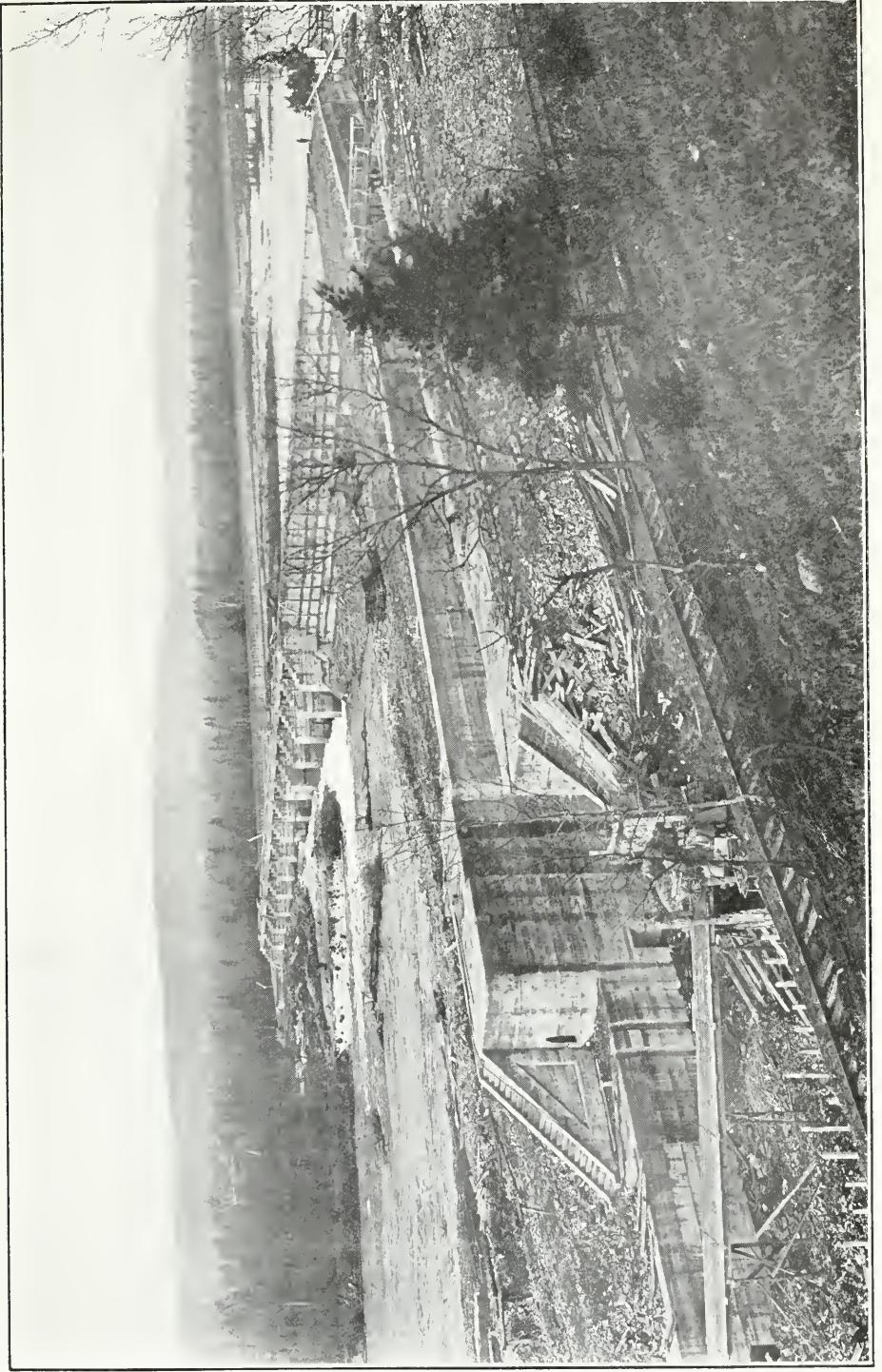


Trent Canal—Dam No. 6, Ontario—Rice Lake division.

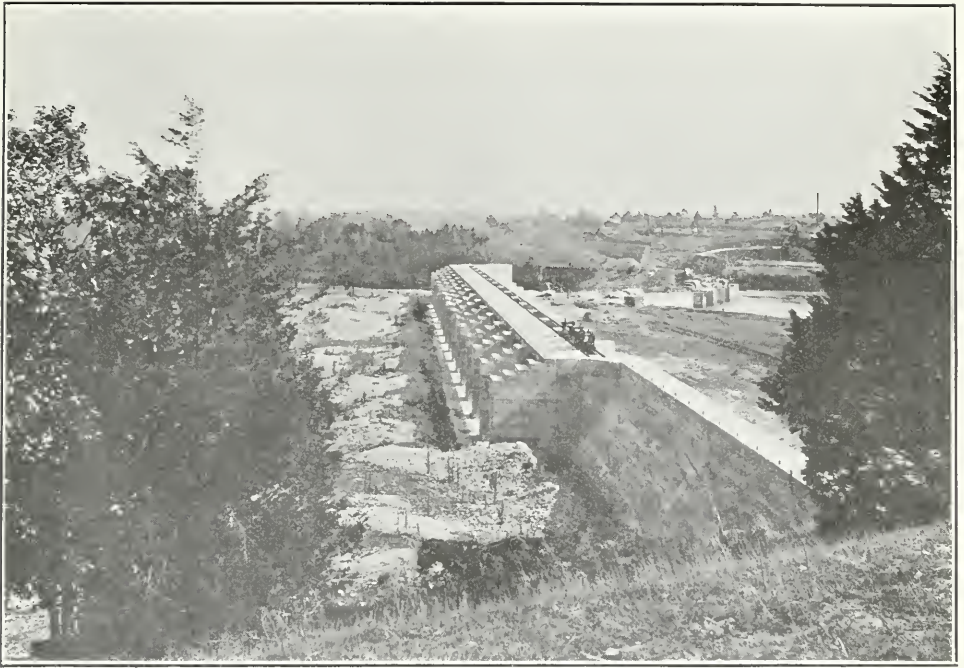
PLATE XXVIII



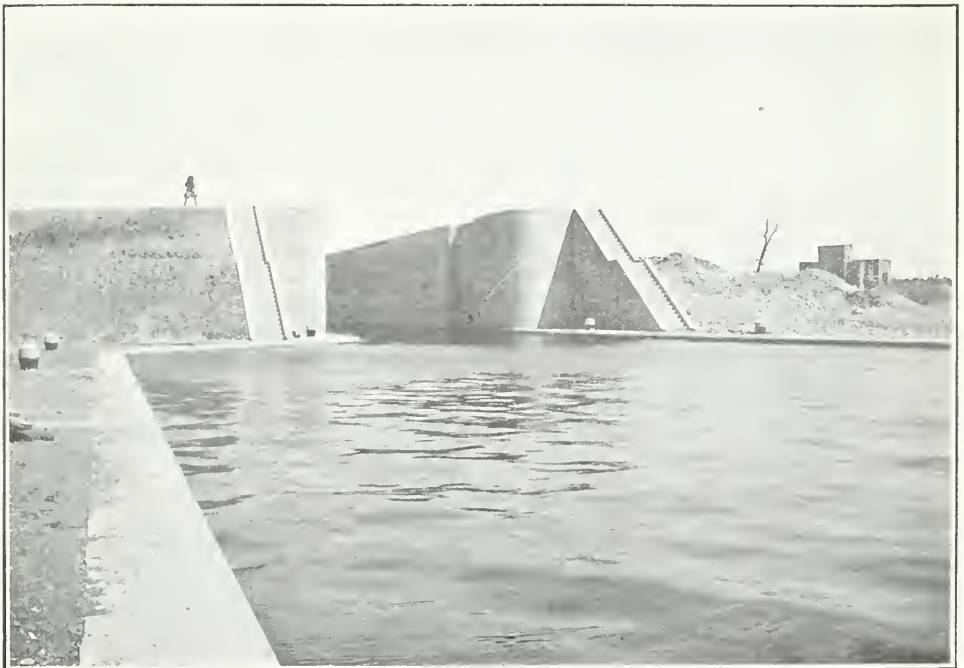
Trent Canal, Ontario—Rice Lake division, looking up stream at Lock No. 3, from Glen Miller bridge.



Trent Canal—Section 4, Ontario—Rice Lake division, Lock 8 and dam 9; under construction.



Trent Canal - Ontario - Rice Lake division, section 6, looking south east at dam 14 - Healey Falls is immediately below this dam.



Trent Canal—Lower entrance to Lock No. 13, Ontario—Rice Lake division.



Trent Canal Lower entrance to Locks 16 and 17, Ontario—Rice Lake division.



Trent Canal Lower entrance to lock at Hastings.



Trent Canal—Ontario—Rice Lake division, new dam at Hastings from north end of old dam.



Trent Canal— Down stream view of Burleigh Falls new dam.



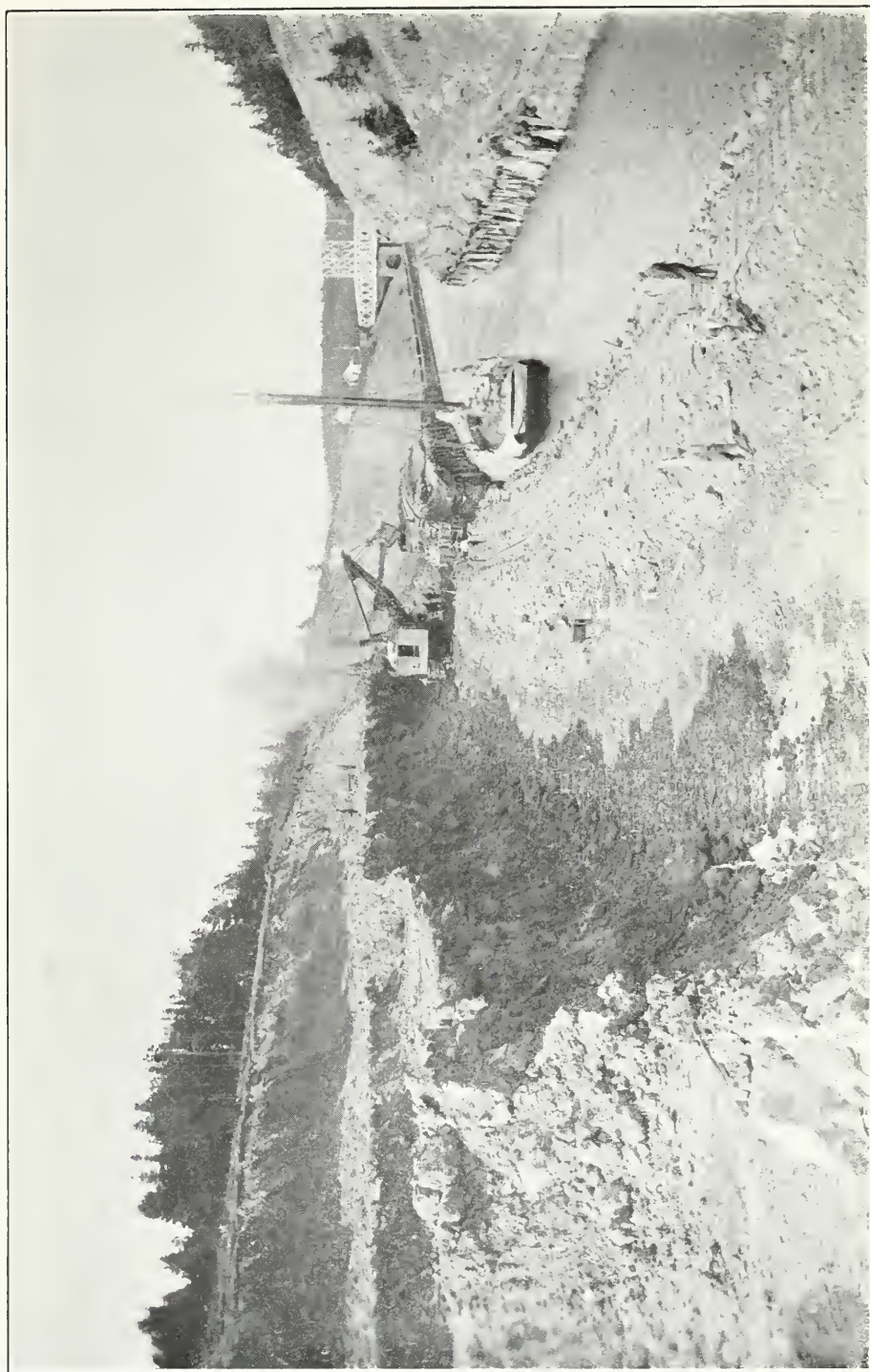
Trent Canal—Lakefield—Balsam Lake division. Up stream view of new Burleigh Falls dam.



Trent Canal—Lakefield—Balsam Lake division, Burleigh Falls new dam, looking north.



Trent Canal—Crow River Weir. Submerged dam.



St. Peter's Canal, Cape Breton Works of improvement in progress.



Prince Arthur's Landing (now Port Arthur) Lake Superior. Arch erected on the wharf to welcome the Governor General, Lord Dufferin, in 1874.



Main street, Winnipeg, 1872. The third shanty on the right was the private office of the Provincial Attorney General.

DEPARTMENT OF RAILWAYS AND CANALS

CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1913

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY THE KING'S PRINTER, PRINTER TO THE KING'S MOST
EXCELLENT MAJESTY

1914

To Field Marshal His Royal Highness PRINCE ARTHUR WILLIAM PATRICK ALBERT, Duke of Connaught and of Strathearn, and Earl of Sussex, (in the Peerage of the United Kingdom), Prince of the United Kingdom of Great Britain and Ireland; Duke of Saxony; Prince of Saxe-Coburg and Gotha; Knight of the Most Noble Order of the Garter; Knight of the Most Ancient and Most Noble Order of the Thistle; Knight of the Most Illustrious Order of Saint Patrick; one of His Majesty's Most Honourable Privy Council; Great Master of the Most Honourable Order of the Bath; Knight Grand Commander of the Most Exalted Order of the Star of India; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George; Knight Grand Commander of the Most Eminent Order of the Indian Empire; Knight Grand Cross of the Royal Victorian Order; Personal Aide-de-Camp to His Majesty the King; Governor General and Commander-in-Chief of the Dominion of Canada.

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to your Royal Highness Canal Statistics for the year ended December 31, 1913.

All of which is respectfully submitted.

F. COCHRANE,

Minister of Railways and Canals.

To the Honourable F. COCHRANE,
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Comptroller of Statistics in relation to the operations of the Canals of the Dominion for the year ended December 31, 1913.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL,
Deputy Minister of Railways and Canals.

OFFICE OF THE COMPTROLLER OF STATISTICS.
OTTAWA, 20th JAN. 1914.

A. W. CAMPBELL, Esq., C. E.,
Deputy Minister of Railways and Canals.

Sir,—I have the honour to submit herewith Canal Statistics for the year ended December 31, 1913.

The volume of traffic through the canals of Canada during the year 1913 aggregated 52,053,913 tons as compared with 47,587,245 in 1912. The increment of 4,466,668 tons was equal to 9.4 per cent.

The total traffic for 1913 was distributed among the various canals as follows:

	Tons.	Increase.	Decrease.
Sault Ste. Marie.....	42,699,324	3,029,669	
Welland.....	3,570,714	718,799	
St. Lawrence.....	4,302,427	825,239	
Chambly.....	555,602		62,813
St. Peters.....	71,514		3,295
Murray.....	180,576	10,495	
Ottawa.....	365,438		26,912
Rideau.....	171,223	11,090	
Trent.....	55,800		21,350
St. Andrews.....	81,295		14,254
Total.....	52,053,913	4,595,292	128,624

It should be understood, that the foregoing figures do not give the net tonnage. They represent the aggregate of the traffic which passed through all the canals, and it happens that a cargo may pass through two or more canals. From the analysis made in the Department it may be said that the traffic of 1913, after eliminating duplication, involved a net tonnage of 44,901,804, of which 6,654,311 tons were of Canadian origin.

On the basis of gross traffic the following table will show the growth since 1904:—

1904.....	8,256,236 Tons.
1905.....	9,371,744 "
1906.....	10,523,185 "
1907.....	20,543,639 "
1908.....	17,502,820 "
1909.....	33,720,748 "
1910.....	42,990,608 "
1911.....	38,030,353 "
1912.....	47,587,245 "
1913.....	52,053,913 "

The increase of traffic through the canals of Canada for the decade was equal to 530 per cent.

For purposes of comparison, the following table will show upon what canals the growth has taken place during the past five years:—

	1909.	1910.	1911.	1912.	1913.
Sault Ste. Marie.....	27,861,245	36,395,687	30,951,709	39,669,655	42,699,324
Welland.....	2,025,951	2,326,290	2,537,629	2,851,915	3,570,714
St. Lawrence.....	2,410,629	2,760,752	3,105,708	3,477,188	4,302,427
Chambly.....	752,117	669,299	599,829	618,415	555,602
St. Peters.....	79,850	85,951	75,298	74,809	71,514
Murray.....	102,291	177,941	163,457	170,081	180,576
Ottawa.....	336,939	385,261	320,071	392,350	365,438
Rideau.....	91,774	134,881	172,227	160,133	171,223
Trent.....	59,952	46,263	57,290	77,150	55,800
St. Andrew's.....		8,283	47,135	95,549	81,295

Details of traffic, showing the tonnage of commodities, will be found in tables constituting the body of this report. Comparing the years 1912 and 1913, following was the tonnage by classes and canals:—

Canals.	Agricultural Products.	Animal Products.	Manu- factures.	Products of Forest.	Products of Mines.	Total.
1912.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie.....	4,530,792	372	975,303	54,114	34,109,074	39,669,655
Welland.....	1,205,912	678	625,569	227,684	792,072	2,851,915
St. Lawrence.....	1,119,567	9,375	464,091	578,760	1,305,395	3,477,188
Chambly.....	19,706	338	11,600	425,313	161,458	618,415
St. Peter's.....	15,427	2,996	7,583	11,161	37,642	74,809
Murray.....	448	37	101,511	706	67,379	170,081
Ottawa.....	5,278	2,880	20,958	226,600	136,634	392,350
Rideau.....	3,995	3,151	18,814	28,642	105,531	160,133
Trent.....	2,514	361	3,459	67,489	3,327	77,150
St. Andrew's.....	37		60	14,153	81,299	95,549
Total.....	6,903,676	20,188	2,228,948	1,634,622	36,799,811	47,587,245
1913.						
Sault Ste. Marie.....	5,253,665	198	733,910	62,958	36,648,593	42,699,324
Welland.....	1,684,967	361	548,373	337,927	999,086	3,570,714
St. Lawrence.....	1,545,775	8,269	460,161	660,226	1,627,996	4,302,427
Chambly.....	13,432	490	20,217	337,331	184,132	555,602
St. Peter's.....	15,935	2,492	8,078	6,301	38,708	71,514
Murray.....	568	13	75,803	55	104,137	180,576
Ottawa.....	2,331	3,657	15,901	186,710	156,839	365,438
Rideau.....	3,437	3,458	15,213	27,331	121,784	171,223
Trent.....	1,840	298	2,414	50,812	436	55,800
St. Andrew's.....	377	65	1,629	9,274	69,950	81,295
Total.....	8,522,327	19,301	1,881,699	1,678,925	39,951,661	52,053,913

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The ratio which each of the foregoing classes bore to the total volume of traffic during the past four years is shown in the following statement:—

	1910.	1911.	1912.	1913.
	Per cent.	Per cent.	Per cent.	Per cent.
Agricultural products.....	10.2	14.2	14.51	16.40
Animal ".....	1.2	.1	.04	.04
Manufactures.....	5.2	6.2	4.68	3.61
Products of forests.....	3.9	4.0	3.43	3.22
" of mines.....	79.5	75.5	77.34	76.73

It will be at once observed that an overwhelming proportion of the traffic through the canals consists of products of the mine. This significant situation will be dealt with under the next heading. It arises entirely from the use made of the Canals of Canada by vessels belonging to the United States.

CANADIAN AND AMERICAN TRAFFIC.

The public service of Canadian canals must be measured in the light of the nationality of the traffic. The canals are entirely free to the vessels of the United States and Canada. Up to 1909 no record was kept of the origin of cargoes; but since that year it has been possible to separate the business of the United States from that of Canada.

The facts with respect to the tonnage of vessels and of cargoes during the past six years are as follows:—

Year.	Canadian Vessels.		U. S. Vessels.		Freight Tonnage.		
	No.	Tonnage.	No.	Tonnage.	Canadian.	United States.	Total.
1908.....	29,040	6,780,789	7,489	4,835,320	5,012,147	12,190,673	17,502,820
1909.....	22,507	7,811,578	9,996	16,459,322	7,378,057	26,342,691	33,720,743
1910.....	25,337	8,931,790	11,462	21,777,297	7,883,614	35,106,994	42,990,608
1911.....	25,585	9,172,192	10,370	18,231,622	7,792,907	30,237,446	38,030,353
1912.....	27,371	10,237,335	11,785	24,636,190	9,376,529	38,210,716	47,587,245
1913.....	28,654	12,078,041	10,739	24,238,788	11,130,875	40,923,038	52,053,913

Gathering the foregoing facts with respect to freight tonnage into percentage form, the result is as follows:—

Year.	Canadian Per Cent.	American Per Cent.
1908.....	28.7	71.3
1909.....	21.8	78.2
1910.....	18.3	81.7
1911.....	20.5	79.5
1912.....	19.7	80.3
1913.....	21.3	78.7

These totals and percentages relate entirely to freight tonnage which passed through the canals of Canada. They do not include the traffic which

passed through the American canal at Sault Ste. Marie. At that point vessels passing up and down may take either the Canadian or American canal. When they pass through the Canadian canal a record is taken of the origin of the cargo; but when they pass through the American canal no such record is taken. Hence it is always impracticable to ascertain with exactness the volume of traffic which belongs to Canada. Until the United States takes cognizance of the origin of cargoes this unsatisfactory situation will continue.

