

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR FROM APRIL 1, 1909, TO MARCH 31, 1910

*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

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, Viscount Howick, Baron Grey of Howick, in the County of Northumberland, in the Peerage of the United Kingdom, and a Baronet; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, &c., &c., Governor General of Canada.

MAY IT PLEASE YOUR EXCELLENCY,—

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year from April 1, 1909, to March 31, 1910.

GEO. P. GRAHAM,

Minister of Railways and Canals.

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(In separate pocket.)

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REPORT OF THE DEPUTY MINISTER.

To the Honourable Geo. P. GRAHAM,
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, 1910.

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.

In Part I, will be found statements 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.

On February 5, 1910, Mr. M. J. Butler, C.M.G., who filled the dual office of deputy minister and chief engineer, resigned, and on my appointment, on that date, to the position of deputy minister, the department reverted to the principle of having a special officer as chief engineer, and this office was filled by the appointment, on April 22, 1910, of Mr. W. A. Bowden, who had been acting in that capacity for some time previous.

Another change of importance was the constitution, under an order in council dated April 20, 1909, of a 'Government Railways Managing Board' with whom now rests the duty of carrying out the various details attaching to the operation of these roads.

GENERAL SUMMARY.

During the twelve months of the past fiscal year 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, aggregate as follows:—

The total railway expenditure amounted to \$32,862,094.46, of which \$21,505,975.91 was charged to capital, \$2,260,214.59 to income and \$9,095,903.96 to revenue.

The railway expenditure on capital account included \$19,968,126.86 for the eastern division (from Moncton to Winnipeg), of the National Transcontinental railway, which is in course of construction by a board of commissioners, and \$53,042.63 for surveys for a line of railway to Hudson bay.

The railway expenditure on income included a total of \$2,048,097.05 paid as subsidies to railways other than the government roads, \$112,465.04 for the Board of Railway Commissioners for Canada, \$17,644.66 for inspection of the Grand Trunk Pacific railway, and \$111,788.02 for preparing plans, &c., for the reconstruction of the bridge across the River St. Lawrence above Quebec—known as the Quebec bridge.

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The expenditure on the Intercolonial railway amounted to \$9,923,479.78, namely, on capital account \$1,278,409.45, and on revenue account \$8,645,070.33. On the maintenance of the Windsor branch the expenditure was \$23,549.90, charged to revenue account.

On the Prince Edward Island railway, the total expenditure was \$633,680.70, of which \$206,396.97 was charged to capital and \$427,283.73 to revenue.

The expenditure on canals aggregated \$3,259,097.18; of which \$1,650,706.64 was on capital account, \$489,256.68 on income, \$604,899.26 for staff and \$514,234.60 for repairs, the last two amounts being charged to revenue.

Adding to the above for miscellaneous expenditures in both branches the sum of \$4,706.79, the total expenditure for the year on railways and canals amounted to \$36,125,898.43.

The total revenue derived from the railway and canal works was \$9,841,347.99, of which the railway produced \$9,647,963.71, and the canals \$193,384.28,* the sum of \$168,893.63 being received from hydraulic rents.

The total government expenditure on railways prior to and since Confederation (July 1, 1867) up to March 31, 1910, amounts, on capital account, to \$236,654,665.29, including the sum of \$25,000,000 granted to the Canadian Pacific Railway Company for its main line, and 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 \$202,532,757.03, making a total of \$439,187,422.32. Of this amount the sum of \$13,881,460.65 was expended, prior to Confederation, on the construction of portions of what is now the Intercolonial railway system.

The government expenditure on canals prior to and since July 1, 1867, to the close of the fiscal year March 31, 1910, amounts, on capital account, to \$96,982,449.37, of which \$20,593,866.13 was expended prior to Confederation, and from the consolidated fund to \$29,346,507.21, making a total of \$126,328,956.58.

The total expenditure on railways and canals up to March 31, 1910, is, as above, \$565,516,375.90; adding to which, for general expenditures embracing both, the further sum of \$810,358.32, the grand total expenditure amounts to \$566,326,737.22.†

Details indicating the general classes and directions of the above expenditures will be found in the statements furnished by the accountant of the department and printed in the appendices hereto, Part I.

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.

Details respecting these railways and their operation will be found in the appen-

* 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.

† 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.)

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dices, Part III., containing reports from the Government Railways Managing Board, and the officials of these roads.

The gross earnings of the government roads for the twelve months ended March 31, 1910, amounted to \$9,647,963.71; the working expenses amounted to \$9,095,903.96, showing a profit of \$552,059.75.

The Intercolonial railway working expenses amounted to \$8,645,070.33; its earnings amounted to \$9,268,234.99; a profit of \$623,164.66.

The Windsor branch maintenance expenditure amounted to \$23,549.90; the government earnings amounted to \$60,653.98, leaving a profit of \$37,104.08.

The Prince Edward Island railway working expenses amounted to \$427,283.73; its earnings amounted to \$319,074.74, the deficit being \$108,208.99.

INTERCOLONIAL RAILWAY.

On March 1, 1898, the operations of the Intercolonial were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169.81 miles to the operation of the government line.

The leasing agreement with the Grand Trunk Railway Company, dated February 1, 1898, was confirmed by the Act 62-63 Vic., chap. 5 (1899). Its term extends for a period of ninety-nine years from March 1, 1898; the annual rental being fixed at \$140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899) the Drummond County railway from Chaudière 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.

The total mileage in operation during the year remained the same as in the preceding year, 1,447.13 miles. 23.13 miles are double-tracked. This is irrespective of spur lines and sidings and tracks in yards, the aggregate length of which was 383.71 miles.

CAPITAL ACCOUNT.

The expenditure for the past fiscal year ended March 31, 1910, on capital account amounted to \$1,278,467.60; from which is deducted the sum of \$58.15 (comprising a refund, &c.), leaving the total \$1,278,409.45, making the total expenditure on the whole road 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, \$92,273,073.51.

The principal items charged to capital during the year were as follows (omitting cents): for the new locomotive and car shops with equipment, and new freight yard at Moncton, \$399,400; new machinery for shops, \$95,799; increased accommodation at Halifax, \$179,953; engine house, machine shops, &c., at Rivière du Loup, \$156,945; extension to wharf at Dalhousie, \$27,500; double tracking parts of line, \$68,977; increased water supply, \$42,482, and increased facilities at various points, \$100,565.

The expenditure on capital account was \$2,588,822.71 less than in the previous year 1908-9, in which year \$1,353,646 was expended for rolling stock, whereas last year there was no capital expenditure under this head.

REVENUE ACCOUNT.

Expenditures on revenue account are grouped under five main heads, each divided into a number of sub-heads.

The main heads and the expenditures under them for the fiscal year ended March 31, 1910, are as follows: maintenance of way and structures (27 sub-heads), \$1,629,254.81, against which is a credit of \$6,975.06 for maintenance of joint tracks, yards, &c., leaving the net amount