A record is kept at the office of the Canadian canal at Sault Ste. Marie, and it was found that for 1913 but 6 per cent of all the freight tonnage which passed through both canals at that important gateway was carried in Canadian vessels.

The overwhelming proportion of American traffic which passes through the canals of Canada arises very largely at Sault Ste. Marie. In 1913 freight to the amount of 42,699,324 tons was transported through the Canadian canal. Of this 4,951,867, or 11.6 per cent, was of Canadian origin. The remainder, equalling 88.4 per cent, was American.

The situation is somewhat improved at the Welland canal. The total tonnage of freight which passed up and down at that point in 1913 was 3,570,714 and of this 2,093,406, or 58.3 per cent, belonged to Canada. Through the St. Lawrence canals 4,302,427 tons of freight were carried, and of this volume 2,837,419 tons were of Canadian origin, or 65.9 per cent. There was a marked betterment at the Welland canal in 1913 as compared with 1912, the proportion of distinctly Canadian business having risen from 54 to 81 per cent.

The character of the traffic at Sault Ste. Marie has a great deal to do with the preponderance of American tonnage. Of the 42,699,324 tons of freight which in 1913 passed through the Canadian canal, 32,445,067 tons consisted of ores, chiefly iron. Practically all of this business was American. If ores had been eliminated, the volume of Canadian business through the Canadian canal in 1913 would have been about equal to the American.

On a succeeding page, in the body of this report, will be found a statement showing the volume and character of the traffic which passed through the American canal at Sault Ste. Marie.

TRANSPORTATION OF CANADIAN WHEAT.

The movement of wheat from the head of Lake Superior eastward has become of increasing importance with the rapid development of the Canadian North West. Prior to 1909 the record was not kept in such a way as to separate Canadian wheat from American wheat. Bearing that fact in mind, following is a statement of the volume of wheat which has been brought down through the Canadian canal at Sault Ste. Marie.

	Bushels.
1895.....	4,518,334
1896.....	19,314,234
1897.....	17,925,834
1898.....	9,746,600
1899.....	12,759,634
1900.....	9,292,034
1901.....	9,639,534
1902.....	27,912,500
1903.....	32,233,934
1904.....	29,794,100
1905.....	25,983,100
1906.....	34,389,300
1907.....	49,399,967
1908.....	58,574,034
1909.....	*48,047,833
1910.....	51,774,833
1911.....	63,641,000
1912.....	83,743,034
1913.....	101,066,133

*For the first time represents Canadian wheat only. The figures of preceding years include American wheat which passed through the Canadian canal.

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There also were brought down through the American canal at Sault Ste. Marie 40,660,766 bushels of Canadian wheat in 1913.

A summary of the facts with respect to Canadian wheat for 1913 might be given in the following form:—

	Bushels.
Through Canadian canal.....	101,066,133
Through American canal.....	40,660,766
Total.	141,726,899

As compared with 1912 this total shows an increase for 1913 of 31,884,868 bushels.

There were also brought down from the West 1,684,170 barrels of Canadian flour, which, at $4\frac{1}{2}$ bushels to the barrel, would represent 7,578,765 bushels of wheat. This would bring the final total up to 149,305,664 bushels of Canadian wheat. The aggregate on this basis in 1912 was 123,986,931; so that the net increase, counting wheat and flour together, for 1913 was 25,318,733 bushels.

A careful analysis has been made of the course which Canadian wheat took in 1913 in its transportation by water. In order to make the statement complete, copies of all the ships' reports filed at the office of the American canal at Sault Ste. Marie were procured, and from these the movement of Canadian wheat through that channel was tabulated.

Taking first the facts in relation to the Canadian wheat which passed through the Canadian canal, the distribution in 1913 was as follows:—

	Bushels.
Port Arthur—Fort William to Montreal.....	11,233,133
“ “ Georgian Bay...	21,532,134
“ “ Other Canadian	
Ports.....	25,580,000
Buffalo.....	39,282,500
Duluth to Montreal.....	437,533
“ Georgian Bay.....	416,067
“ Other Canadian ports.....	281,600
“ Buffalo.....	2,303,166
Total.....	101,066,133

The volume of Canadian wheat which passed through the American canal at Sault Ste. Marie in 1913 was distributed as follows:—

	Bushels.
Port Arthur—Fort William to Montreal.....	717,300
“ “ Georgian Bay...	2,916,000
“ “ Other Canadian	
ports.....	2,465,733
Buffalo.....	28,419,400
Duluth to Montreal.....	2,798,666
“ Georgian Bay.....	1,189,800
“ Other Canadian ports.....	646,000
“ Buffalo.....	1,507,867
Total.....	40,660,766

Combining the Canadian wheat which passed through the Canadian canal with the Canadian wheat which passed through the American canal the statement for 1913 would be as follows:—

Canadian Wheat.	Bushels.	Per cent.
Port Arthur—Fort William to Montreal.....	11,950,433	8.4
“ “ “ Georgian Bay.....	24,448,134	17.2
“ “ “ Other Canadian ports.....	28,045,733	19.8
“ “ “ Buffalo.....	67,701,900	47.8
Duluth to Montreal.....	3,236,199	2.3
“ “ Georgian Bay.....	1,605,867	1.1
“ “ other Canadian ports.....	927,600	.7
“ “ Buffalo.....	3,811,033	2.7
Total.....	141,726,899	100.0

The “other Canadian ports” referred to in the foregoing statements are ports between Georgian Bay and Lake Ontario.

Cargoes consigned to Kingston are counted as being to Montreal, since Kingston is a port of transfer. The destiny of such cargoes is Montreal.

It will be observed that 45.4 per cent of the Canadian wheat brought down from the North West by water in 1913 clung to wholly Canadian channels.

In order that a comparison may be made with the facts in preceding years, the following table is brought down to the end of 1913:—

Canadian Wheat.	1909.	1910.	1911.	1912.	1913.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	10,517,266	13,185,370	12,761,666	14,929,099	11,950,433
“ “ Georgian Bay.....	13,384,400	12,753,200	9,881,234	19,501,168	24,448,134
“ “ Other Canadian ports...	10,149,633	9,603,400	11,880,666	20,458,700	28,045,733
“ “ Buffalo.....	12,841,334	15,693,363	27,945,600	44,228,266	67,701,900
Duluth to Montreal.....	520,000	315,000	.....	283,500	3,236,199
“ “ Buffalo.....	528,200	224,500	710,334	5,714,367	3,811,033
“ “ Georgian Bay.....	28,000	.....	461,500	1,418,767	1,605,867
“ “ other Canadian ports.....	79,000	.....	.....	230,000	927,600
“ “ unclassified.....	.....	.....	.....	3,078,164	.....
Total.....	48,047,833	51,774,833	63,641,000	109,842,031	141,726,899
Through American canal.....	9,117,328	5,321,446	1,981,481
Grand total.....	57,165,161	57,096,279	65,622,481	109,842,031	141,726,899

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The following statement of percentages presents the foregoing tables in a convenient form for purposes of comparison:—

Canadian Wheat.	1909.	1910.	1911.	1912.	1913.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Fort William to Montreal.....	21.9	25.5	20.1	13.6	8.4
“ “ Georgian Bay.....	27.9	24.6	15.6	17.8	17.2
“ “ Other Canadian ports.....	21.1	18.5	18.7	18.6	19.8
“ “ Buffalo.....	26.7	30.3	43.8	40.2	47.8
Duluth to Canadian ports.....	1.3	.6	.7	1.7	4.1
“ “ American ports.....	1.1	.5	1.1	5.2	2.7
“ “ unclassified.....				2.9	

The diversion of Canadian wheat to Buffalo-New York, instead of following wholly Canadian channels, is due to several causes. Chief among these is the matter of time. Cargoes are sold for delivery at a foreign port by a specified date, and during the period of pressure in October, November and December, but chiefly in November, the availability of ocean tonnage at New York is a factor rising above freight rates. This question will be dealt with under the next heading.

FREIGHT RATES BY WATER.

Carriers by water are not placed by law on the same reporting basis as are the railways. Hence special and extraordinary measures have had to be taken in order to gather facts from which the freight rates prevailing on the inland waters of Canada might be ascertained. Such steps were taken for the first time in 1912, and were continued in 1913. They have resulted in the assembling of an exceedingly valuable and useful mass of statistical information. That information has been carefully classified and tabulated. With the co-operation of ship owners the system which was inaugurated in 1912 will be continued. It leaves much, however, to be desired. It would, for example, be most instructive to also have definite and authentic reports with respect to the number of vessels operating on inland waters, their tonnage, the capital invested, earnings, operating expenses, tonnage of freight other than that which passes through the canals, employees, the salaries and wages bill, accidents, &c.

The objects of the special inquiry to which allusion has been made were to show the average rate per ton per mile on inland waters, the average freight charges per ton and per bushel between certain points, and to compare these charges with railway rates. Before steps were taken in this direction in 1912 no information whatever was to be had from any source on these important aspects of transportation.

Having ascertained for 1913 the number of tons carried one mile, and the amount of gross earnings thereon, the following results were reached:—

Canadian traffic:—

Average rate per ton.....99.37 cents.
Average rate per ton per mile.....184 “

American traffic:—

Average rate per ton.....55.19 cents.
Average rate per ton per mile......074 “

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As compared with 1912 the foregoing results show a reduction. Following is a comparative summary:—

	1912 cents	1913 cents
Canadian traffic:—		
Average rate per ton.....	91.04	99.37
Average rate per ton per mile....	0.194	.184
American traffic:—		
Average rate per ton.....	56.62	55.19
Average rate per ton per mile....	.067	.074

The wide disparity between Canadian and American rates is due wholly to the character of American traffic. Of the 37,747,457 tons of American freight which passed through the Canadian canal in 1913, there were 32,445,067 tons of iron and copper ore and 4,153,301 tons of coal. These two commodities made up 97 per cent of the total American traffic. The ore moved downward and the coal upward. An overwhelming proportion of both the ore and the coal is carried in vessels belonging to the iron and steel industries of Pennsylvania, at rates which can hardly be regarded as commercial. They are uniform year after year—55 cents per ton for ore and 33 cents for coal. That these rates are not commercial, nor subject to competition, is demonstrated by the fact that in every month of the season of navigation grain and other commodities have been carried over the same route at as high a rate as \$1.17 per ton. In some instances the rate was \$2 and over per ton.

The Canadian rates also exhibit a wide difference as between maximum and minimum. Wheat was moved during 1913 at as low a rate as .067 cent per ton per mile, and at as high a rate as .172. Package freight, aggregating a considerable volume, earned as high as .500 per ton per mile.

The facts having been given with regard to the volume of Canadian wheat moved over the various routes in 1913, it will be instructive to observe the rates of freight which applied to this important traffic. A thorough analysis was made of the reports received, and they yielded the following averages:—

Port Arthur—Fort William to Montreal:—

Per ton per mile.....	.142 cent.
Per bushel.....	5.351 "
Per ton.....	\$1.78

Port Arthur—Fort William to Georgian Bay:—

Per ton per mile.....	.148 cent.
Per bushel.....	2.279 "
Per ton.....	.76.00 "

Port Arthur—Fort William to other Canadian ports:—

Per ton per mile.....	.104 cent.
Per bushel.....	2.436 "
Per ton.....	.81.21 "

Port Arthur—Fort William to Buffalo:—

Per ton per mile.....	.103 cent.
Per bushel.....	2.430 "
Per ton.....	.81.00 "

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A comparison of the foregoing rates for 1913 with the rates for 1912 is here given in the following table:—

Port Arthur-Fort William	1912.			1913.		
	Per ton per mile.	Per bushel.	Per ton.	Per ton per mile.	Per bushel.	Per ton.
	cent.	cent.	\$	cent.	cent.	\$
To Montreal.....	.157	5.774	1.924	.142	5.351	1.780
“ Georgian Bay.....	.163	2.629	.876	.148	2.279	.760
“ other Canadian ports.....	.115	2.384	.795	.104	2.436	.812
“ Buffalo.....	.104	2.863	.793	.104	2.436	.812

A record was also kept of the movement of Canadian wheat over the several routes during each month of the season of navigation and the results ascertained were as follows:—

Port Arthur-Fort William to Montreal.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	\$	Cents.
April.....	6.015	2.04	.165
May.....	5.525	1.84	.135
June.....	4.682	1.54	.127
July.....	4.080	1.60	.130
August.....	5.440	1.68	.137
September.....	5.282	1.76	.144
October.....	6.313	2.10	.171
November.....	6.341	2.11	.172

Port Arthur-Fort William to Georgian Bay.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cent.
April.....	2.42	80.63	.157
May.....	2.16	71.85	.135
June.....	2.18	73.93	.142
July.....	1.59	52.73	.102
August.....	1.43	47.81	.092
September.....	1.53	51.26	.100
October.....	2.21	73.95	.146
November.....	2.46	82.30	.160
December.....	3.35	\$1.12	.220

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Port Arthur-Fort William to other Canadian ports.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cent.
April.....	2-599	86-63	·127
May.....	2-200	73-35	·091
June.....	1-755	55-53	·072
July.....	2-371	90-36	·122
August.....	1-928	64-27	·082
September.....	1-969	65-63	·083
October.....	2-767	92-23	·166
November.....	2-750	92-69	·116
December.....	3-081	81-03	·146

Port Arthur-Fort William to Buffalo.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cent.
April.....	2-739	91-30	·108
May.....	2-442	81-40	·094
June.....	1-954	65-13	·076
July.....	2-289	76-30	·118
August.....	1-969	65-63	·090
September.....	1-739	57-97	·066
October.....	2-876	95-86	·122
November.....	2-998	99-97	·114
December.....	3-296	81-09	·126

A study of the returns for 1913 showed that the largest volume of wheat was moved through to Montreal during the months of May and June, when the rates were low and there was no apparent pressure for delivery abroad; while the movement to Buffalo was largest in October and November, when dispatch was the prime consideration, and the rates were high.

The all water rate from Port Arthur-Fort William to Montreal in November averaged 6·341 cents per bushel, which must be regarded as a fair rate for the vessels. For the same month the average water rate between Port Arthur-Fort William and Buffalo was 3·296 cents. To this should be added the rail rate between Buffalo and New York, which in November, for export, was 5½ cents per bushel. This fact was officially ascertained from the Buffalo Chamber of Commerce. The combined water and rail rate from Port Arthur-Fort William to Buffalo-New York in November was 8·796 cents, as compared with an average for that month between Port Arthur-Fort William and Montreal of 6·341. With an advantage of 2·455 cents per bushel in favor of the St. Lawrence route, it is still true that more than ten times as many bushels of Canadian wheat went out by way of Buffalo-New York in November than came down to Montreal.

Such a situation is obviously created by other considerations than the rates of freight. They will be found in (1) the availability of ocean tonnage at New York, (2) the demand for expedition, and (3) lower ocean freight and insurance rates from New York than from Montreal.

A larger volume of wheat was brought down to Georgian Bay ports in 1913 than in 1912. The average water rates to such ports was 2·279 cents per bushel. The rail rate from Georgian Bay to Montreal was 6 cents per bushel; but that rate was probably adjusted so as to make the water and rail rate combined equal to the all water rate.

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It was also observed that a much larger volume of grain than in preceding years was brought to Port Colborne, there passed into the elevator and subsequently carried on to Montreal by water.

RAIL AND WATER RATES.

Out of the facts which have been presented with respect to freight rates in 1913 on the inland waters of Canada grows quite naturally the suggestion of a comparison with rail rates. It must be said at once that the water rates were considerably lower than the rail rates. It is easily possible with the information in hand which has been gathered during the past years to put certain water rates side by side with rail rates; but such a measurement could not be made with satisfactory accuracy until carriers by water are placed on the same statistical footing as that now occupied by the railways. There are large and important factors lacking from the data which has been made available with regard to the operations of certain carriers by water on the inland waters of Canada. When all the factors are known it will then be practicable to make an exact comparison. The statistical facts dealt with in this report are satisfactory as far as they go; but in a matter of this nature absolutely complete and comprehensive reports are required before conclusions may be drawn which are sound from every point of view. It is believed that the whole statistical situation with regard to carriers by water will be changed during the current year.

Within the limited scope of Canal Statistics certain facts are definitely known. The rates of freight on a very large proportion of all the cargoes of Canadian origin moved through the canals has been ascertained. From that basic information the average rate per ton per mile has been calculated. The omissions from the account relate to cargoes which did not pass through the canals, and there are good reasons for asserting that such cargoes bore a somewhat higher freight rate than those which applied to the trade of the Great Lakes in particular. The latter is a more or less specialized business, in which competition is active.

It has been shown that the average rate per ton per mile on canal traffic in 1913 was .184. The corresponding average rate for all the railways of Canada in 1913 was .758. This comparison is most favourable to carriers by water. But it must not be forgotten that Government makes a substantial contribution toward freight rates by water. The canals have not only been constructed by Government, but Government also maintains and operates them. It is therefore obviously reasonable to ask what the freight rate by water would have been in 1913 if carriers had been obliged to meet the interest on the cost of canals as well as the cost of maintenance. The facts are at hand.

The capital cost of the canals of Canada up to 30th March, 1913, was \$105,656,037. Interest at 3½ per cent on this sum would amount to \$3,697,612. The cost of maintenance for the fiscal year 1913 was \$1,603,080. These two sums combined give a total of \$5,301,041. The Canadian tonnage in 1913 was 6,654,311; so the Government contribution was equal to 78.85 cents per ton. Assuming that all this Canadian tonnage was carried at the same freight rates as the tonnage dealt with in the calculations on a preceding page, it will be

seen that 78·85 cents was the precise equivalent to ·146 per ton per mile. Put into tabular form the account would stand as follows:—

	Per ton.	Per ton per mile.
	cents.	cent.
Actual freight rate.....	99·37	·184
Government contribution.....	79·66	·147
Total.....	\$1·7903	·331

The rail rate on wheat from Fort William to Montreal is 12 cents per bushel, or \$4 per ton. This is equal to ·402 per ton per mile; so that the difference in favor of waterborne wheat in 1913 was ·071 per ton per mile. Put in another way, if shippers had been obliged to meet the amount involved in the public contribution to the water rate, the freight cost to Montreal in 1913 would have been 8 cents per bushel instead of 5·351. It should be added that the cost and maintenance of the canals is not the only Government contribution to the water rate. If the cost and maintenance of harbours, lighting, dredging &c., had been taken into the account there would have been a considerable addition. As it was, however, the rate by water was very much lower than the rate by rail.

INSURANCE RATES.

The insurance rates which prevailed during 1913 on the St. Lawrence and Great Lakes route were as follows:—

4¾ per cent from the head of navigation to the eastern end of Lake Erie, an additional 1 per cent to Ogdensburg and a further 1 per cent to Montreal. This would make the total 6¾ per cent from Port Arthur-Fort William to Montreal, or 2 per cent more than to Buffalo. This difference must be taken into account in comparing freight rates as between Buffalo and Montreal. In December an extension was allowed for the first five days at an additional one per cent.

GENERAL STATISTICS.

The following tables will afford further information with respect to traffic through the canals of Canada:—

STATEMENT of Total Freight passed through the Canals for the following years.

Years.	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.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1887	336,648	1,154,424	138,692	202,563	151,805	192,528	86,374	457,482	713,519	2,006,997	2,720,516
1888	355,165	1,146,260	138,127	174,239	214,407	223,429	81,611	428,357	789,310	1,972,287	2,761,597
1889	384,777	1,156,306	122,295	193,497	267,221	300,193	81,243	603,311	855,529	2,258,367	3,113,896
1890	369,593	1,137,011	144,368	183,188	216,813	320,324	58,709	533,021	789,505	2,123,542	2,913,047
1891	370,120	1,155,247	103,814	123,193	248,188	307,958	50,747	543,259	772,869	2,129,657	2,902,526
1892	327,560	1,322,137	173,538	135,787	241,034	302,933	47,396	481,301	789,328	2,242,208	3,031,736
1893	351,706	1,314,822	214,070	141,602	247,329	385,769	54,912	806,773	868,023	2,678,966	3,546,989
1894	299,155	1,140,006	204,175	89,614	231,172	363,107	46,020	568,866	780,522	2,162,193	2,942,715
1895	264,824	1,070,046	286,191	91,177	362,637	608,778	62,285	590,140	975,937	2,360,141	3,336,078
1896	293,353	1,619,668	259,659	100,519	1,197,245	3,536,054	117,535	867,040	1,867,792	6,123,281	7,991,073
1897	275,587	1,713,274	268,700	187,960	669,142	4,369,614	108,787	968,203	1,322,216	7,238,751	8,560,967
1898	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
1899	296,208	1,833,412	266,364	115,133	732,030	2,193,988	125,678	727,111	1,420,280	4,806,644	6,225,924
1900	312,201	1,632,915	270,033	81,714	568,197	1,339,915	105,155	703,363	1,255,586	3,758,107	5,013,693
1901	340,805	1,086,094	268,449	201,231	307,204	1,801,636	177,715	682,065	1,294,173	4,371,086	5,665,259
1902	529,085	2,094,480	308,212	342,484	515,828	3,000,636	190,243	562,229	1,543,368	5,969,829	7,513,197
1903	648,150	2,391,366	430,174	408,500	863,337	3,130,812	373,456	958,018	2,315,117	6,888,700	9,203,817
1904	606,737	2,047,499	511,887	276,578	699,784	2,778,903	483,795	851,053	3,302,203	5,954,033	8,256,236
1905	736,976	2,252,514	549,365	347,089	607,228	3,183,895	577,528	1,137,146	2,451,097	6,920,647	9,371,744
1906	1,238,929	2,855,855	627,094	234,919	991,508	3,505,256	482,239	997,385	3,339,770	7,183,415	10,523,639
1907	1,034,733	3,162,158	891,692	226,138	1,991,959	11,000,878	819,369	1,356,712	4,737,753	15,805,886	20,543,685
1908	1,028,246	3,292,422	560,736	278,721	1,704,310	8,218,866	972,300	1,447,219	4,265,592	13,237,298	17,502,820
1909	1,608,659	3,504,849	1,030,715	607,894	1,985,522	22,385,226	1,023,829	1,544,054	5,744,349	27,976,399	33,720,748
1910	2,312,740	3,861,272	600,144	661,436	3,323,677	29,530,163	995,749	1,705,282	7,232,455	35,758,153	42,990,608
1911	2,370,516	3,910,558	572,470	995,719	2,546,677	23,458,256	2,086,777	2,089,380	7,576,440	30,453,913	38,030,853
1912	2,340,444	4,973,342	867,250	961,838	2,042,819	32,434,755	1,343,288	2,628,329	6,593,801	40,993,444	47,587,245
1913	2,212,928	6,286,637	967,712	1,478,263	2,694,327	33,630,484	1,906,947	2,876,415	7,782,114	44,271,799	52,053,913

*Sault Ste. Marie canal opened in August, 1895.

STATEMENT of the Tonnage of Canadian and United States Vessels for the following years.
CANADIAN VESSELS.

YEARS.	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.	Number of Vessels.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1887.....	1,201,529	1,194,665	162,554	36,277	1,071	65	30,778	221,013	1,395,932	1,452,020	2,847,952	18,991
1888.....	1,113,290	1,120,774	158,200	34,368	1,252	.....	22,553	189,876	1,295,304	1,345,018	2,640,322	17,661
1889.....	1,283,574	1,307,892	188,131	29,371	976	802	20,271	252,565	1,494,952	1,500,630	2,995,582	19,393
1890.....	1,314,127	1,250,939	229,178	32,909	929	351	14,003	296,076	1,558,337	1,580,335	3,139,472	20,655
1891.....	1,356,518	1,287,068	201,758	28,642	550	292	16,350	244,176	1,575,176	1,560,278	3,135,454	19,246
1892.....	1,517,249	1,460,505	177,136	29,184	1,466	394	14,659	201,374	1,710,510	1,691,455	3,401,965	21,177
1893.....	1,548,094	1,422,326	170,186	26,787	1,172	10	17,037	248,442	1,736,489	1,697,565	3,434,054	20,757
1894.....	1,319,792	1,460,907	247,635	19,298	2,177	5	6,394	222,696	1,545,998	1,502,906	3,048,904	19,027
1895.....	1,258,848	1,465,683	253,693	43,383	.....	.....	5,889	285,553	1,518,440	1,464,619	2,983,059	17,136
1896.....	1,547,757	1,420,332	200,292	5,234	157	.....	4,115	271,809	1,752,921	1,697,355	3,449,706	20,972
1897.....	1,629,192	1,482,351	215,785	11,378	.....	.....	3,533	237,898	1,848,510	1,792,227	3,640,737	21,466
1898.....	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	21,609
1899.....	1,865,613	1,774,789	242,817	32,436	925	3,691	42,290	345,980	2,151,675	2,156,896	4,308,571	25,579
1900.....	1,767,293	1,681,340	245,926	14,922	2,909	64	38,015	358,781	2,074,143	2,055,107	4,129,250	21,755
1901.....	1,615,952	1,587,221	279,007	82,541	3,300	2,908	97,332	312,003	1,995,591	1,984,673	3,980,264	20,860
1902.....	1,914,167	1,840,787	241,356	97,492	1,874	2,161	101,335	286,520	2,258,732	2,226,963	4,485,695	22,198
1903.....	2,061,258	2,088,969	340,383	143,611	7,018	5,082	188,806	379,612	2,597,555	2,615,277	5,212,832	23,767
1904.....	1,838,260	1,807,886	299,245	169,740	5,175	4,223	237,910	349,661	2,380,590	2,391,510	4,772,100	24,851
1905.....	2,059,097	2,031,766	312,773	188,138	11,820	3,191	262,401	322,005	2,646,691	2,545,100	5,191,191	23,726
1906.....	2,271,776	2,264,476	292,705	155,595	24,420	5,506	306,567	300,567	2,791,177	2,735,144	5,526,321	25,498
1907.....	2,561,948	2,631,317	337,822	129,246	9,153	7,331	238,172	383,922	3,147,095	3,181,816	6,328,911	28,833
1908.....	2,726,776	2,748,139	348,327	227,315	5,657	7,844	348,944	383,387	3,999,104	3,881,685	7,880,789	29,040
1909.....	3,335,187	2,992,403	300,320	217,989	82,691	111,236	257,945	513,907	3,796,043	3,835,655	7,631,578	22,407
1910.....	3,891,613	3,504,463	315,656	122,988	95,151	89,618	287,555	627,046	4,587,375	4,513,815	9,101,790	25,337
1911.....	3,997,073	3,646,516	333,500	176,690	8,499	2,332	393,012	614,570	4,732,084	4,440,108	9,172,132	25,585
1912.....	4,457,363	4,168,594	617,407	211,676	9,907	1,053	180,735	781,450	5,265,352	4,971,983	10,237,335	27,371
1913.....	4,964,635	4,827,587	898,249	67,031	3,631	5,231	348,477	963,300	6,214,892	5,863,119	12,078,041	28,564

STATEMENT of the Tonnage of Canadian and United States Vessels for the following years.

UNITED STATES VESSELS.

YEARS.	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.	Number of Vessels.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1887	16,265	17,925	38,857	56,708	143,730	140,562	52,748	98,840	251,645	315,035	566,680	3,883
1888	14,304	26,801	42,425	50,047	177,714	156,095	49,778	114,613	284,221	347,556	631,777	3,921
1889	21,125	26,449	55,996	50,732	253,088	206,567	56,249	160,442	380,458	444,190	830,648	4,542
1890	10,390	16,345	38,156	38,397	248,418	234,728	39,697	97,266	336,661	384,786	721,397	3,364
1891	10,357	29,851	70,665	27,727	283,013	238,818	31,083	146,602	395,118	442,998	838,116	3,602
1892	12,023	29,405	88,221	22,763	280,315	229,437	37,037	172,594	417,596	454,199	871,795	3,928
1893	10,752	34,303	214,047	53,741	351,994	282,724	50,994	307,740	627,787	658,508	1,286,295	4,585
1894	18,4528	30,201	139,720	20,830	302,562	269,788	37,406	192,902	498,216	513,811	1,012,027	4,131
1895	8,838	24,708	139,554	17,712	262,240	216,542	32,295	185,730	441,927	444,752	886,679	4,427
1896	11,496	19,093	195,228	21,953	357,205	292,359	40,416	290,370	604,345	623,775	1,228,120	4,650
1897	14,666	18,367	269,430	17,618	338,938	277,345	26,341	347,698	619,375	661,028	1,310,403	4,675
1898	12,112	9,541	133,524	32,880	308,878	305,464	32,331	335,004	586,875	683,889	1,270,764	4,264
1899	17,217	18,044	172,897	30,092	1,605,887	1,456,503	51,902	334,336	1,846,848	1,438,885	3,285,733	6,101
1900	13,316	17,824	157,689	30,443	1,208,725	1,744,276	45,741	190,971	1,423,471	983,514	2,408,985	5,502
1901	11,587	18,706	177,169	28,124	922,464	1,044,707	54,895	224,622	1,166,115	1,316,153	2,482,274	5,634
1902	13,622	37,871	137,826	70,641	1,756,918	1,634,672	123,257	241,602	2,081,653	2,004,786	4,086,439	6,433
1903	14,014	24,168	205,208	65,247	1,736,187	1,689,414	106,401	335,836	2,121,810	2,114,665	4,236,475	6,695
1904	16,890	16,890	275,721	39,993	1,464,316	1,475,035	68,081	395,097	1,818,240	1,837,665	3,655,905	6,253
1905	19,743	15,424	364,985	81,876	2,350,494	1,701,704	119,536	456,459	2,838,758	2,250,483	5,096,241	7,085
1906	24,306	15,324	356,359	78,561	2,738,623	1,928,131	115,675	418,436	3,214,803	2,440,432	5,685,315	7,310
1907	57,349	72,013	394,591	72,048	4,730,653	5,376,060	205,769	623,931	5,463,767	6,141,067	11,604,834	9,328
1908	51,587	32,705	442,773	124,120	2,975,624	4,142,392	218,835	536,103	3,685,819	4,835,320	8,521,139	7,489
1909	263,592	109,407	442,176	200,202	4,178,378	10,429,614	213,750	621,903	5,038,196	11,361,126	16,459,322	9,996
1910	119,222	50,493	429,807	305,330	5,509,417	14,488,565	299,462	709,084	6,356,803	15,420,494	21,777,297	11,462
1911	49,778	12,613	626,897	576,313	3,348,956	12,057,484	850,487	850,487	4,734,095	13,496,927	18,231,622	10,270
1912	50,296	15,518	470,330	470,330	5,778,534	16,011,911	614,311	931,864	7,206,567	17,429,623	24,636,190	11,785
1913	61,301	29,788	673,382	711,603	5,657,984	13,567,499	703,212	834,019	7,093,879	17,142,909	24,238,788	10,739

Vessel and Freight Tonnage passed through the Sault Ste. Marie Canal.

Years.	CANADIAN VESSELS.		U.S. VESSELS.		Total No.	Vessel Tonnage.	FREIGHT TONNAGE.		LOCKAGES		DAYS OPEN.	Remarks.	
	No.	Tonnage.	No.	Tonnage.			Canadian	United States.	Total.	No.			No.
1895	609	126,534	583	623,092	1,192	749,626	.....	595,837	699	87	Canal first operated Sept. 9, 1895.	
1896	2,070	689,407	3,086	3,805,749	5,156	4,395,156	.....	4,577,399	3,042	218		
1897	1,909	405,546	2,359	3,391,936	4,268	3,797,482	.....	4,947,065	2,604	298		
1898	1,811	403,931	1,864	2,353,699	3,675	2,757,630	.....	3,055,387	2,590	243		
1899	2,000	558,552	1,769	2,389,457	3,769	2,948,009	.....	3,000,664	2,610	239		
1900	1,790	577,310	1,291	1,617,438	2,081	2,194,748	.....	2,035,077	2,205	238		
1901	2,796	775,151	1,408	1,674,397	4,204	2,449,748	.....	2,820,394	2,910	246		
1902	3,080	1,366,939	1,964	3,237,372	5,044	4,604,302	.....	4,729,268	3,418	264		
1903	2,711	1,615,939	1,640	3,146,807	4,351	4,762,746	.....	5,511,868	3,242	256		
1904	2,637	1,555,012	1,325	2,079,003	3,962	4,230,705	.....	5,030,705	3,022	241		
1905	3,970	1,803,299	1,692	2,734,349	5,662	5,537,637	.....	6,473,406	4,031	255		
1906	3,922	1,959,252	1,758	4,390,872	5,680	6,350,124	.....	6,574,039	4,152	253		
1907	3,217	1,544,688	3,132	9,961,281	6,349	12,115,969	.....	15,588,165	4,596	238		
1908	3,280	2,603,292	2,204	7,035,655	5,293	9,638,887	.....	12,759,216	3,667	235	Origin of cargo first shown.	
1909	2,397	2,988,936	3,734	14,850,738	6,331	17,839,674	.....	24,494,750	5,046	240		
1910	2,744	3,173,494	5,228	20,187,701	7,972	23,361,198	.....	36,395,687	6,110	248		
1911	2,713	3,108,880	4,068	16,252,340	6,781	19,361,220	.....	30,951,709	6,802	236		
1912	2,643	3,296,229	5,213	22,536,015	7,856	25,832,244	39,669,655	6,200	240			
1913	3,279	3,793,431	5,006	22,181,007	8,285	25,974,441	42,699,324	6,266	246			

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CAPITAL EXPENDITURE.

The following statement brings the capital expenditure on the canals of the Dominion down to March 31, 1913. It must be understood, however, that the total shown is apart from the outlay by the Imperial Government on the Carillon and Grenville canal, as to which the records were lost in the destruction by the fire of the Ordnance Office, Montreal, in 1852. The details are as follows:—

Canal.	Construction.		Enlargement.		Total.	
	\$	cts.	\$	cts.	\$	cts.
Beauharnois.....	1,636,690	26			1,636,690	26
Carillon and Grenville.....	63,053	64	4,119,039	32	4,182,092	86
Chambly.....	637,214	66	91,784	83	728,999	49
Cornwall.....	1,945,624	73	5,297,179	48	7,242,804	21
Culbute.....	382,391	46			382,391	46
Lachine.....	2,589,532	85	10,815,488	11	13,404,970	96
Lake St. Francis.....			75,906	71	75,906	71
Lake St. Louis.....			298,176	11	298,176	11
Murray.....	1,248,946	71			1,248,946	71
Rideau.....	4,127,454	21			4,987,498	24
Sault Ste. Marie.....	4,987,498	24			4,987,498	24
Soulanges.....	7,696,439	46			7,696,439	46
Ste. Anne's.....	134,456	51	1,035,759	12	1,170,215	63
St. Lawrence River and Canals.....	18,442	85	3,451,470	56	3,469,913	41
St. Ours.....	121,537	65	4,306	28	125,843	93
St. Peter's.....	648,547	14			648,547	14
Tay.....	439,599	23			439,599	23
Trent.....	12,464,651	64			12,464,651	64
Welland.....	7,693,824	03	21,557,126	98	29,250,951	01
Williamsburg { Farran's Point.....			877,090	57		
{ Galops.....			6,120,300	14		
{ Rapide Plat.....			2,158,242	00	10,490,184	51
{ Williamsburg.....	1,320,655	54	13,896	26		
St. Andrew's Lock.....	1,533,759	57			1,533,759	57
Total.....	49,740,320	38	915,716	47	105,656,036	85

The cost of maintenance for the fiscal year 1913, was \$1,603,080.07.

I have the honor to be, sir,

Your obedient servant,

J. L. PAYNE,

Comptroller of Statistics.

CANAL STATISTICS

FOR

SEASON OF NAVIGATION, 1913

GRAIN PASSED DOWN WELLAND.

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 thirty-two years is as follows:—

Quantity passed down to Montreal		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
1899.....	332,746	40,197	68,011
1900.....	244,661	17,525	84,589
1901.....	151,566	13,732	83,370
1902.....	208,215	22,787	81,164
1903.....	351,936	29,062	111,828
1904.....	198,246	23,711	102,523
1905.....	341,431	42,061	129,270
1906.....	404,935	33,351	176,119
1907.....	635,573	42,032	163,295
1908.....	756,141	38,142	135,172
1909.....	652,742	40,238	129,587
1910.....	789,661	63,657	115,457
1911.....	836,924	51,560	121,655
1912.....	961,855	47,866	117,195
1913.....	1,265,368	63,806	122,069

During the last decade the quantity of agricultural products as above, passed down the Welland and St. Lawrence canals to Montreal, has increased from 198,246 tons in 1904 to 1,265,368 tons in 1913, and the quantity passed down the Welland canal from United States ports to United States, has increased from 102,523 to 122,069 tons the same years.

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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 15 years, is reported as follows:—

Year.	Tons.
1899.....	209, 170
1900.....	229, 624
1901.....	227, 700
1902.....	263, 861
1903.....	253, 959
1904.....	154, 625
1905.....	148, 377
1906.....	386, 963
1907.....	383, 735
1908.....	285, 262
1909.....	426, 163
1910.....	
1911.....	241, 134
1912.....	462, 444
1913.....	

The quantity of the same articles passed down the whole length of the St. Lawrence canals to Montreal for the same period was:—

Year.	Tons.
1899.....	372, 291
1900.....	295, 928
1901.....	203, 316
1901.....	242, 225
1903.....	400, 057
1904.....	220, 076
1905.....	375, 630
1906.....	449, 673
1907.....	684, 697
1908.....	776, 374
1909.....	652, 742
1910.....	789, 661
1911.....	836, 924
1912.....	964, 187
1913.....	1, 265, 376

Comparative shipments of grain by the St. Lawrence route, and railways, 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 canal to Montreal, is as follows:—

For 1912.....	Tons.
1913.....	964, '87
	1, 265, 376
Showing an increase of.....	301, 189

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways is reported as follows:—

For 1912.....	462, 444
1913.....	
Showing an increase of.....	

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The quantity of grain passed down the Welland canal in Canadian and United States vessels to Kingston and Prescott for fifteen years is as follows:—

In Canadian vessels there were in:—

	Tons.
1899, 162 cargoes, with an aggregate quantity of	221,306
1900, 325 " "	183,200
1901, 112 " "	132,558
1902, 131 " "	175,514
1903, 170 " "	218,840
1904, 115 " "	174,121
1905, 167 " "	239,418
1906, 205 " "	344,605
1907, 255 " "	427,813
1908, 855 " "	598,941
1909, 308 " "	550,276
1910, 383 " "	679,358
1911, 421 " "	728,223
1912, 504 " "	796,858
1913, 687 " "	1,128,324

In the United States vessels there were in:—

	Tons.
1899, 167 cargoes, with an aggregate quantity of	205,571
1900, 259 " "	163,575
1901, 135 " "	123,229
1902, 135 " "	136,652
1903, 219 " "	273,986
1904, 118 " "	150,359
1905, 235 " "	273,344
1906, 178 " "	269,800
1907, 263 " "	413,087
1908, 271 " "	330,514
1909, 174 " "	272,291
1910, 182 " "	295,714
1911, 173 " "	281,916
1912, 154 " "	330,058
1913, 253 " "	322,919

One hundred and sixty-two Canadian and 49 American vessels took cargoes of 343,733 tons through to Montreal intact in 1908; 87 Canadian and 9 American of 135,582 in 1907; 74 Canadian and 10 American of 108,734 tons in 1906; 96 Canadian and 18 American of 180,206 in 1905; 56 Canadian and 16 American of 116,095 tons in 1904; 56 Canadian and 18 American of 99,582 tons in 1903; 19 Canadian and 17 American of 34,804 tons in 1902; 23 Canadian and 2 American of 17,303 tons in 1901, 15 of 7,924 tons in 1900, 2 of 558 tons in 1899, 7 of 2,426 in 1898, 7 of 2,324 in 1897, 3 of 1,176 in 1896, 4 of 1,344 tons in 1905, 2 cargoes of 810 tons in 1894, none in 1893, 2 in 1892 of 934 tons, and 3 in 1891 of 1,441 tons. Three vessels lightened a portion of their cargoes in 1901, 9 in 1900, 11 in 1899, 25 in 1898, 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 222 vessels discharged the whole of their cargoes at Kingston in 1901, 540 in 1900, 316 in 1899, 473 in 1898, 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

4 GEORGE V., A. 1914

The quantity of grain transhipped at Port Colborne in 1909 and the four previous years was as follows:

Articles.	1905.	1906.	1907.	1908.	1909.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Wheat.....	679,840	1,009,474	1,428,300	1,106,244	2,636,963
Corn.....	104,027	110,629	112,036	.....	.....
Rye.....	.....	.....	.....	.....	.....
Oats.....	.....	29,118	30,824	23,945	.....
Barley.....	.....	2,103	.....	56,544	22,216
Flaxseed.....	.....	.....	30,040	49,628	8,202

WELLAND CANAL.

The total quantity of freight passed on the Welland canal during the season of 1913 was 3,570,714 tons; of this quantity 86,030 tons was way or local freight.

There were 2,565,611 tons of freight passed eastward, and 1,005,103 passed westward.

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 1913 was 3,484,651 tons.

Of this quantity 2,553,542 tons were west bound and 931,109 west bound freight.

Of the east bound through freight, Canadian vessels carried 1,966,970 tons and United States vessels carried 586,572 tons; and of the west bound through freight Canadian vessels carried 544,241 tons and United States vessels carried 386,868 tons, or a total of 2,511,211 tons for Canadian and 973,440 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1913 was 4,302,427 tons; of this quantity 3,198,302 tons passed eastward and 1,104,125 passed westward.

East and West bound Through Freight.

The total quantity of through freight was 3,486,882 tons; of this quantity 2,815,410 tons were east bound and 671,472 tons were west bound.

Way Freight.

Of the total quantity of (way) or local freight 382,892 were east bound and 432,653 tons west bound freight.

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THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freights passed eastward from Lake Erie and westward from Montreal through the Welland and St. Lawrence canals, during fifteen years, was as follows:—

Year.	Eastward to Montreal.	Westward from Montreal.
1899.....	354,933	5,991
1900.....	288,251	6,217
1901.....	184,420	13,714
1902.....	250,475	25,289
1903.....	390,786	100,699
1904.....	278,328	71,512
1905.....	448,704	72,482
1906.....	554,231	96,791
1907.....	789,167	1,281
1908.....	864,926	3,472
1909.....	925,005	191,510
1910.....	1,170,139	172,360
1911.....	1,291,973	233,335
1912.....	1,559,963	236,979
1913.....	1,710,219	333,592

THROUGH FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of through freight passed eastward and westward through the Welland canal, from United States ports to United States ports, for a period of fifteen years, was as follows:—

Year.	Eastward.	Westward.	Total.
	Tons.	Tons.	Tons.
1899.....	225,491	135,038	360,529
1900.....	218,969	99,560	318,529
1901.....	190,476	83,543	274,019
1902.....	224,110	44,919	269,029
1903.....	221,074	149,151	370,225
1904.....	165,337	87,144	252,481
1905.....	190,547	112,549	303,096
1906.....	237,226	84,205	321,431
1907.....	218,997	177,660	396,657
1908.....	209,518	239,136	448,654
1909.....	196,838	248,581	445,419
1910.....	197,301	288,193	485,499
1911.....	175,752	309,603	485,355
1912.....	180,319	235,437	415,756
1913.....	204,597	320,736	525,333

The total quantity of freight passed through the Welland canal from United States ports to United States ports shows an increase of 109,577 tons as compared with the previous year; and an increase of 164,804 tons as compared with 1899.

4 GEORGE V., A. 1914

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 year 1867 to 1913 inclusive.

Fiscal Year.	Aggregate Number of Trips.	Total quantity transported on the Welland canal.	Quantity passed from United States ports to United States ports.
	Number.	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
<i>Season of Navigation.</i>			
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	233,957
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
1899.....	2,202	789,770	360,529
1900.....	2,399	719,360	318,529
1901.....	1,547	620,209	274,019
1902.....	1,568	665,387	269,029
1903.....	1,787	1,002,919	370,225
1904.....	1,433	811,371	252,481
1905.....	1,595	1,092,050	305,096
1906.....	1,536	1,201,967	321,431
1907.....	1,982	1,614,132	396,743
1908.....	2,351	1,703,453	448,654
1909.....	2,433	2,025,951	445,419
1910.....	2,544	2,326,290	487,499
1911.....	2,480	2,537,629	485,355
1912.....	2,905	2,851,915	415,756
1913.....	3,229	3,570,714	525,333

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The total quantity of freight passed through the several divisions of the Canadian canal system during the season of 1913 is as follows:

	Farm Stock.	Forest Produce of Wood.	Manu- factures.	Products of Mines.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie.....	198	62,958	733,910	36,648,593	5,253,665	42,699,324
Welland.....	361	337,927	548,373	990,086	1,684,967	3,570,714
St. Lawrence.....	8,269	660,226	460,161	1,627,996	1,545,775	4,302,427
Chambly.....	490	337,331	20,217	184,132	13,432	555,602
St. Peter's.....	2,492	6,301	8,078	38,708	15,935	71,514
Murray.....	13	55	75,803	104,137	568	180,576
Ottawa.....	3,657	186,710	15,901	156,839	2,331	365,438
Rideau.....	3,458	27,331	15,213	121,784	3,437	171,223
Trent.....	298	50,812	2,414	436	1,840	55,800
St. Andrews'.....	65	9,274	1,629	69,950	377	81,295

The total quantity of freight moved on the Welland canal was 3,570,714 tons, of which 1,684,967 tons were agricultural products.

On the St. Lawrence canals the total quantity of freight moved was 4,302,427 tons, of which 1,545,775 were agricultural products, and 460,161 tons were manufactures.

On the Ottawa canals the total quantity of freight moved was 365,438 tons; of this quantity 186,710 tons were the produce of the forest.

4 GEORGE V., A. 1914

Comparative Statement of Commerce through the United States St. Mary's Falls Canals and the Canadian Sault Ste. Marie Canal, for the seasons of 1912 and 1913.

	TRAFFIC FOR 1913.		TOTAL TRAFFIC FOR.		INCREASE.	DECREASE
	United States Canal.	Canadian Canal.	Season of 1913.	Season of 1912.	Amount.	Amount.
Vessels..... number.	15,599	8,285	23,884	22,772	1,112	
Lockages..... "	10,601	6,266	16,867	16,088	779	
Tonnages registered net tons	32,062,619	25,974,441	58,037,060	56,779,377	1,257,683	
Tonnages freight... "	37,022,201	42,699,324	79,721,525	72,494,470	7,227,055	
Passengers..... number.	40,096	36,822	76,918	67,144	9,774	
Coal hard..... net tons	2,200,954	472,719	2,673,673	2,136,767	536,906	
Coal soft..... "	12,271,253	3,680,632	15,951,885	12,801,069	3,150,816	
Flour..... barrels.	7,962,622	2,240,840	10,203,462	8,652,431	1,551,031	
Wheat..... Bushels	72,619,194	131,827,467	204,446,661	173,934,451	30,512,210	
Grain, excluding wheat. "	62,757,060	50,875,233	113,632,293	69,224,016	44,408,277	
Manif. and pig iron net tons.	285,754	146,023	431,777	698,247		266,470
Salt..... barrels.	650,858	84,518	735,376	648,616	86,750	
Copper..... net tons.	81,139	25,855	106,994	126,854		19,860
Iron ore..... "	15,672,579	32,419,242	48,091,821	46,310,284	1,781,537	
Lumber, ft. B.M.....	574,805,000	25,261,000	600,066,000	677,007,500		76,941,500
Silver ore..... net tons.						
Building stone..... "	481		481	2,282		1,801
Unclassified freight "	1,095,237	653,249	1,748,486	1,629,524	118,962	

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The United States canal was open to navigation during the season of—

1889.....	234 days.	1901.....	250 days.
1890.....	228 “	1902.....	256 “
1891.....	225 “	1903.....	249 “
1892.....	233 “	1904.....	223 “
1893.....	219 “	1905.....	245 “
1894.....	234 “	1906.....	249 “
1895.....	231 “	1907.....	233 “
1896.....	232 “	1908.....	231 “
1897.....	234 “	1909.....	236 “
1898.....	241 “	1910.....	224 “
1899.....	231 “	1911.....	237 “
1900.....	238 “	1912.....	237 “
		1913.....	245 “

The Canadian canal was open to navigation during the season of—

1895.....	87 days.	1904.....	241 days.
1896.....	218 “	1905.....	255 “
1897.....	238 “	1906.....	253 “
1898.....	243 “	1907.....	238 “
1899.....	239 “	1908.....	235 “
1900.....	238 “	1909.....	240 “
1901.....	246 “	1910.....	248 “
1902.....	264 “	1911.....	236 “
1903.....	256 “	1912.....	240 “
		1913.....	246 “

The average number of vessels passing per day through the two canals for the season of 1913 was ninety-seven.

A—TABLE showing the total tonnage of the undermentioned articles moved Up
December

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	64,888	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
1899	11,625	197,732	204,004	2,907	24,037	923	18,460
1900	10,968	137,800	163,509	4,035	41,055	3,538	14,815
1901	18,978	151,586	67,756	7,119	28,485	2,961	14,024
1902	22,282	225,171	67,647	7,418	11,232	4,079	12,963
1903	25,998	259,031	210,758	14,656	7,911	4,904	13,994
1904	35,049	165,188	116,444	27,171	16,582		13,184
1905	38,512	254,458	180,921	55,432	36,072	1,711	9,883
1906	18,294	326,798	211,805	31,446	49,306	1,784	10,739
1907	22,739	488,565	271,693	13,240	73,369	2,270	22,683
1908	23,209	732,131	127,402	31,172	33,423	6,667	21,668
1909	38,763	590,196	140,902	23,151	75,135	33	30,221
1910	41,152	587,493	229,980	21,575	136,233		18,149
1911	57,061	562,282	273,932	15,029	163,333	112	11,360
1912	45,807	795,989	121,333	25,241	185,546	714	14,626
1913	45,710	1,005,362	144,354	96,889	199,794	6,867	10,640

* Fiscal. † Apples, meals of all kinds, pea-meal, potatoes.

CANAL STATISTICS

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and Down. through the Welland canal, during a period of forty-three years, ended 31, 1913.

HEAVY GOODS.							
Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Iron & Salt having paid full tolls on St. Lawrence canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	46,806	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	3,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	43,387
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	155	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
459,688	567	6,361	1,282	1,318	97,732	26,125	133,385
375,720	.....	8,190	533	4,800	47,392	58,400	119,315
290,909	83	6,094	327	8,773	49,480	99,487	164,244
350,792	64	7,488	.....	15,201	64,014	22,450	109,247
537,252	488	5,407	2,554	45,846	147,884	18,323	220,502
373,568	11,381	9,957	1,093	4,164	113,525	39,683	179,803
576,989	2,651	10,912	226	4,221	172,642	22,381	213,033
650,172	3,747	8,493	100	16,204	147,587	5,862	181,993
894,559	961	4,923	246	18,761	267,212	25,040	317,143
975,672	.....	35,726	429	.....	316,921	18,004	371,080
898,401	.....	87,025	.....	.....	377,681	33,301	498,007
1,034,582	.....	57,581	.....	.....	577,491	34,311	669,383
1,083,109	.....	126,956	35,888	.....	619,682	37,480	820,006
1,189,256	.....	139,991	21,630	.....	709,696	82,376	953,693
1,509,616	.....	96,245	28,396	.....	945,790	78,776	1,149,207.

B.—TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland canal during a series of forty-three years, ended December 31, 1913.

VEGETABLE FOOD.

Years.	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
1893.....	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874.....	24,017	406,157	181,128	377	5,953		3,201	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	488,931
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	404,015
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
1899.....	11,625	197,732	204,004	2,424	23,541	923	18,440	458,689
1900.....	10,968	137,800	163,509	3,449	40,256	3,538	14,802	374,322
1901.....	18,937	151,325	67,757	7,119	28,281	2,961	14,021	290,400
1902.....	22,282	223,499	67,647	7,418	11,223	4,079	12,912	349,060
1903.....	25,997	257,370	210,758	14,656	7,911	4,904	13,982	535,578
1904.....	35,046	164,515	116,444	27,171	16,582		13,157	372,915
1905.....	38,512	247,599	180,921	55,432	36,072	1,711	9,882	570,129
1906.....	18,227	326,789	111,243	31,446	49,306	1,411	10,739	549,161
1907.....	22,689	488,565	271,693	13,240	73,369	2,270	22,683	894,509
1908.....	23,187	730,751	127,402	31,172	33,422	6,667	21,668	974,270
1909.....	38,763	590,074	140,902	23,151	75,135	33	30,206	898,264
1910.....	41,152	587,493	229,980	21,575	136,232		18,149	1,034,582
1911.....	57,061	562,282	273,982	14,622	163,333	112	11,360	1,082,702
1912.....	45,807	795,989	121,333	25,241	185,546	714	14,626	1,189,256
1913.....	45,710	1,005,362	144,354	96,889	199,794	6,867	10,640	1,509,616

*Fiscal. †Apples, meal all kinds, potatoes

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C.—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 forty-two years, ended December 31, 1913.

YEARS.	VEGETABLE FOOD.							HEAVY GOODS.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other Articles.	Total.	Railway Iron.	Other Iron.	Sugar and 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	55,912	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	234,264
1873.....	10,805	127,727	101,329	1,920	1,188	.....	392	373,366	4,659	13,826	40,507	170,242	62,942	292,170
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	.....	1,920	177,908	14	4,133	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	13,585	178,723
1879.....	1,159	53,791	33,401	.....	461	.....	11	87,826	2,405	3,648	6,318	118,572	17,707	148,741
1880.....	.....	30,611	16,122	1,551	296	.....	.....	48,580	4,743	3,515	.....	65,945	18,380	92,954
1881.....	.....	34,320	30,031	924	.....	.....	10	63,285	1,313	3,570	.....	83,888	6,464	97,265
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	.....	196,462	24,891	229,471
1884.....	1,715	40,966	53,707	732	882	9,874	8,170	114,422	698	599	.....	210,790	15,100	227,187
1885.....	1,224	53,235	63,229	.....	.....	.....	.....	118,203	.....	1,594	.....	198,416	15,029	215,039
1886.....	7,591	53,258	94,048	732	4,799	.....	13,201	172,888	156	5,328	.....	189,964	11,364	206,843
1887.....	11,780	37,678	83,431	1,732	12,050	.....	10,559	157,530	15	4,406	.....	82,780	627	87,828
1888.....	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	.....	173,239	2,309	177,288
1889.....	5,017	39,229	147,045	.....	27,492	.....	17,225	230,208	.....	1,587	.....	272,476	1,204	231,163
1890.....	9,201	31,527	180,842	6,519	27,030	.....	20,497	279,019	.....	504	.....	162,231	1,620	164,563
1891.....	6,802	32,097	127,494	8,113	52,823	.....	26,115	253,444	.....	292	.....	186,572	1,773	189,342
1892.....	11,018	26,950	131,222	6,433	36,935	.....	31,992	244,550	.....	576	.....	183,895	.....	184,473
1893.....	6,588	28,187	138,777	16,751	33,870	864	36,352	311,889	.....	344	.....	206,827	.....	207,171
1894.....	17,795	53,846	105,329	28,095	27,621	.....	60,462	198,558	.....	297	.....	188,521	.....	188,818
1895.....	10,169	29,831	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	.....	246	.....	207,348	.....	207,494
1897.....	7,237	28,919	139,057	14,173	14,963	.....	41,887	276,242	965	146	.....	166,143	.....	166,133
1898.....	4,212	11,263	109,667	6,909	12,732	1,197	22,671	209,656	770	339	.....	156,814	.....	157,927
1899.....	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892	351	1,946	553	88,981	.....	91,481
1900.....	07,966	18,771	60,545	2,402	39,706	2,149	14,248	145,787	.....	953	.....	46,024	.....	46,977
1901.....	7,165	32,557	55,531	7,119	26,344	.....	14,016	143,732	83	80	105	46,702	.....	46,970
1902.....	13,785	32,639	66,111	7,418	10,006	.....	12,675	142,634	.....	214	.....	12,911	.....	13,125

*Apples, meal of all kinds, peas, potatoes.

C.—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 forty-three years, ended December 31, 1913—*Concluded*.

YEARS.	VEGETABLE FOOD.										HEAVY GOODS.				
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other Articles.	Total Articles.	Railway Iron.	Other Iron.	Sugar and Salt.	Coal.	Ores.	Total	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1903.	6,082	15,439	108,917	11,433	6,112	4,174	13,568	165,725	459			113,072		113,535	
1904.	8,556	14,269	60,964	16,621	16,497		13,070	129,986				63,882		63,882	
1905.	24,664	15,483	93,622	9,197	10,892		9,682	162,930		1		73,461		73,465	
1906.	15,215	13,410	135,410	9,266	11,323		10,678	195,132		169		33,523		33,692	
1907.	18,898	21,892	124,474	2,812	4,741	2	22,001	194,820		30		110,347	4,050	114,420	
1908.	17,694	24,651	99,830	7,418	2,070	2	21,393	172,788		5		158,351	1,400	159,751	
1909.	15,452	17,940	100,967	4,224			22,683	161,266				131,131	1,531	132,667	
1910.	11,859	10,717	126,938	3,840			8,751	161,925				201,893		201,893	
1911.	2,852	4,950	116,705				7,565	132,072		1,863	26,303	223,942	4,483	256,491	
1912.	9,878	15,911	91,254		1,400		12,714	133,317		300	11,078	166,419	4,979	182,776	
1913.	11,967	20,258	114,662		7,407		8,685	162,979		505	18,387	237,230	5,202	261,324	

* Apples, meal all kinds, pease, potatoes.

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D.—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 season of Navigation in 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912 and 1913.

Articles.	CANADIAN VESSELS.				UNITED STATES VESSELS.				Total.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	196	90,791	122	73,958	191	201,339	52	22,097	561	388,185
1902.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	82,954		85,973		52,889				221,816	
Corn.....	148		1,388		66,111				67,647	
Barley.....					7,418				7,418	
Oats.....	1,200		43		9,963				11,206	
Pease.....										
Rye.....	3,808				271				4,079	
Coal.....	3,977		25,732		13,497		8,332		51,538	
Miscellaneous merchandise.....	33,111		8,723		38,351		1,594		81,779	
Shingles, woodenware, &c.....	47		28		4				79	
Sawed lumber..... Ft. B.M.	13,218,960		3,256,187		25,437,287		19,540,426		61,452,860	
Square timber..... Cub. ft.	370,718		557,689				115,000		1,043,407	
Firewood..... Cords	56		40						96	
Staves..... No.			14,000						14,000	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	329	151,850	76	45,918	243	252,094	69	27,854	627	477,716
1903.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	149,378		38,473		60,514		6,305		254,670	
Corn.....	21,356		4,682		174,588		10,132		210,758	
Barley.....	2,580		667		11,409				14,656	
Oats.....	306		1,335		6,112				7,753	
Pease.....	63				22				85	
Rye.....					4,904				4,904	
Coal.....	339		12,991		8,133		8,496		30,009	
Miscellaneous merchandise.....	39,563		3,367		41,584		2,000		86,514	
Shingles, woodenware, &c.....			54						54	
Sawed lumber..... Ft. B.M.	12,841,552		1,625,855		17,871,652		14,733,677		47,072,736	
Square lumber..... Cub. ft.	572,000		660,000				84,200		1,316,200	
Firewood..... Cords			210		9				219	
Staves..... No.			641,000						641,000	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	228	157,539	55	39,375	205	187,748	42	15,918	530	400,580
1904.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	116,794		33,302		14,269				164,365	
Corn.....	12,768		7,814		95,862				116,444	
Barley.....	2,619		824		23,728				27,171	
Oats.....					16,261				16,261	
Pease.....					3				3	
Rye.....	1,925		7,187		17,133		7,668		33,913	
Coal.....	34,907				1,925				36,832	
Miscellaneous merchandise.....	29,567				60,548				90,115	
Shingles, woodenware, &c.....										
Sawed lumber..... Ft. B.M.	15,077,382		854,811		32,754,541		9,572,655		58,259,389	
Square timber..... Cub. ft.	944,508		744,000				149,000		1,837,508	
Firewood..... Cords					717				717	
Staves..... No.	634,000								634,000	

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels, &c.—Continued.

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	252	182,373	91	48,692	319	286,656	64	29,120	726	546,841
1905.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Wheat.....	188,706	18,575	28,757	2,512	238,550					
Corn.....	6,385	6,636	163,374	4,526	180,921					
Barley.....	6,870	1,451	47,111		55,432					
Oats.....	8,225	2,570	21,535	3,742	36,072					
Pease.....			76		76					
Rye.....			1,171		1,711					
Coal.....	18,756	35,324	28,330	8,678	91,088					
Iron Ore.....	14,358	8,023			22,381					
Merchandise.....	29,375	7,485	74,975	3,126	114,961					
Shingles, woodenware, &c.....		2,748,941	2,325		2,325					
Sawed lumber..... Ft. B.M.	2,867,147		38,290,831	12,479,689	54,569,200					
Square timber..... Cub. ft.	355,000	951,524			538,000					
Firewood..... Cords		183,000	900		900					
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	328	238,690	121	66,355	305	310,622	43	15,758	797	631,425
1906.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Wheat.....	250,493	34,355	35,578		320,436					
Corn.....	8,177		202,250	1,378	49,306					
Barley.....	8,546	5,046	17,854		31,446					
Oats.....	21,900	16,083	11,323		49,306					
Pease.....			11		11					
Rye.....		5	1,406		1,411					
Coal.....	30,455	47,242	24,190	9,356	111,243					
Iron Ore.....	5,862				5,862					
Merchandise.....	35,383	7,009	110,263	50	152,705					
Shingles, woodenware, &c.....	16	37	851		904					
Sawed lumber..... Ft. B.M.	3,471,514	235,624	25,711,196	10,789,755	40,188,089					
Square timber..... Cub.ft.	375,000	200,000			575,000					
Firewood..... Cords	110	18	1,093		1,221					
Staves..... No.			300,000		300,000					
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	375	290,509	148	81,070	408	397,616	76	36,921	1007	806,116
1907.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Wheat.....	294,298	50,808	130,818	4,429	480,303					
Corn.....	6,713	514	259,895	4,571	271,693					
Barley.....	8,726	468	4,046		13,240					
Oats.....	49,689	16,647	7,033		73,369					
Pease.....			25		25					
Rye.....			2,270		2,270					
Coal.....	31,506	57,373	50,183	14,493	143,555					
Iron Ore.....	12,010	8,950			20,990					
Merchandise.....	21,545	9,436	5,231	6,235	42,447					
Shingles, woodenware, &c.....			2,222		2,222					
Sawed lumber..... Ft. B.M.			14,395,124	11,201,446	25,596,570					
Square timber..... Cub. ft.	558,090	323,000			881,090					
Firewood..... Cords			660		660					

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D.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal in Canadian and United States Vessels, &c.—Continued.

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	567	432,623	149	64,034	428	319,030	36	19,866	1180	835,553
1908.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Wheat.....	505,151	39,001	183,011	3,498	730,751					
Corn.....	2,405	124,997	127,402							
Barley.....	19,775	1,133	10,264	31,172						
Oats.....	30,091	643	2,689	33,423						
Pease.....	742	40	40	40						
Rye.....	33,733	42,656	5,925	6,667						
Coal.....	26,815	14,783	57,448	8,344	148,181					
Merchandise.....	70	14,410	13,656	69,694						
Firewood.....	70	1,173	1,243							
Sawed lumber..... Ft. B.M.	17,572,070	6,578,545	24,150,615							
Square timber..... Cub.ft	221,300	313,000	534,300							
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	555	486,406	136	71,034	323	324,576	26	17,317	1040	899,333
1909.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
Wheat.....	415,208	34,902	133,172	583,283						
Corn.....	6,694	134,208	140,902							
Barley.....	17,943	360	4,848	23,151						
Oats.....	70,392	4,743	75,135							
Pease.....	33	63	63							
Rye.....	33	33								
Coal.....	160,475	53,681	21,097	630	235,883					
Merchandise.....	52,994	14,732	12,232	16,498	96,506					
Sawed lumber.....	31,643	10,214	41,857							
Square timber.....	3,450	7,840	125	1,475	12,890					
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	596	599,416	142	88,963	249	285,704	14	13,563	1001	987,646
1910.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.			
Wheat.....	481,624	22,200	77,040	580,864						
Corn.....	15,759	214,221	229,980							
Barley.....	17,159	576	3,840	21,575						
Oats.....	135,743	490	136,233							
Pease.....	123	123								
Rye.....	894	361,990								
Coal.....	216,679	114,671	29,646	20,466	96,664					
Merchandise.....	39,149	15,231	21,818	21,562						
Sawed lumber.....	3,630	800	16,932	7,730						
Square timber.....	1,930	5,000	800	525						
Shingles.....	74,434	1,772	24,031	100,237						
Unenumerated.....	986,207	160,250	389,466	31,360	1,557,283					
Total.....	986,207	160,250	389,466	31,360	1,557,283					

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D.—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.
	640	670,037	122	83,755	270	304,171	48	42,830	1080	1,100,793
1911.		Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....		483,984		24,826		49,330				558,140
Corn.....		29,978		11,368		232,586				273,932
Barley.....		14,382		240						14,622
Oats.....		162,455		878						163,333
Pease.....										
Rye.....		112								112
Coal.....		230,809		79,311		40,109		22,489		372,718
Merchandise.....		45,838		19,325		45,881		34,449		145,493
Sawed lumber.....		300				25,361		9,020		34,781
Square timber.....		3,260		4,500		2,277				10,037
Shingles.....						60				60
Unenumerated.....		95,017				14,386				109,403
Total.....		1,066,135		140,448		409,990		65,958		1,682,513
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	774	790,044	152	95,202	450	427,226	52	33,102	1428	1,345,574
1912.		Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....		603,854		78,794		111,284				793,932
Corn.....		536		2,181		118,616				121,353
Barley.....		22,022		353		2,866				25,241
Oats.....		170,446		3,269		11,831				185,546
Pease.....						150				150
Rye.....						714				714
Coal.....		331,536		44,212		154,653		3,800		534,201
Merchandise.....		48,659		17,602		47,836		32,340		146,437
Sawed lumber.....						22,689		15,361		38,050
Square timber.....		9,000		8,660		1,409				19,069
Shingles.....						250				250
Unenumerated.....		73,387		1,186		69,367				143,940
Total.....		1,259,440		156,257		541,665		51,501		2,008,863
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	1,043	1,081,973	148	104,194	375	386,284	28	18,908	1,594	1,590,459
1913.		Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....		761,418		87,153		154,768				1,003,339
Corn.....		1,549				142,805				144,354
Barley.....		82,241		2,448		12,200				96,889
Oats.....		188,442		1,937		9,415				199,794
Pease.....										
Rye.....		3,136				3,731				6,867
Coal.....		498,269		59,145		107,946		1,735		667,095
Merchandise.....		59,375		18,701		28,825		21,008		127,909
Sawed lumber.....		1,500				19,200		3,736		24,436
Square timber.....		4,636		4,004		1,040				9,680
Shingles.....										
Unenumerated.....		183,957		9,059		76,613		3,550		273,179
Total.....		1,784,523		182,447		556,543		30,029		2,553,542

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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 1913 is as follows:—

Summary.	Tons.	Tons.
In Canadian steam vessels.....	537,755	
“ sail vessels.....	6,486	
Total quantity in Canadian vessels.....		544,241
In United States steam vessels.....	384,110	
“ sail vessels.....	2,758	
Total in United States vessels.....		386,868
Grand total freight passed Up the Welland canal in Canadian and United States vessels.....		931,109

STATEMENT of the Quantity of Through Freight passing Up and Down the Welland canal during the Season of Navigation in 1913.

Summary.	Tons.	Tons.
In Canadian steam vessels up.....	537,755	
“ “ down.....	1,784,523	
Total in Canadian steam vessels.....		2,322,278
In Canadian sail vessels up.....	6,486	
“ “ down.....	182,447	
Total in Canadian sail vessels.....		188,933
Total quantity in Canadian vessels.....		2,511,211
In United States steam vessels up.....	384,110	
“ “ down.....	560,093	
Total in United States steam vessels.....		944,203
In United States sail vessels up.....	2,758	
“ “ down.....	26,479	
Total in United States sail vessels.....		29,237
Total quantity in United States vessels.....		973,440
Total in Canadian and United States vessels.....		3,484,651
	Down or east bound.	Up or west bound.
In Canadian vessels.....	1,966,970	544,241
In United States vessels.....	586,572	386,868
Total.....	2,553,542	931,109

F.—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 1901 to 1913.

Articles.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Cement and water lime									5,652	484			270
Clay, lime and sand				35	22								
Iron, railway		50		8,170	10								
“ pig	1,178	5,785	2,542	1,651	384	269	124	553	12,689		1,901		93
“ all other				16	48						34,540	28,996	5,402
Steel													
Stone, for cutting				1									
Apples			2,206	9,697	43,607	21,196	9,936	24,318	19,143	20,000	14,853	20,572	60,854
Barley	14,319	1,719	123,864	55,021	84,204	55,559	105,984	10,454	17,137	77,612	134,239	7,345	9,344
Corn	4,065		3,643	212	15,694	80,570	49,159	27,500	19,634	6,607	11,696	15,413	117,548
Flaxseed	1,400	6,755	16,151	24,662	14,571	9,174	3,730	5,028	21,905	27,081	44,888	38,026	34,152
Meal, all kinds	35		348	57	270	60		156		10,323	3,907		
Oats	1,584	1,442	2,438	21,401	21,401	37,164	66,941	28,081	65,624	129,900	147,180	164,581	72,733
Oil cake	1,983		462	7,846	9,229								
Pease		63							30		20	10	
Rye	2,561	4,079	4,260	1,711	1,405	2,266	2,266	6,662	120			714	4,567
Salt	50		132	615	168	75	143	419				931	686
Seed, all kinds							20						
Hay, pressed	246												
Tobacco, raw	23												
Wheat	132,702	200,975	226,746	133,528	190,505	289,611	450,446	686,626	550,775	562,149	541,174	768,633	763,851
All other agricultural products, vegetables													
Hides, skins, horns and hoofs				10									
Horses						2							
Lard and lard oil	1,155				2,847	4,810							
Meats, all kinds												41	
Pork	34							524					
Tallow			3		53								
All other agricultural products, animal									366				
Total, class 3	161,849	220,805	382,858	241,522	384,727	499,895	688,749	790,321	718,951	841,310	934,158	1,015,262	1,069,500

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<i>Class 4.</i>												
Agricultural implement	1,785	13	58	17								
Ashes.....	3		2	16								
Bricks.....									1,948			
Crockery.....	5		3	6	6					2		
Furniture.....	1		15	3	11	4						
Glass, all kinds.....		54	240	820								
Molasses.....			19	64								
Nails.....	14,987	12,091	44,619	12,848	19,995	22,111	30,002	31,149	26,932	45,930	52,871	67,576
Oil.....	17		5									
Paint.....												
Pitch and tar.....												
Rags.....			4		53	101						
Resin.....			20									
Soda ash.....	4											
Sugar.....	112				72	15						
Tin.....				87								
Tobacco.....												
White lead.....												
Whisky, beer and other spirits.....	32			766	614	1,224	1,056	525	959	581	1,739	1,298
Merchandise not enumerated.....	2,420	419	582	713	466	2,294	2,126	10,418	9,224	11,254	13,601	4,270
Total, class 4.....	19,366	12,577	15,569	14,456	25,572	21,164	25,749	42,265	37,462	58,942	71,686	74,078
<i>Class 5.</i>												
Barrels, empty.....	66	15										
Hoops.....												
Sawed lumber.....	2,685	1,085			100						300	
Staves, pipe and barrel.....				394	2,400							
Staves, West India and pipe.....												
Timber, square, in vessels.....				1,544	1,260	4,180						
Timber, sq., in rafts.....								900	1,800	1,360	5,560	3,444
Woodenware.....		17										
Total, class 5.....	3,205	1,117		1,938	5,217	4,000	4,180	900	1,800	1,660	5,560	3,444
<i>Special class.</i>												
Coal.....					29,351	29,172	70,489	42,075	289,567	298,873	424,988	563,197
Iron ore.....		15,976		17,362	3,837			1,824			12,467	
Stones, all kinds.....												
Totals, special class.....		15,976		17,362	33,188	29,172	70,489	43,367	289,567	298,873	437,455	363,197
Grand total.....	184,420	250,475	398,427	275,278	448,704	554,231	789,167	869,398	939,055	1,170,129	1,993,623	1,710,219

G.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland canals to Lake Erie, during the Seasons of Navigation in 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1909, 1910, 1911, 1912 and 1913.

Articles.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1909.	1910.	1911.	1912.	1913.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>												
Bricks.....	196	22	80	115	132		556					
Brimstone.....	5	20	23	12								
Cement and water lime.....	2,916	178	3,924	39	181	88	13	400	17,565	8,625	40,074	36,890
Clay, lime and sand.....	2	1	181				100					
Cotton, raw.....	8		23	4								
Fish.....			8				39					
Gypsum.....												
Iron, railway.....	748	11,735	39,641	283	126	7,289	4,119					
“ pig.....		558	273		312	680	7,655	7,231	2,060	2,300	2,598	675
“ all other.....	4,950	2,904	5,845	3,782	3,633	8,235	6,987		540			
Salt.....	75	4	87	99	150	17						
Steel.....	3	11	332	58	192	111	2,561	35,153		22,352	66,544	49,692
Stone for cutting.....				41								
Flour.....	16				18							
Hay.....							30	255				
Meals.....			17	25					1,113			
Oats.....												
Potatoes.....												
Seeds, all kinds.....	302	58	325	164	35		17					
Tobacco, raw.....		1	2									
Agricultural products, not enumerated, vegetable.....	1				127							
Hides and skins.....		16	6									
Horses.....												
Lard and lard oil.....		11			28	20	1					
Meats, other than pork.....				猪鬃 25			15					
Pork.....										150	150	25
Wool.....												
All other articles not enumerated.....												
Total, class 3.....	9,222	15,520	50,768	4,647	4,934	16,457	22,076	43,039	21,278	34,427	109,366	87,282

H.—STATEMENT showing the Quantity of Freight passed Eastward and Westward through the Welland canal, from United States Ports to United States Ports, during the Seasons of Navigation from 1901 to 1913, inclusive.

Articles.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
<i>Class 3.</i>	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Bricks.....										2,000			11,060
Cement and water lime.....											91		
Fish.....							20						
Iron, railway.....													
" all other.....	105	30			1	27					1,863	300	505
Salt.....													238
Steel.....									9,086				
Stone for cutting.....							2						
Apples.....													
Barley.....	7,418	7,418	11,435	16,621	9,197	9,566	2,812	7,148	4,224	3,840		2,160	
Corn.....	55,531	66,111	108,917	60,964	93,622	135,240	124,474	99,830	100,967	126,938	116,705	91,254	114,662
Flour.....	17,168	13,785	6,082	8,556	24,054	15,215	18,898	17,694		11,859	2,852	9,878	11,967
Hay, pressed.....					200								
Meal, all kinds.....	14,016	12,675	13,546	13,076	9,606	10,668	21,976	21,353		8,621	7,565	12,569	8,685
Marble.....					87								
Nails.....					1								
Oil cake.....	1,302	110	740	16,497	228		114						
Oats.....	26,344	10,006	6,112	3	10,892	11,323	4,741	2,070				1,400	7,407
Pease.....			22		76		11	40	63	123			
Potatoes.....													
Rye.....			4,174										
Flax seed.....			1,591			756			2				
Seeds, all kinds.....		10			43		17			15,452			
Tobacco.....	23												
Wheat.....	23,557	32,639	15,436	14,269	15,483	13,410	21,802	24,651	17,940	10,717	4,950	15,911	20,258
Agricultural products, vegetable.....	10		1										
Hides and skins, &c.....												19	37
Horses.....													
Lard and lard oil, &c.....	1,680	2,413											
Meats, other than pork.....													
Pork.....	970	632	152	379	273	268	429						
Sheep.....													
Tallow.....	119								190				
Wool.....	3	732	482	134	21	86	30						
Total, class 3.....	147,947	146,581	108,720	130,301	163,301	196,301	196,061	182,085	161,738	164,564	134,054	133,659	184,782

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L.—STATEMENT of the quantity of Grain Transhipped to the following Ports for the season of 1913.

Ports.	Wheat.	Oats.	Barley.	Corn.	Other grain.	Total.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.
Kingston.....	5,943,567	1,942,590	1,633,418	78,465	77,858	9,675,898	255,010
Prescott.....	232,367	167,589	51,417	58,715	.....	510,088	12,698
Ogdensburg.....	.....	.....	.....	75,000	.....	75,000	2,100
Total bushels .	6,175,934	2,110,179	1,684,835	212,180	77,858	10,260,986
Total tons...	185,278	35,873	40,536	5,941	2,180	269,808

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M.—The quantity of Coal passed through the Welland canal during a series of years from 1885 to 1913 inclusive, as follows:—

Years.	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.
	Up.	Down.	Up.	Down.	Up.	Down.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1885.			193,442	4,974	10,321	31,350	240,087
1886.			184,564	5,400	22,187	49,724	261,875
1887.			81,617	1,163	26,775	25,968	135,523
1888.			172,381	878	17,365	27,183	217,807
1889.			226,352	1,124	12,036	25,931	265,443
1890.			116,616	615	17,280	22,781	202,372
1891.	80		185,190	1,382	17,374	20,698	224,644
1892.			183,244	651	12,391	15,330	211,616
1893.			204,704	2,123	8,325	17,944	233,096
1894.			187,794	727	1,269	13,947	203,737
1895.	4		148,887	603	1,565	7,807	158,866
1896.	20	210	206,093	1,255	4,127	11,740	223,443
1897.		4	165,143		1,277	9,799	176,225
1898.			156,055	759	986	4,536	162,336
1899.			86,638	2,293	525	8,276	97,732
1900.	8		45,032	992		1,360	47,392
1901.			46,345	357	456	2,322	49,480
1902.			12,410	501	65	51,037	64,013
1903.	3		113,076		4,796	30,009	147,884
1904.	2,919		62,782	1,100	3,711	32,813	103,325
1905.			70,118	3,346	11,436	37,742	172,642
1906.	60		29,123	4,400	7,161	106,843	147,587
1907.	2,857		110,347		10,453	143,555	267,212
1908.	4,401		158,351		5,988	148,181	316,921
1909.			130,731	400	11,067	235,483	377,681
1910.	2,045		197,482	4,411	15,974	357,579	577,491
1911.	731		221,752	2,160	24,451	370,558	619,682
1912.			163,461	2,958	12,034	531,243	709,696
1913.			235,730	1,500	42,965	665,595	945,790

N.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence canals during the season of 1885 to 1913, inclusive.

Years.	Quantity	Quantity	Total
	passed up.	passed down to Montreal.	Quantity passed up and down.
	Tons.	Tons.	Tons.
1885.....	5,035	122,829	127,864
1886.....	3,301	118,802	122,103
1887.....	7,579	121,618	129,197
1888.....	8,341	123,050	131,391
1889.....	5,360	124,290	129,650
1890.....	6,538	135,168	141,706
1891.....	7,951	141,701	149,652
1892.....	7,543	157,134	164,677
1893.....	2,285	147,139	149,424
1894.....	16,213	169,552	185,765
1895.....		165,151	165,151
1896.....	689	161,551	162,240
1897.....	40	164,963	165,003
1898.....	400	175,609	176,009
1899.....	448	201,546	201,994
1900.....	10	280,169	280,179
1901.....	2,765	298,245	301,010
1902.....	9,231	95,702	104,933
1903.....	30	290,548	290,578
1904.....	9,670	320,973	330,643
1905.....	8,518	345,589	354,107
1906.....	6,989	313,080	320,069
1907.....	1,281	406,978	408,259
1908.....	23,939	448,140	472,079
1909.....	13,543	469,635	483,238
1910.....	7,351	746,926	754,277
1911.....	6,230	756,474	762,704
1912.....	9,300	903,237	912,537
1913.....	3,500	1,225,288	1,228,788

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O.—STATEMENT showing the quantity of Through Freight passed down the Welland canal, &c.

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 Lake Ontario.
1902.	Tons.	Tons.	Tons.
Barley.....			7,418
Corn.....	1,719	10,335	55,583
Oats.....	1,412		9,764
Pease.....			
Rye.....	4,079		
Wheat.....	200,075	12,452	8,389
Total, grain.....	208,215	22,787	81,165
Other articles.....	42,260	32,946	179,914
Total.....	250,475	55,733	261,078
1903.			
Barley.....	2,206	1,017	11,433
Corn.....	116,223	13,846	80,689
Oats.....	2,438		5,315
Pease.....	63		22
Rye.....	4,200		644
Wheat.....	226,746	14,199	13,725
Total, grain.....	135,1936	29,062	111,828
Other articles.....	38,850	82,298	101,621
Total.....	390,786	111,360	213,449
1904.			
Barley.....	9,697	853	16,621
Corn.....	55,021	3,950	57,473
Oats.....			16,497
Pease.....			
Rye.....			3
Wheat.....	133,528	18,908	11,929
Total, grain.....	198,246	23,711	102,523
Other articles.....	77,031	80,092	138,475
Total.....	375,277	103,803	240,998
1905.			
Barley.....	43,607	2,628	9,197
Corn.....	84,204	3,095	93,622
Oats.....	21,404	3,776	10,892
Pease.....			76
Rye.....	1,711		
Wheat.....	190,505	32,562	15,483
Total, grain.....	**341,431	42,061	129,270
Other articles.....	107,273	123,225	104,747
Total.....	448,704	165,286	234,017

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O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, &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 Lake Ontario.
	Tons.	Tons.	Tons.
1906.			
Barley.....	21,196	984	9,266
Corn.....	55,559	15,688	140,558
Oats.....	37,164	819	11,323
Pease.....	.....	11	.....
Rye.....	1,405	6	.....
Wheat.....	***289,611	15,843	14,972
Total grain.....	404,935	33,351	176,119
Other articles.....	118,224	176,277	59,884
Total.....	523,159	209,628	236,003
1907.			
Barley.....	9,936	492	2,812
Corn.....	106,299	31,901	133,493
Oats.....	67,063	1,565	4,741
Pease.....	.....	.....	25
Rye.....	2,266	2	2
Wheat.....	450,009	8,072	22,222
Total grain.....	635,573	42,032	163,295
Other articles.....	153,594	126,423	93,127
Total.....	789,167	168,455	256,422
1908.			
Barley.....	24,318	3,546	3,308
Corn.....	10,454	11,489	105,459
Oats.....	28,081	3,272	2,070
Pease.....	.....	.....	40
Rye.....	6,662	3	2
Wheat.....	†686,626	19,832	24,293
Total grain.....	756,141	38,142	135,172
Other articles.....	108,785	162,378	91,875
Total.....	864,926	200,520	227,047
1909.			
Barley.....	19,143	.....	4,008
Corn.....	17,137	22,798	100,967
Oats.....	65,624	2,872	6,639
Pease.....	30	.....	33
Rye.....	33	.....	.....
Wheat.....	550,775	14,568	17,940
Total grain.....	652,742	40,238	129,587
Other articles.....	272,263	113,970	126,223
Total.....	925,005	154,208	255,810

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O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, &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 Lake Ontario.
1910.	Tons.	Tons.	Tons.
Barley.....	20,000		1,575
Corn.....	77,612	49,326	103,042
Oats.....	129,900	6,333	
Pease.....			123
Rye.....			
Wheat.....	562,149	7,998	10,717
Total grain.....	789,661	63,657	115,457
Other articles.....	380,500	152,325	55,683
Total.....	1,170,161	215,982	171,140
1911.			
Barley.....	14,331	291	
Corn.....	134,239	22,988	116,705
Oats.....	147,180	16,153	
Pease.....			
Rye.....		112	
Wheat.....	541,174	12,016	4,950
Total grain.....	836,924	51,560	121,655
Other articles.....	500,881	115,721	55,790
Total.....	1,337,805	167,281	177,445
1912.			
Barley.....	20,572	218	4,451
Corn.....	7,345	1,372	112,616
Oats.....	164,581	20,965	
Pease.....	10	12	128
Rye.....	714		
Wheat.....	768,633	25,299	
Total grain.....	961,855	47,866	117,195
Other articles.....	598,108	214,395	69,444
Total.....	1,559,963	262,261	186,639
1913.			
Barley.....	91,856	5,033	
Corn.....	9,344	20,348	114,662
Oats.....	173,827	18,560	7,407
Pease.....			
Rye.....	4,567	2,300	
Wheat.....	985,774	17,565	
Total, grain.....	1,265,368	63,806	122,069
Other articles.....	916,254	135,742	50,303
Total.....	2,181,622	199,548	172,372

TABLE 1.—COMPARATIVE STATEMENT OF Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation 1912 and 1913.

	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.		ORIGIN OF CARGO.		
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.		
											Canadian.	United States.	
1912.													
Sault Ste. Marie.....	770,976	2,162,521	16,883	857,777	1,807,181	32,253,916	1,826,457	473,944	3,921,497	35,748,158	38,669,655	4,090,362	35,579,293
Welland.....	440,946	975,826	137,305	3,699	235,437	180,319	12,034	866,349	825,722	2,026,193	2,851,915	1,553,116	1,298,799
St. Lawrence.....	678,046	1,371,077	280,438	48,306	201	500	196	1,098,424	958,881	2,518,307	3,477,188	2,340,143	1,137,045
Chambly.....	5,930	9,378	432,324	.....	.....	.....	.....	170,774	438,263	180,152	618,415	447,702	170,713
St. Peter's.....	33,375	40,334	.....	.....	.....	.....	.....	300	33,575	41,234	74,809	74,509	300
Murray.....	162,153	5,429	300	.....	.....	.....	866	1,331	163,321	6,760	170,081	167,520	2,561
Ottawa.....	53,092	283,637	.....	51,886	.....	.....	3,735	.....	56,827	335,523	392,350	383,515	8,835
Rideau.....	78,570	68,986	.....	170	.....	.....	.....	12,407	78,570	81,563	160,133	146,963	13,170
Trent.....	29,101	48,049	.....	.....	.....	.....	.....	.....	29,101	48,049	77,150	77,150	.....
St. Andrews.....	88,044	7,505	.....	.....	.....	.....	.....	.....	88,044	7,505	95,549	95,549	.....
Grand total.....	2,340,444	4,973,342	867,250	961,838	2,042,819	32,434,735	1,843,288	2,623,529	6,593,801	40,993,444	47,587,245	9,376,529	38,210,716
1913.													
Sault Ste. Marie.....	634,118	2,752,099	27,372	1,403,129	2,373,665	33,425,887	1,859,116	223,938	4,891,271	37,805,053	42,699,324	4,934,734	37,764,590
Welland.....	395,667	1,335,059	245,735	3,215	320,736	204,597	42,965	1,022,740	1,005,103	2,565,611	3,570,714	2,093,406	1,477,308
St. Lawrence.....	749,035	1,750,553	354,532	34,893	126	.....	432	1,413,446	1,104,125	3,198,302	4,302,427	2,837,019	1,465,408
Chambly.....	8,354	10,096	339,113	.....	.....	.....	.....	198,039	347,467	208,135	555,602	358,801	196,801
St. Peter's.....	29,486	42,028	.....	.....	.....	.....	.....	.....	29,486	42,028	71,514	71,514	.....
Murray.....	168,614	4,670	.....	.....	.....	.....	1,692	5,600	170,306	10,270	180,576	162,065	18,481
Ottawa.....	51,428	273,652	.....	.....	.....	.....	2,742	.....	54,170	311,268	365,438	358,465	6,973
Rideau.....	80,147	77,464	960	.....	.....	.....	.....	12,652	81,107	90,116	171,223	157,746	13,477
Trent.....	17,541	38,259	.....	.....	.....	.....	.....	.....	17,541	38,259	55,800	55,800	.....
St. Andrew's.....	78,538	2,757	.....	.....	.....	.....	.....	.....	78,538	2,757	81,295	81,295	.....
Grand total.....	2,212,928	6,286,637	967,712	1,478,293	2,694,527	33,030,484	1,906,947	2,876,415	7,782,114	44,271,799	52,053,913	11,130,875	40,923,038

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TABLE 2.—STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through the several Canals during the Season of Navigation in 1913.

VESSELS.	TOTAL NUMBER OF TRIPS.	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.	
CANADIAN VESSELS.												
<i>Steam and Sail.</i>												
Sault Ste. Marie.....	3,279	1,582,432	1,584,759	93,623	64,171	973	4,641	329,265	133,572	2,006,291	1,787,143	3,793,434
Welland.....	2,411	786,785	798,430	373,524	830	2,558	.....	17,660	396,991	1,180,527	1,196,251	2,376,778
St. Lawrence.....	3,845	1,784,339	1,686,746	389,290	168	.....	590	.....	409,246	2,143,649	2,096,750	4,240,399
Chambly.....	472	27,988	28,074	4,292	.....	.....	.....	.....	1,786	.....	32,280	32,140
St. Peters.....	1,324	50,581	44,309	31,535	38	.....	.....	1,252	15,231	50,581	44,309	94,890
Murray.....	1,224	220,172	127,266	.....	.....	.....	.....	302	.....	252,959	142,535	395,494
Ottawa.....	2,647	238,891	256,738	.....	1,718	.....	.....	.....	.....	230,193	258,456	497,649
Rideau.....	2,798	93,223	95,110	5,985	106	.....	.....	.....	6,474	93,203	101,690	200,898
Trent Valley.....	3,666	110,224	106,857	.....	.....	.....	.....	.....	.....	110,224	106,857	217,081
St. Andrews.....	988	99,980	99,298	.....	.....	.....	.....	.....	.....	99,980	99,298	199,278
Total Canadian.....	28,654	4,964,635	4,827,587	898,249	67,031	3,531	5,231	348,477	963,300	6,214,892	5,863,149	12,078,041
UNITED STATES VESSELS.												
Sault Ste. Marie.....	5,006	12,041	8,349	39,054	681,549	5,345,574	15,371,416	689,357	33,667	6,086,026	16,094,981	22,181,007
Welland.....	818	4,000	911	77,804	1,545	289,480	195,782	9,269	208,961	380,553	407,199	787,752
St. Lawrence.....	1,811	32,096	15,786	421,813	13,886	22,728	268	441	454,353	477,078	484,293	961,371
Chambly.....	2,725	111	2,820	133,852	.....	.....	.....	.....	136,888	133,963	139,708	273,671
St. Peters.....	43	88	88	.....	267	.....	.....	310	.....	398	650	1,048
Murray.....	53	293	53	859	242	202	33	301	150	1,655	478	2,133
Ottawa.....	291	11,628	442	.....	14,114	.....	.....	3,534	.....	15,162	14,566	29,718
Rideau.....	22	1,044	1,044	.....	.....	.....	.....	.....	.....	1,044	1,044	2,088
Trent Valley.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Andrews.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total United States.....	10,739	61,301	29,788	673,382	711,603	5,657,984	15,567,493	703,212	824,019	7,005,879	17,142,909	24,238,788
Grand total Canadian and United States.....	39,393	5,025,936	4,857,375	1,571,631	778,634	5,661,515	15,572,730	1,051,689	1,797,319	13,310,771	23,006,058	36,316,829

TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Numbr	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
SAULT STE. MARIE CANAL.					
Canadian vessels, steam.....	3,003	1,553,789	1,556,456	93,623	64,171
“ “ sail.....	276	28,643	28,303	.....	.....
Total Canadian.....	3,279	1,582,432	1,584,759	93,623	64,171
United States vessels, steam.....	4,996	11,891	8,286	39,054	681,549
“ “ sail.....	10	150	63	.....	.....
Total United States.....	5,006	12,041	8,349	39,054	681,549
Grand total, Sault Ste. Marie canal.....	8,285	1,594,473	1,593,108	132,677	745,720
WELLAND CANAL.					
Canadian vessels, steam.....	2,111	723,613	735,097	330,557	830
“ “ sail.....	300	63,172	63,333	42,967	.....
Total Canadian.....	2,411	786,785	798,430	373,524	830
United States vessels, steam.....	756	4,000	425	73,181	1,075
“ “ sail.....	62	.....	486	4,623	470
Total United States.....	818	4,000	911	77,804	1,545
Grand total, Welland canal.....	3,229	790,785	799,341	451,328	2,375
ST. LAWRENCE CANALS.					
Canadian vessels, steam.....	4,997	1,065,517	1,026,880	374,659	163
“ “ sail.....	4,848	688,842	659,866	14,631	.....
Total Canadian.....	9,845	1,754,359	1,686,746	389,290	163
United States vessels, steam.....	1,208	8,713	5,993	397,206	39
“ “ sail.....	603	23,383	9,793	24,607	13,847
Total United States.....	1,811	32,096	15,796	421,813	13,886
Grand total, St. Lawrence canals.....	11,656	1,786,455	1,702,542	811,103	14,054
CHAMBLY CANAL.					
Canadian vessels, steam.....	290	22,806	23,228	.....	.....
“ “ sail.....	182	5,182	4,846	4,292	.....
Total Canadian.....	472	27,988	28,074	4,292	.....
United States vessels, steam.....	.....	.....	.....	.....	.....
“ “ sail.....	2,725	111	2,280	133,852	.....
Total United States.....	2,725	111	2,820	133,852
Grand total, Chambly canal.....	3,197	28,099	30,894	138,144

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FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
Up.	Down.	Up.	Down.	Up.	Down.	
973	4,641	329,163	133,572	1,977,548	1,758,840	3,736,388
		100		28,743	28,303	57,046
973	4,641	329,263	133,572	2,006,291	1,787,143	3,793,434
5,344,768	15,370,402	685,744	33,667	6,081,457	16,093,904	22,175,861
806	1,014	3,613		4,569	1,077	5,646
5,345,574	15,371,416	689,357	33,667	6,086,026	16,094,981	22,181,007
5,346,547	15,376,057	1,018,620	167,239	8,092,317	17,882,124	25,974,441
2,367		17,660	356,004	1,074,197	1,091,931	2,166,128
191			40,987	106,330	104,320	210,650
2,558		17,660	396,991	1,180,527	1,196,251	2,376,778
283,204	192,225	8,429	193,336	368,814	387,061	755,875
6,276	3,557	840	15,625	11,739	20,138	31,877
289,480	195,782	9,269	208,961	380,553	407,199	787,752
292,038	195,782	26,929	605,952	1,561,080	1,603,450	3,164,530
	590		381,518	1,440,176	1,409,156	2,849,332
			27,728	703,473	687,594	1,391,067
	590		409,246	2,143,649	2,096,750	4,240,399
22,728	18		420,307	428,647	426,357	855,004
	250	441	34,046	48,431	57,936	106,367
22,728	268	441	454,353	477,078	484,293	961,371
22,728	858	441	863,599	2,620,727	2,581,043	5,201,770
				22,806	23,228	46,034
			1,786	9,474	6,632	16,106
			1,786	32,280	29,860	62,140
			136,888	133,963	139,708	273,671
			136,888	133,963	139,708	273,671
			138,674	166,243	169,568	335,811

TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Num'b'r	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
ST. PETER'S CANAL.					
Canadian vessels, steam.....	382	24,761	16,481	.....	.....
“ “ sail.....	942	25,820	27,828	.....	.....
Total Canadian.....	1,324	50,581	44,309	.....	.....
United States vessels, steam.....	6	88	157	.....	88
“ “ sail.....	7	.....	226	.....	179
Total United States.....	13	88	383	.....	267
Grand total, St. Peter's canal.....	1,337	50,669	44,692	.....	267
MURRAY CANAL.					
Canadian vessels, steam.....	887	173,463	85,034	24,535	38
“ “ sail.....	337	46,709	42,232	7,000	.....
Total Canadian.....	1,224	220,172	127,266	31,535	38
United States vessels, steam.....	51	293	53	451	242
“ “ sail.....	2	.....	.....	408	.....
Total United States.....	53	293	53	859	242
Grand total, Murray canal.....	1,277	220,465	127,319	32,394	280
OTTAWA CANALS.					
Canadian vessels, steam.....	1,007	102,339	109,138	.....	1,121
“ “ sail.....	1,640	136,552	147,600	.....	597
Total Canadian.....	2,647	238,891	256,738	.....	1,718
United States vessels, steam.....	.....	.....	.....	.....	.....
“ “ sail.....	291	11,628	442	.....	14,114
Total United States.....	291	11,628	442	.....	14,114
Grand total, Ottawa Canals.....	2,938	250,519	257,180	.....	15,832
RIDEAU CANAL.					
Canadian vessels, steam.....	2,185	56,702	59,320	5,985	106
“ “ sail.....	613	36,521	35,790	.....	.....
Total Canadian.....	2,798	93,223	95,110	5,985	106
United States vessels, steam.....	.....	.....	.....	.....	.....
“ “ sail.....	22	1,044	1,044	.....	.....
Total United States.....	22	1,044	1,044
Grand total, Rideau canal.....	2,820	94,267	96,154	5,985	106

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FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
Up.	Down.	Up.	Down.	Up.	Down.	
				24,761	16,481	41,242
				25,820	27,828	53,648
				50,581	44,309	94,890
		157		245	245	490
		153		153	405	558
		310		398	650	1,048
		310		50,979	44,959	95,938
		962	13,951	198,960	99,023	297,983
		290	1,280	53,999	43,512	97,511
		1,252	15,231	252,959	142,535	395,494
202	33	301	150	1,247	478	1,725
				408		408
202	33	301	150	1,655	478	2,133
202	33	1,553	15,381	254,614	143,013	397,627
				102,339	110,259	212,598
		302		136,854	148,197	285,051
		302		239,193	258,456	497,649
		3,534		15,162	14,556	29,718
		3,534		15,162	14,556	29,718
		3,836		254,355	273,012	527,367
			6,474	62,687	65,900	128,587
				36,521	35,790	72,311
			6,474	99,208	101,690	200,898
				1,044	1,044	2,088
				1,044	1,044	2,088
			6,474	100,252	102,734	202,986

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TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Number	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
TRENT VALLEY CANALS.					
Canadian vessels, steam.....	3,021	83,250	80,525		
“ “ sail.....	645	26,974	26,332		
Total Canadian.....	3,666	110,224	106,857		
United States vessels, steam.....					
“ “ sail.....					
Total United States.....					
Grand total, Trent Valley canals....	3,666	110,224	106,857		
ST. ANDREW'S CANAL.					
Canadian vessels, steam.....	616	45,322	42,513		
“ “ sail.....	372	54,658	56,785		
Total Canadian.....	988	99,980	99,298		
United States vessels, steam.....					
“ “ sail.....					
Total United States.....					
Grand total, St. Andrew's canal.....	988	99,980	99,298		

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FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
Up.	Down.	Up.	Down.	Up.	Down.	
				83,250	80,525	163,775
				26,974	26,332	53,306
				110,224	106,857	217,081
				110,224	106,857	217,081
				45,322	42,513	87,835
				54,658	56,785	111,443
				99,980	99,298	199,278
				99,980	99,298	199,278

TABLE 4.—Comparative Statement of all the Canals, for the year ending December 31st, 1912 and 1913.

ARTICLES.	1912.	1913.	Increase.	Decrease.
<i>Class No. 1.</i>	Tons.	Tons.	Tons.	Tons.
Canadian vessels, steam.....	8,062,842	9,730,702	1,667,860	.....
“ sail.....	2,174,493	2,347,360	172,867	.....
United States vessels, steam.....	24,069,124	23,788,434	.....	280,690
“ sail.....	567,066	450,333	.....	116,733
Total, Class No. 1.....	34,873,525	36,316,829	1,443,304	397,423
<i>Class No. 2.</i>	No.	No.	No.	No.
Passengers.....	292,267	335,799	43,512	.....
<i>Class No. 3.</i>	Tons.	Tons.	Tons.	Tons.
Barley.....	206,789	423,728	216,939	.....
Buckwheat.....	253	5	.....	248
Corn.....	148,218	176,490	28,272	.....
Oats.....	762,302	842,737	80,435	.....
Rye.....	13,263	13,620	357	.....
Flax.....	224,848	711,921	487,073	.....
Peas.....	228	375	147	.....
Wheat.....	5,122,696	5,956,153	833,457	.....
Flour.....	342,636	334,602	.....	8,034
Hay.....	35,420	18,283	.....	17,137
Other mill products.....	27,894	26,542	.....	1,352
Fruit and vegetables.....	10,836	9,958	.....	878
Potatoes.....	8,293	7,915	.....	378
Live stock.....	1,692	2,826	1,134	.....
Poultry, game and fish.....	2,710	2,237	.....	473
Dressed meats.....	346	168	.....	178
Other packing house products.....	2,403	1,996	.....	407
Hides and leather.....	493	70	.....	423
Wool.....	1,075	228	.....	847
All other animal products.....	11,469	11,774	305	.....
Total, Class No. 3.....	6,923,864	8,541,628	1,617,764	30,355
<i>Class No. 4.</i>				
Agricultural implements.....	42,116	28,299	.....	13,817
Cement, bricks, lime.....	537,033	413,041	.....	124,052
Household goods and furniture.....	2,958	3,948	990	.....
Iron, pig and bloom.....	99,251	67,646	.....	31,605
“ and steel, all other.....	458,762	311,955	.....	146,807
Petroleum and other oils.....	144,205	163,765	25,560	.....
Sugar.....	41,338	54,445	13,107	.....
Salt.....	23,071	20,775	.....	2,296
Wines, liquors and beers.....	31,632	27,847	.....	3,785
Merchandise not enumerated.....	848,522	783,978	.....	64,544
Total, Class No. 4.....	2,228,948	1,881,699	39,657	386,906
<i>Class No. 5.</i>				
Pulpwood.....	762,156	980,726	218,570	.....
Sawed lumber.....	723,935	596,722	.....	127,213
Squared timber.....	58,484	41,032	.....	17,452
Shingles.....	6,851	7,296	445	.....
Other woods.....	83,196	53,149	30,047
Total, Class No. 5.....	1,634,622	1,678,925	219,015	174,712

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TABLE 4.—Comparative Statement of all the Canals, for the year ending December 31st, 1912 and 1913—*Concluded.*

Articles.	1912.	1913.	Increase.	Decrease.
<i>Class No. 6.</i>	Tons.	Tons.	Tons.	Tons.
Hard coal.....	1,178,917	1,503,412	324,495	.....
Soft coal.....	2,786,969	5,241,567	1,454,598	.....
Coke.....	12	2	.....	10
Copper ore.....	40,322	25,855	.....	14,467
Iron ore.....	31,219,646	32,498,724	1,279,078	.....
Other ore.....	57,951	32,192	.....	25,759
Sand, &c.....	515,994	649,909	133,915	.....
Total, Class No. 6.....	36,799,811	39,951,661	3,192,086	40,236
Grand total.....	47,587,245	52,053,913	5,098,877	632,209

Net increase, 4,466,668 tons.

TABLE 5.—Statement of Traffic on the undermentioned Canals during the Season of Navigation in 1913.

Articles.	St. Lawrence.	Welland.	St. Lawrence.	Chambly.	St. Peters.	Murray.	Ottawa.	Rideau.	Trent Valley.	St. Andrews.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class No. 1.—Vessels.</i>										
Canadian Vessels..... Steam.	3,736,388	2,166,128	2,894,332	46,034	41,242	297,983	212,598	128,587	163,775	88,635
“ “..... Sail.	57,046	210,671	1,391,067	16,106	53,648	97,511	285,051	72,311	53,306	110,643
United States Vessels..... Steam.	22,175,361	755,851	855,004	.....	490	1,735	.....	.....	.....	.....
“ “..... Sail.	5,646	31,877	106,367	273,671	558	438	.....	2,088	.....	.....
Total, Class No. 1.....	25,974,441	3,164,530	5,201,770	335,811	95,938	397,627	527,367	202,986	217,081	199,278
<i>Class No. 2.</i>										
Passengers.....	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Total, Class No. 2.....	36,872	1,620	127,638	2,507	1,582	20,210	24,759	19,653	9,162	1,796
<i>Class No. 3.</i>										
Barley.....	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Buckwheat.....	234,245	96,889	92,264	13	4	267	18	17	11	.....
Corn.....	.....	144,351	31,913	89	1	.....	13	119	.....	.....
Oats.....	461,635	199,794	176,279	868	3,856	.....	31	164	98	42
Rye.....	2,184	6,867	4,568	1	.....	.....	.....	.....	.....	.....
Flax.....	370,378	173,351	166,132	.....	.....	.....	.....	.....	.....	.....
Peas.....	100	100	114	26	13	.....	.....	7	.....	.....
Wheat.....	3,954,824	1,005,362	994,312	1,389	1,587	.....	34	459	1,128	.....
Flour.....	224,084	45,710	60,767	8,547	945	.....	430	487	116	32
Hay.....	1,535	.....	5,339	1,587	.....	.....	389	1,026	207	295
Other mill products.....	4,680	10,540	8,282	404	1,038	.....	704	654	180	.....
Fruit and vegetables.....	.....	.....	5,128	1,859	1,995	301	248	424	82	.....
Potatoes.....	.....	114	644	.....	6,494	2	.....	110	82	8
Live stock.....	7	.....	1,308	344	21	.....	.....	28	156	.....
Poultry, game and fish.....	61	266	42	29	1,772	.....	962	29	.....	.....
Dressed meats.....	.....	.....	54	5	20	.....	6	80	3	.....
Other packing house products.....	40	.....	475	83	656	.....	350	392	.....	.....
Hides and leather.....	.....	.....	12	21	.....	.....	.....	32	.....	.....
Wool.....	90	95	35	.....	1	.....	.....	7	.....	.....
All other animal products.....	.....	.....	6,343	5	22	11	2,301	2,890	137	65
Total, Class No. 3.....	5,253,863	1,685,328	1,554,044	13,922	18,427	581	5,988	6,895	2,138	442

TABLE 6.—SUMMARY STATEMENT OF Traffic on the undermentioned Canals, during the Season of Navigation ended 31st December, 1913, showing the total quantity of each description of property passed through.

Articles.	Sault Ste. Marie.	Welland.	St. Lawrence.	Chambly.	St. Peters.	Murray.	Ottawa.	Rideau.	Trent Valley.	St. Andrews.
<i>Class No. 1.—Vessels.</i>										
Vessels of all kinds.....	Tons. 25,974,441	Tons. 3,164,530	Tons. 5,201,770	Tons. 335,811	Tons. 95,988	Tons. 397,027	Tons. 527,367	Tons. 202,986	Tons. 217,081	Tons. 199,278
Passengers.....	No. 36,872	No. 1,020	No. 127,638	No. 2,507	No. 1,582	No. 20,210	No. 24,759	No. 19,653	No. 99,102	No. 1,796
<i>Forest Produce of Wood.</i>										
Pulpwood.....	Tons. 19,518	Tons. 299,669	Tons. 408,632	Tons. 208,218	Tons.	Tons.	Tons.	Tons. 6,496	Tons. 29,639	Tons. 8,554
Sawed lumber.....	Tons. 32,461	Tons. 25,028	Tons. 220,876	Tons. 126,296	Tons. 5,018	Tons. 55	Tons. 164,993	Tons. 19,277	Tons. 2,202	Tons. 516
Squared timber.....	Tons. 3,450	Tons. 9,080	Tons. 23,707	Tons. 1,443	Tons.	Tons.	Tons. 1,557	Tons. 30	Tons. 1,144	Tons. 19
Shingles.....	Tons. 6,169	Tons.	Tons. 218	Tons. 28	Tons. 379	Tons.	Tons. 129	Tons. 126	Tons. 129	Tons.
Other woods.....	Tons. 1,360	Tons. 3,550	Tons. 6,793	Tons. 1,346	Tons. 902	Tons.	Tons. 19,913	Tons. 1,402	Tons. 17,668	Tons. 185
Total.....	62,958	337,927	660,226	337,331	6,301	55	186,710	27,331	50,812	9,274
<i>Animals and Produce of Animals.</i>										
Live stock.....	7	.....	1,308	344	21	2	962	28	156	.....
Poultry, game and fish.....	61	266	42	29	1,772	38	38	29	.....	.....
Dressed meats.....	.....	.....	54	5	20	.....	6	.....	3	.....
Other packing house products.....	40	.....	475	83	656	.....	350	392	.....	.....
Hides and leather.....	.....	.....	12	24	.....	.....	.....	32	2	.....
Wool.....	90	95	35	.....	1	.....	.....	.....	.....	.....
All other animal products.....	.....	.....	6,343	5	22	11	2,301	2,890	137	65
Total.....	198	361	8,269	490	2,492	13	3,657	3,458	298	65
<i>Agricultural Products.</i>										
Barley.....	234,245	96,889	92,264	13	4	267	18	17	11	.....
Buckwheat.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....
Corn.....	144,354	.....	31,914	89	1	.....	13	119	.....	.....
Oats.....	461,635	199,794	176,279	868	3,856	.....	31	134	98	42

TABLE 7, No. 1.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Sault Ste. Marie Canal during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		TONS.		ORIGIN OF CARGO.		
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.	Canadian.	United States.
Agricultural implements													
All other animal		13,443								13,443	13,443	13,443	
Barley		143,913		28,617				3,441		234,245	234,245	175,971	58,274
Buckwheat						58,274							
Cement, bricks, &c.	143,888		1,928		2,185				148,001		148,001	145,511	2,490
Coal, hard					327,184			145,535	472,719		472,719		472,719
“ soft	2,701				1,995,701			1,682,230	3,680,632		3,680,632	50	3,680,582
Coke													
Corn													
Dressed meats		220,166		81,678		61,201		7,333	370,378		370,378	323,163	47,215
Flax		153,798			55,527		14,619		223,944		223,944	168,557	55,527
Flour	140								140				
Fruits and vegetables	1,535								1,535		1,535	1,535	
Hay													
Hides and leather	23								23	14	37	37	
Household goods	31,914				313				32,227		32,227	31,229	998
Iron, pig and bloom	84,895				18,573	6,073	4,180		107,648	6,148	113,796	86,474	27,322
Iron and steel, all other													
Live stock	7								7		7		
Live stock	318,356	9,398	25,444	11,730	28,059	1,275	15		371,874	22,403	394,277	354,278	39,999
Merchandise	375,101			69,986		7,261	9,287		461,635	461,635	461,635	450,493	11,142
Oats	2,063					2,617			4,680		4,680	2,063	2,617
Other mill products													
“ packing house products		40								40	40	40	
“ woods	232	452		500			176		232	1,128	1,360	1,184	176
Org, all other				6,800								6,800	
“ copper						25,855				25,855	25,855		25,855
“ iron		33,926		6,900		32,221,056	32,376	124,984	32,376	32,386,866	32,419,242	40,826	32,378,416
Peas	100								100		100	100	
Petroleum													
Poultry, game and fish	5,195								5,195		5,195	5,195	
Potatoes	61								61		61	61	
Pulpwood	18,414	1,050					54		18,468	1,050	19,518	19,464	54

TABLE 7, No. 2.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Welland Canal during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		Total Tons.		ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.	Total Tons.	Canadian.	United States.
Agricultural imple-												
ments.....	13,443						13,443		13,443	13,489		
All other animal.....									96,889	93,992		2,897
Barley.....		84,689										
Buckwheat.....			3,428				3,428		11,580	106,171		11,580
Cement, bricks, &c....	102,743				11,060		11,060		278,695	278,695		278,695
Coal, hard.....					235,730		235,730		667,095	667,095		667,095
“ soft.....					1,500		1,500					
Coke.....												
Corn.....					114,662		114,662		144,354	144,354		144,354
Dressed meats.....									175,351	171,641		3,710
Flax.....		153,672							45,710	33,299		12,411
Flour.....		33,299			11,967		11,967					
Fruits and vegetables.....												
Hay.....												
Hides and leather.....												
Household goods.....	193	4					40	44	237	232		5
Iron, pig and bloom.....	14,663	58	287				335	393	15,343	15,008		335
Iron and steel, all other.....	73,048	38	130				505	7,724	80,902	73,216		7,686
Live stock.....												
Merchandise.....	105,497	422	13,849				9,055	12,064	192,344	119,311		73,033
Ons.....	185,183						7,407	199,794	199,794	192,008		7,726
Other mill products.....		1,555					8,085	300	10,540	1,555		8,985
“ packing house products.....												
Other woods.....							3,550		3,550			3,550
Ore, all other.....	20	11,704					3,550		16,926	11,724		5,202
“ copper.....									5,222			
“ iron.....												
Peas.....	100								36,220			36,220
Petroleum.....	100								100	100		100
Poultry, game and fish.....	405	35,375	15				53,885	90,271	90,799	37,799		53,000
Potatoes.....							266	266	266			266

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TABLE 7, No. 5.—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Lawrence Canals during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		Total TONS.		ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total TONS.	Canadian.	United States.	
Agricultural imple- ments.....	110	8					110	8	118	118		
All other animal.....	1,092	5,185					1,098	5,245	6,343	6,278	65	
Barley.....	408	87,454			60		408	91,856	92,264	89,367	2,897	
Buckwheat.....		3						3	5		2	
Cement, bricks, &c.....	73,453	3,304			250		74,955	3,554	78,509	77,081	1,428	
Coal, hard.....	170,895	3,943			258		850	616,099	616,949	616,996	953	
“ soft.....		3,412					170,895	641,065	812,960	170,082	641,878	
Coke.....	5,146	18,600			8,168		5,146	26,768	31,914	5,164	26,750	
Dressed meats.....	32	32					22	32	54		54	
Flax.....	392	162,090			3,710		392	165,800	166,192	163,482	3,710	
Floor.....	1,281	59,486					1,281	59,486	60,767	60,767		
Fruits and vegetables.....	3,367	4,744			15		369	4,759	5,128	5,111	17	
Hay.....	3,970	1,364					3,975	1,364	5,339	5,339		
Hides and leather.....	835	1,872	7				12	1,908	12	10	2	
Household goods.....	15,123	1,889	345		29		15,468	1,918	17,386	11,256	6,130	
Iron, pig and bloom.....	93,123	6,081	50		174		93,347	11,557	104,904	97,130	7,774	
Lavo stock.....	111	1,197					111	1,197	1,308	1,300	8	
Merchandise.....	116,600	29,182	9,093		1,029		125,763	30,211	155,974	151,968	4,006	
Oats.....	423	175,856					423	175,856	176,279	176,279		
Other mill products.....	4,995	3,256					4,996	3,256	8,252	8,251	1	
“ packing house pro- ducts.....	339	136					339	136	475	475		
“ woods.....	1,159	5,634					1,159	5,634	6,793	6,793		
Ore, all other.....	2,650						2,650		2,650		2,650	
“ copper.....												
“ iron.....	1	1					1	1	2	1	1	
Peas.....	106	7					107	7	114	114		
Petroleum.....	1,618	23,401	47		45,402		1,695	68,803	70,498	25,125	45,373	
Poultry, game and fish.....	3	38					3	38	41	41	1	
Potatoes.....	100	532					109	532	641	639	2	

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Pulpwood.....	69,022	465	339,145				408,167	465	408,632	408,632	1,116
Rye.....	1	4,567					1	4,567	4,568	3,452	
Sand.....	90,674	104,959					90,674	105,161	195,835	186,731	9,104
Sawed lumber.....	59,946	122,743	3,879	34,303	5		63,830	137,040	220,876	220,571	305
Shingles.....	85	131					87	131	218	218	
Square timber.....	277	15,413					277	23,430	23,707	15,520	8,187
Sugar.....	14,278	791	30				14,308	948	13,256	15,256	
Salt.....	2,090	1,147					2,020	1,236	3,256	2,999	257
Wheat.....	8,237	900,433					8,237	986,075	994,312	906,608	87,704
Wines, liquors and beers	9,531	1,167	421		1		9,953	1,550	11,503	11,422	81
Wool.....	20		15				55		35	35	
Total freight.....	749,035	1,750,553	354,532	34,303	126	432	1,104,125	3,198,302	4,302,427	2,837,019	1,465,408

TABLE 7, No. 6.—GENERAL STATEMENT showing the Quantity of each Through Article Transported on the St. Lawrence Canals during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		ORIGIN OF CARGO.		
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.	United States.	
										Canadian.	United States.
Agricultural imple- ments.....	1						1		1		
All other animal.....	175	2,819				60	175	2,879	3,054	2,994	60
Barley.....	87,454				4,402			91,856	91,856	88,859	2,997
Buckwheat.....											
Cement, bricks, &c.....	42,694	230	1,500		250		44,194	480	44,674	44,424	250
Coat, hard.....	3,500	3,089			600,112		3,500	603,211	603,211		603,211
“ soft.....	3,500	622,077						622,077	625,577	2,900	622,677
Coke.....	1,814	1,176			8,168		1,814	9,344	11,158	1,814	9,344
Corn.....	20						20		20		
Dressed meats.....	392	161,530			3,710		392	165,240	165,632	161,922	3,710
Flax.....	16	37,243					16	37,243	37,259	37,259	
Flour.....	62	4,384			15		62	4,399	4,401	4,446	15
Fruits and vegetables.....											
Hay.....											
Hides and leather.....	463	1,605			36		463	1,641	2,104	2,104	
Household goods.....	5,303	88	345		29		5,648	117	5,765	5,736	29
Iron, pig and bloom.....	68,106	831	50		5,476		68,156	6,307	74,463	68,492	5,971
Iron and steel, all other.....								24	25	25	
Live stock.....	103,264	21,157	9,093		1,029		112,357	22,166	134,523	133,634	889
Merchandise.....	234	173,827					234	173,827	173,827	173,827	
Oats.....		748						748	982	982	
Other mill products.....											
“ packing house pro- ducts.....	33	37					33	37	70	70	
“ woods.....											
Ore, all other.....											
“ copper.....											
“ iron.....											
Peas.....	100	5					100	5	105	105	
Petroleum.....	651	23,025	47		45,402		698	68,427	69,125	23,752	45,373
Poultry, game and fish.....											
Potatoes.....	6						6		6	6	

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Pulpwood.....	68,329	165	407,474	165	407,639	407,639
Rye.....	4,567	4,567	4,567	3,451
Sand.....
Sawed lumber.....	190	4,069	4,069	4,069
Shingles.....	.....	.....	.....	.....	.....	.....
Square timber.....	.....	3,970	8,017	11,987	11,987	3,970
Sugar.....	13,014	638	13,044	795	13,839	13,839
Salt.....	338	700	338	89	1,127	1,038
Wheat.....	75	900,132	75	985,774	985,849	898,145
Wines, liquors and beers	8,146	91	8,567	1,298	9,865	9,785
Wool.....	20	.....	35	.....	35	35
Total freight.....	316,947	2,052,433	762,977	2,815,410	3,486,882	2,095,650
			671,472	2,815,410	3,486,882	1,391,282

TABLE 7, No. 7.—GENERAL STATEMENT showing the Quantity of each Way Article Transported on the St. Lawrence Canals during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	109	8					109	8	117	
All other animal.....	917	2,366	6				923	2,366	3,289	5
Barley.....	408						408		408	
Buckwheat.....			2						2	
Cement, bricks, &c.....	30,759	3,074	2				30,761	3,074	33,835	2
Coal, hard.....	167,395	3,444			258	12,044	850	12,888	13,738	1,178
" soft.....						16,146	167,395	19,588	167,782	19,201
Coke.....	3,332	17,424					3,332	17,424	3,350	17,406
Corn.....	2	32					2	32	34	
Dressed meats.....		560						560	560	
Flax.....	1,265	22,243					1,265	22,243	23,508	
Flour.....	305	360					307	360	665	2
Fruits and vegetables.....	3,970	1,360	5				3,975	1,360	5,335	
Hay.....	7		5				12		10	
Hides and leather.....	372	267	14				386	267	653	6
Household goods.....	9,820	1,801					9,820	1,801	5,520	6,101
Iron, pig and bloom.....	25,017	5,250			174		25,191	5,250	30,441	28,638
Iron and steel, all other.....	1,173	1,173					1,173	1,173	1,283	1,803
Live stock.....	13,336	8,045	70				13,406	8,045	21,451	8
Merchandise.....	423	2,029					423	2,029	2,452	3,317
Oats.....	4,761	2,508	1				4,762	2,508	7,270	1
Other mill products.....										
" packing house products.....	306	99					306	99	405	
" woods.....	1,159	5,634					1,159	5,634	6,793	
Ore, all other.....	2,650						2,650		2,650	2,650
" copper.....										
" iron.....	1	1					1	1	2	1
Peas.....	6	2					7	2	9	
Petroleum.....	997	376					997	376	1,373	
Poultry, game and fish.....	3	38	1				4	38	41	1

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Potatoes.....	94	532	9	103	532	635	633	2
Pulpwood.....	693	300		693	300	993	993	
Rye.....	1			1		1	1	
Sand.....	90,674	104,959		90,674	105,161	195,835	186,731	9,104
Sawed lumber.....	59,756	122,743	5	59,761	157,046	216,807	216,502	305
Shingles.....	85	131	2	87	131	218	218	
Square timber.....	277	11,443		277	11,443	11,720	11,550	170
Sugar.....	1,264	152		1,264	152	1,417	1,417	
Salt.....	1,682	447		1,682	447	2,129	1,961	168
Wheat.....	8,162	301		8,162	301	8,463	8,463	
Wines, liquors and beers.....	1,385	252	1	1,386	252	1,638	1,637	1
Wool.....								
Total freight...	432,088	320,197	126	432,653	382,892	815,545	741,369	74,176

TABLE 7, No. 8.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Chambly Canal during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		ORIGIN OF CARGO.		
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.	United States.	
										Canadian.	United States.
Agricultural imple- ments.....	131	9					131	9	140	140	
All other animal.....	5	5					5	5	5	5	
Barley.....	5	8					5	8	13	13	
Buckwheat.....	672	22			369		672	391	1,063	694	369
Cement, bricks, &c	86				119,949		86	119,949	120,035	81	119,954
Coal, hard.....											
Coal, soft.....											
Coke.....	87	2					87	2	89	89	
Corn.....	3	2					3	2	5	5	
Dressed meats.....											
Flax.....	1,355	34					1,355	34	1,389	1,389	
Flour.....	712	1,147					712	1,147	1,859	1,859	
Fruits and vegetables.	4,993	3,554					3,554	4,993	8,547	8,547	
Hay.....	24						24		24	24	
Hides and leather.....	89	99					89	99	188	188	
Household goods.....	111	1					111	1	112	112	
Iron, pig and bloom.....	799	73			8,194		799	8,267	9,066	1,945	7,121
Iron and steel, all other	16	328					16	328	344	344	
Live stock.....	1,580	911			4,689		3,016	5,600	8,616	3,927	4,689
Merchandise.....	8	860					8	860	868	868	
Oats.....	447	47					447	47	494	494	
Other mill products... " packing house " products.....	82	1					82	1	83	83	
" woods.....	974	372					974	372	1,346	1,346	
Ore, all other.....	150	815					150	815	965	965	
" copper.....											
" iron.....					43,260				43,260		43,260
Peas.....	13	13					13	13	26	26	
Petroleum.....	181	6					181	6	187	187	
Poultry, game and fish.....	1	28					1	28	29	29	

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Potatoes.....	11	103	11	108	114	114
Pulpwood.....	10	208,208	208,208	10	208,218	208,218
Rye.....	1	1	1	1
Sand.....	15	60	.....	.....	.....	15	19,857	19,872	75	19,797
Saved lumber.....	114	87	125,925	.....	.....	170	257	126,296	126,296	.....
Shingles.....	28	.....	.....	.....	.....	28	.....	28	28	.....
Square timber.....	.....	.....	.....	.....	.....	.....	1,443	1,443	.....	1,443
Sugar.....	180	6	.....	.....	.....	180	6	186	186	.....
Salt.....	408	6	.....	.....	.....	408	174	582	414	168
Wheat.....	12	20	.....	.....	.....	12	20	32	32	.....
Wines, liquors and beers.....	73	4	.....	.....	.....	73	4	77	77	.....
Wool.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total freight...	8,354	10,096	339,113	.....	.....	347,467	208,135	555,002	353,801	196,801

TABLE 7, No. 9.—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Peters Canal during the Season of Navigation in 1913.

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.	ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural imple- ments.....	18	5							18	5			
All other animal.....	19	3							19	3			
Barley.....	4								4				
Buckwheat.....		33								33			
Cement, bricks, &c.....	346								346				
Coal, hard.....	255	2							255	2			
“ soft.....		36,551								36,551			
Coke.....													
Corn.....	1								1				
Dressed meats.....	19	1							19	1			
Flax.....													
Flour.....	1,555	32							1,555	32			
Fruits and vegetables.....	1,968	27							1,968	27			
Hay.....	935	10							935	10			
Hides and leather.....													
Household goods.....	27	10							27	10			
Iron, pig and bloom.....		127								127			
Iron and steel, all other.....	154	73							154	73			
Live stock.....	21								21				
Merchandise.....	3,522	990							3,522	990			
Oats.....	3,856								3,856				
Other mill products.....	954	84							954	84			
“ packing house pro- ducts.....													
“ woods.....	633	23							633	23			
Ore, all other.....	645	257							645	257			
“ copper.....		274								274			
“ iron.....													
Peas.....	13								13				
Petroleum.....	994	41							994	41			
Poultry, game and fish.....	321								321				
Potatoes.....	6,487	7							6,487	7			

TABLE 7, No. 12.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Rideau Canal during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		TONS.		Total Tons.		ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.	Total Tons.	Canadian.	United States.
Agricultural implem'ts.	597	390					597	390	987	987	987	
All other animal.	1,159	1,731					1,159	1,731	2,890	2,890	2,890	
Barley		17						17	17	17		
Buckwheat.												
Cement, bricks, etc.	109	228					109	228	337	337		
Coal, hard.	753	57			8,820		753	8,877	9,630	42		9,588
“ soft.	1,218	104			3,832		1,218	3,936	5,154	1,265		3,889
Coke.												
Corn.	27	92					27	92	119	119		
Dressed meats.	44	36					44	36	80	80		
Flax.												
Flour.	223	264					223	264	487	487		
Fruits and vegetables.	203	221					203	221	424	424		
Hay.	966	60					966	60	1,026	1,026		
Hides and leather.	29	3					29	3	32	32		
Household goods.	222	98					222	98	320	320		
Iron, pig and bloom.	914	52					914	52	966	966		
Iron and steel, all other.	1,902	141					1,902	141	2,043	2,043		
Live stock.	14	14					14	14	28	28		
Merchandise.	4,093	2,146					4,093	2,146	6,239	6,239		
Oats.	23	111					23	111	134	134		
Other mill products.	236	418					236	418	654	654		
“ packing house												
“ products.	286	106					286	106	392	392		
“ Woods.	1,236	166					1,236	166	1,402	1,402		
Ore, all other.							960		960	960		
“ copper.												
“ Iron.												
Pease.	6	1					6	1	7	7		
Petroleum.	607	472					607	472	1,079	1,079		
Poultry, game and fish.	27	2					27	2	29	29		
Potatoes.	95	15					95	15	110	110		
Pulpwood.	450	6,046					450	6,046	6,496	6,496		

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Rye.....	57,716	48,324	106,040	106,040
Sand.....	4,327	14,950	19,277	19,277
Sawed lumber.....	101	25	126	126
Shingles.....	6	24	30	30
Square timber.....	613	221	834	834
Sugar.....	1,044	278	1,322	1,322
Salt.....	4	455	459	459
Wheat.....	895	191	1,086	1,086
Wines, liquors and beers.....	2	5	7	7
Wool.....				
Total freight.....	80,147	90,116	171,223	157,746
				13,477

TABLE 7, No. 13.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Trent Valley Canals during the Season of Navigation in 1913.

Articles.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		TONS.		ORIGIN OF CARGO.		
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.	Canadian.	United States.
Agricultural imple- ments.....	30	20							30	20	50		
All other animal.....	106	31							106	31	137		
Barley.....	11								11		11		
Buckwheat.....	219	520							219	520	739		
Cement, bricks, &c.....	92	37							92	37	129		
Coal, hard.....	208	30							208	30	238		
“ soft.....		2								2	2		
Coke.....													
Corn.....	1	2							1	2	3		
Dressed meats.....													
Flax.....	56	60							56	60	116		
Flour.....	3								3		3		
Fruits and vegetables.....	180	27							180	27	207		
Hay.....	2								2		2		
Hides and leather.....	74	7							74	7	81		
Household goods.....	10								10		10		
Iron, pig and bloom.....	13								13		13		
Iron and steel, all other.....	136	20							136	20	156		
Live stock.....	902	509							902	509	1,411		
Merchandise.....	94	4							94	4	98		
Oats.....	103	77							103	77	180		
Other mill products.....													
“ packing house products.....													
Other woods.....	10,443	7,255							10,443	7,255	17,698		
Ore, all other.....		67								67	67		
“ copper.....													
“ iron.....													
Peas.....	15								15		15		
Petroleum.....	41	3							41	3	44		
Poultry, game and fish.....													
Potatoes.....	82								82		82		

TABLE 7, No. 14.—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Andrews Canal during the Season of Navigation in 1913.

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.		ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural imple- ments.....									65			65
All other animal.....		65										
Barley.....												
Buckwheat.....		23							23			23
Cement, bricks &c.....	448								448	26		474
Coal, hard.....												
“ soft.....												
Coke.....												
Corn.....												
Dressed meats.....												
Flax.....												
Flour.....		32							32			32
Fruits and vegetables.....												
Hay.....	295								295			295
Hides and leather.....												
Household goods.....	1	2							1	2		3
Iron, pig and bloom.....												
Iron and steel, all other.....		301							301			301
Live stock.....	13	1,288							13	1,288		1,301
Merchandise.....		42								42		42
Oats.....												
Other mill products.....												
“ packing house products.....												
“ woods.....	185								185			185
Ore, all other.....												
“ copper.....												
“ iron.....												
Peas.....												
Petroleum.....		1								1		1
Poultry, game and fish.....												
Potatoes.....	8								8			8

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Pulpwood.....	49	8,505	49	8,554	8,544
Rye.....	98	69,378	98	69,476	69,476
Sand.....	516	516	516	516	516
Sawed lumber.....	19	19	19	19	19
Shingles.....					
Square timber.....					
Sugar.....					
Salt.....					
Wheat.....					
Wines, liquors and beers.....					
Wool.....					
Total freight.....	2,757	78,538	2,757	81,295	81,295

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TABLE 8.—Statement showing the Classified Tonnage of all kinds of Vessels

SAULT STE.

CANADIAN.

Class.		Steam Vessels.		No.	Tonnage.	Class.		Sailing Vessels.		No.	Tonnage.
1	5,000 to 6,506 tons.....	1	6,506	1	5,000 to — tons.....						
2	4,000 " 5,005 ".....	3	13,550	2	4,000 " 5,000 ".....						
3	3,000 " 4,000 ".....	2	6,800	3	3,000 " 4,000 ".....						
4	2,000 " 3,000 ".....	16	36,400	4	2,000 " 3,000 ".....						
5	1,000 " 2,000 ".....	66	86,350	5	1,000 " 2,000 ".....						
6	Under 1,000.....	47	15,550	6	Under 1,000.....	23	5,725				
Total.....		137	165,186	Total.....		23	5,725				

WELLAND

1	250 to 1,905 tons.....	97	100,950	1	250 to 1,225 tons.....	28	19,200
2	200 " 249 ".....	2	400	2	200 " 249 ".....		
3	150 " 199 ".....	2	350	3	150 " 199 ".....	3	475
4	100 " 149 ".....	2	250	4	100 " 149 ".....	1	125
5	50 " 99 ".....	8	600	5	50 " 99 ".....	3	190
6	Under 50 ".....	23	510	6	Under 50 ".....	4	35
Total.....		134	103,060	Total.....		39	20,025

ST. LAWRENCE

1	250 to 1,905 tons.....	103	100,985	1	250 to 1,226 tons.....	82	41,009
2	200 " 249 ".....	5	1,110	2	200 " 249 ".....	13	3,000
3	150 " 199 ".....	7	1,250	3	150 " 199 ".....	33	5,860
4	100 " 149 ".....	12	1,560	4	100 " 149 ".....	53	6,720
5	50 " 99 ".....	30	2,240	5	50 " 99 ".....	50	4,110
6	Under 50 ".....	61	1,575	6	Under 50 ".....	11	395
Total.....		218	108,720	Total.....		242	61,094

RIDEAU, OTTAWA

1	250 to 370 tons.....	6	1,830	1	250 to 320 tons.....	7	1,700
2	200 " 249 ".....			2	200 " 249 ".....	3	600
3	150 " 199 ".....	5	860	3	150 " 199 ".....	43	7,110
4	100 " 149 ".....	6	650	4	100 " 149 ".....	29	3,460
5	50 " 99 ".....	9	525	5	50 " 99 ".....	15	1,055
6	Under 50 ".....	35	560	6	Under 50 ".....	15	275
Total.....		61	4,425	Total.....		112	14,200

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passed through the following Canals during the Season of Navigation in 1913.

MARIE CANAL.

UNITED STATES.

Steam Vessels.				Sailing Vessels.			
Class.		No.	Tonnage.	Class.		No.	Tonnage.
1	5,000 to 6,498 tons.....	73	397,798	1	5,000 to ——— tons.....		
2	4,000 " 5,000 ".....	86	396,500	2	4,000 " 5,000 ".....	1	4,650
3	3,000 " 4,000 ".....	131	451,600	3	3,000 " 4,000 ".....		
4	2,000 " 3,000 ".....	37	98,350	4	2,000 " 3,000 ".....	1	2,200
5	1,000 " 2,000 ".....	30	47,050	5	1,000 " 2,000 ".....	1	1,000
6	Under 1,000 ".....	20	7,975	6	Under 1,000 ".....	4	2,200
	Total.....	377	1,399,273		Total.....	7	10,050

CANAL.

1	250 to 1,750 tons.....	57	58,125	1	250 ton 2,040 tons.....	13	11,125
2	200 " 249 ".....	4	825	2	200 " 249 ".....	2	400
3	150 " 199 ".....	3	525	3	150 " 199 ".....	1	150
4	100 " 149 ".....	1	100	4	100 " 149 ".....	1	100
5	50 " 99 ".....	10	670	5	50 " 99 ".....	2	130
6	Under 50 ".....	30	565	6	Under 50 ".....	2	30
	Total.....	105	60,810		Total.....	21	11,935

CANAL.

1	250 to 1,611 tons.....	36	35,289	1	250 to 700 tons.....	7	3,440
2	200 " 249 ".....	1	240	2	200 " 249 ".....		
3	150 " 199 ".....	2	350	3	150 " 199 ".....	1	190
4	100 " 149 ".....			4	100 " 149 ".....	28	3,270
5	50 " 99 ".....	5	360	5	50 " 99 ".....	106	10,040
6	Under 50 ".....	10	240	6	Under 50 ".....		
	Total.....	54	36,479		Total.....	142	16,940

AND CHAMBLY CANALS.

1	250 to — tons.....			1	250 to — tons.....		
2	200 " 249 ".....			2	200 " 249 ".....		
3	150 " 199 ".....			3	150 " 199 ".....	6	960
4	100 " 149 ".....			4	100 " 149 ".....	145	16,210
5	50 " 99 ".....			5	50 " 99 ".....	331	31,115
6	Under 50 ".....	1	15	6	Under 50 ".....		
	Total.....	1	15		Total.....	482	47,285

APPENDIX

DOMINION CANALS

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

First—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)

	Miles.
1. Lachine canal.....	8 $\frac{1}{2}$
Lake St. Louis and River St. Lawrence.....	16
2. Soulanges canal.....	14
Lake St. Francis and River St. Lawrence.....	31
3. Cornwall canal.....	11 $\frac{1}{4}$
River St. Lawrence.....	5
4. Farran's Point canal.....	1 $\frac{1}{2}$
River St. Lawrence.....	9 $\frac{1}{2}$
5. Rapide Plat canal.....	3 $\frac{3}{8}$
River St. Lawrence.....	4
6. Galops canal.....	7 $\frac{1}{3}$
River St. Lawrence and Lake Ontario.....	228
7. Welland canal.....	26 $\frac{3}{4}$
Lake Eric, Detroit river, Lake St. Clair, Lake Huron, &c.....	574
8. Sault Ste. Marie canal.....	1 $\frac{1}{4}$
Lake Superior to Port Arthur.....	272
Total.....	1,214
To Duluth.....	1,336
Chicago.....	1,240

Second.—Ottawa to Lake Champlain.

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

Third.—Ottawa to Kingston and Perth.

1. Rideau canal.

Fourth.—Lake Ontario at Trenton to Lake Huron at mouth of River Severn.

1. Trent canal (not completed).

Fifth.—Ocean to 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 2,217 statute miles. The distance to Duluth is 2,339 statute miles. The distance to Chicago, 2,243 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 1,003 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. 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, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 74 miles; total lockage (or height directly overcome by locks), 553¼ 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 48. 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 Farrans' 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.

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LACHINE CANAL.

First construction commenced.....	1821
“ completed.....	1825
First enlargement commenced.....	1843
“ completed.....	1848
Second enlargement commenced.....	1873
“ completed.....	1901
Length of canal.....	8½ statute miles.
Number of locks.....	5
Dimensions of locks.....	270 feet by 45 feet.
Total rise of lockage.....	45 feet.
Depth of water on sills at two locks.....	18 “
“ “ at three locks.....	14 “
Average 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 canal consists of one channel, with two distinct systems of locks, the old and the enlarged. 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 to the River St. Lawrence. They are 1,006 miles distant from the Straits of Belle Isle.

SOULANGES CANAL.

Construction commenced.....	1892
Open for traffic.....	1899
Length of canal.....	14 statute miles.
Number of locks, lift.....	4
“ “ guard.....	1
Dimensions of locks.....	280 feet by 45 feet.
Total rise of lockage.....	84 feet.
Depth of water on sills.....	15 “
Breadth of canal at bottom.....	100 “
Breadth of canal at water surface.....	164 “
Number of arc lights.....	219 of 2,000 c.p. each.

The canal extends from Cascade point to Coteau Landing, overcoming the Cascade, Rapids, Cedar rapid and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges, the distance is sixteen miles.

CORNWALL CANAL.

Fisrt commenced, 9 feet.....	1844
“ opened.....	1847
Enlargement commenced.....	1897
“ completed.....	1900
Length of canal.....	11 statute miles.
Number of locks.....	6
Dimensions of Locks.....	270 feet by 75 feet.
Total rise of lockage.....	48 feet.
Depth of water on sills.....	14 “
Breadth of canal at bottom.....	90 “
Breadth of canal at water surface.....	154 “

The old lift locks, 200 feet by 55 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis, of 31 miles, which is being made navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's landing.

WILLIAMSBURG CANALS.

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

FARRAN'S POINT CANAL.

First commenced, 9 feet.....	1844
Opened.....	1847
Enlargement commenced.....	1897
“ completed.....	1900
Length of canal.....	1½ miles.
Number of locks.....	1 “
New lock.....	800 feet by 45 feet.
Old lock.....	200 “
Total rise of lockage.....	3½ feet.
Depth of water on sills of new lock.....	14 “
Depth of water on sills of old lock.....	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 five miles. The latter canal enables vessels ascending the river to avoid Farran's Point rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

RAPIDE PLAT CANAL.

First commenced, 9 feet.....	1844
“ opened.....	1847
Enlargement commenced.....	1884
“ completed.....	1897
Length of canal.....	3⅔ miles.
Number of locks.....	2 “
Dimensions of locks.....	270 feet by 45 feet.
Total rise in lockage.....	11½ feet.
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 nine feet of 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 9½ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

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GALOPS CANAL.

First commenced, 9 feet.....	1844
Opened.....	1846
Enlargement commenced.....	1888
“ completed.....	1903
Length of canal.....	7 $\frac{3}{4}$ miles.
Number of locks.....	3
Dimensions of locks { one of which is { a guard lock }.....	{ 800 by 50. 270 by 45. 303 by 45.
Total rise of 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 4 $\frac{1}{2}$ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Construction begun.....	1882
Completed.....	1890
Length between eastern and western pier heads.....	5 1-6 miles.
Breadth at bottom.....	80 feet
Breadth at water surface.....	124
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 Quinte 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.....	27 $\frac{1}{2}$ miles.	26 $\frac{3}{4}$ miles.
Pairs of guard-gates (formerly 3)	2	1
Number of locks { lift.....	26	25
{ guard.....	1	1
Dimensions..... { 1 lock 270 x 45 { 1 lock 200 x 45 { 1 (tidal) 230 x 45 { 24 locks 150 x 26 ft. 6 in. }		270 feet x 45 feet.
Total rise of lockage.....	326 $\frac{3}{4}$ feet	326 $\frac{3}{4}$ feet.
Depth of water on sills.....	10 $\frac{1}{4}$ “	14 “
Construction commenced, 8 feet.....	1824	
“ completed.....	1833	
Enlargement commenced, 14 feet.....	1872	
“ completed.....	1887	

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 300 by 45 “ 28 “
Total rise of lockage . . . . .		10 feet.
Depth of water on sills	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1¼ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Total rise of lockage	7 feet.
Depth of water on sills	7½ “

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 Allanburg, 11¼ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg 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 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 274 miles, and to Duluth 397 miles.

SAULT STE. MARIE CANAL.

Construction commenced	1888
Opened for traffic	1895
Length of canal, between the extreme ends of the entrance piers	7,472 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	18 feet 3 inches.
Total rise of lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

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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 $245\frac{5}{8}$ miles.

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

Ottawa River Canals.

The Ste. Anne's lock.
Carillon canal.

Grenville canal.
Rideau canal.

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.	Inter- mediate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine canal.....	$8\frac{1}{2}$	
From Lachine to Ste. Anne's lock.....	15	$23\frac{1}{2}$
Ste. Anne's lock and piers.....	$\frac{1}{8}$	$23\frac{5}{8}$
Ste. Anne's lock to Carillon canal.....	27	$50\frac{5}{8}$
The Carillon canal.....	$\frac{3}{4}$	$51\frac{3}{4}$
The Carillon to Grenville canal.....	$6\frac{1}{4}$	$57\frac{5}{8}$
The Grenville canal.....	$5\frac{3}{4}$	$63\frac{3}{8}$
From the Grenville canal to entrance of Rideau navigation.....	56	$119\frac{3}{8}$
Rideau navigation ending at Kingston.....	$126\frac{1}{4}$	$245\frac{5}{8}$

STE. ANNE'S LOCK.

Construction commenced.....	1814
“ completed.....	1816
Rebuilt of wood.....	1833
“ in masonry.....	1843

Length of canal.....	Old Lock. $\frac{1}{8}$ mile.	New Lock $\frac{1}{8}$ 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, $23\frac{1}{2}$ miles from Montreal harbour.

THE CARILLON CANAL.

Construction commenced.....	1819
" completed.....	1833
Enlargement commenced.....	1871
" completed.....	1887
Length of canal.....	$\frac{3}{4}$ 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.

Construction commenced.....	1819
" completed.....	1833
Enlargement commenced.....	1871
" completed.....	1887
Length of canal.....	$5\frac{3}{4}$ miles.
Number of locks.....	5
Dimensions of locks.....	200 x 45 feet.
Total rise or lockage.....	$43\frac{3}{4}$ 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.

Construction commenced.....	1826
" completed.....	1832

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.....	126 $\frac{1}{4}$ miles.
Number of locks going from Ottawa to Kingston.....	35 ascending. 14 descending.
Total lockage.....	457 $\frac{1}{2}$ feet 292 $\frac{1}{2}$ rise and 165 $\frac{1}{4}$ fall at low water.
Dimensions of locks.....	134 x 33 feet
Depth of water on sills.....	5 feet.
Navigation depth through the several reaches..	5 "
Breadth of canal reaches at bottom.....	60 ft. in earth. 54 feet in rock.
Breadth of canal at surface of water.....	80 feet in earth

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PERTH BRANCH.

Construction commenced.....	1883
“ completed.....	1892
Length of canal.....	7 Miles.
Number of locks.....	2
Dimensions of locks.....	134 feet x 33 feet.
Total rise or lockage.....	26 “
Depth of water on sills.....	5 “ 6 inches.
Length of dam.....	200 “
Breadth of canal at botton.....	{ 40 “ in rock.
	{ 60 “ in clay.
Breath of canal at surface of water.....	80 “

The Perth branch of 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 source 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 Wolfe lake system.
2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.

3. The southwest 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 Rivers 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 up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain 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.	Interme- diate Distance.	Total Distances.
	Miles.	Miles.
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.....	60	258
Erie canal, from junction to Albany.....	7	265
Albany to New York.....	146	411

ST. OURS LOCK DAM.

Construction commenced.....	1844
“ completed.....	1849
Length.....	$\frac{1}{8}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise of lockage.....	5 feet.
Depth of water on sills.....	7 feet at low water.
Length of dam in eastern channel.....	300 “
Length of dam in 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.

Construction commenced.....	1831
“ completed.....	1843
Length of canal.....	12 miles.
Number of locks.....	9
Dimensions of locks:—	
Guard lock, No. 1, at St. Johns.....	122 feet.
Lift “ 2.....	124 “
“ “ 3, 4, 5, 6.....	118 “
“ “ 7, 8, 9 combined.....	125 “
Total rise or lockage.....	74 “
Depth of water on sills.....	$6\frac{1}{2}$ “
Breadth of canal at bottom.....	36 “
Breadth of canal at surface of water.....	60 “

} From $22\frac{1}{2}$ to
24 feet wide.

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 155 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

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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 174 miles from Trenton.

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

From Trenton, Bay of Quinte 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.	—	9½
Lakefield to a point across Balsam lake.	61	—
	132¼	33

Total distance, Bay of Quinté to a point across Balsam lake 165¼

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. 27

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Young's point, Burleigh rapids, Lovesick, Buckhorn rapids, Bobcaygeon, Fenelon falls and Rosedale; also dams at Lakefield, Young's point, Burleigh falls, Lovesick, Buckhorn, Bobcaygeon and Fenelon falls. 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 Katchewanoe up to Young's point.

At Young's point, 5 miles from Lakefield, the dam between Lake Katchewanoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal.

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, 7 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 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'x33'x5' 0" to 7' 6" deep water on mitre sill
1	" Lindsay. 134'x33'x5' 0" to 7' 6" " "
1	" Bobcaygeon. 134'x33'x5' 8" to 7' 0" " "
1	" Buckhorn. 134'x33'x5' 0" to 9' 0" " "
1	" Lovesick. 134'x33'x5' 0" to 9' 4" " "
2	" Burleigh. 134'x33'x6' 0" to 8' 0" " "
1	" Young's point. 134'x33'x5' 0" to 14' 0" " "
1	" Peterborough. 134'x33'x5' 0" to 10' 0" " "
1	" Hastings. 134'x33'x7' 0" to 10' 6" " "
1	" Chisholms. 134'x33'x5' 0" to 8' 6" " "

ST. PETER'S CANAL, CAPE BRETON.

Construction commenced.....	1854
" completed.....	1869
Enlargement begun.....	1875
" completed.....	1881
Length of canal about 2,600 feet.	-
Breadth at water line.....	50 feet.
Lock.....	One tidal lock, 4 pairs of gates.
Dimensions.....	200 feet by 48 feet.
Depth of water on sills.....	18 feet at lowest water.
Depth through canal.....	19 "
Extreme rise and fall of tide in St. Peter's bay.....	7 "

This canal connects St. Peter's bay on the northern 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.

BEAUHARNOIS CANAL.

Construction begun.....	1842
" completed.....	1845
Length of canal.....	12 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 "

As the new Soulanges canal is now opened for navigation, the Beauharnois canal is abandoned for navigation purposes.

EARLIER CANALS.

A system of three canals preceded the Beauharnois. These were:—

COTEAU DU LAC CANAL.

Construction commenced.....	1779
" completed.....	1780

SPLIT ROCK CANAL.

Construction commenced.....	1779
" completed.....	1780

CASCADE POINT CANAL.

Construction commenced.....	1782
" completed.....	1783

The locks were 20 x 6 feet, and provided for a draft of 2 feet. In 1814 the work of widening them to 12 feet was begun, and finished in 1817.

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Two canals were also constructed off Burlington Bay, Ontario. They were:

BURLINGTON BAY CANAL.

Construction commenced.....	1825
“ completed.....	1832

DESJARDINS CANAL.

Construction commenced.....	1826
“ completed.....	1837

Neither of these canals required locks. They have for many years been abandoned. The depth of water provided in the first instance was $7\frac{1}{2}$ feet.



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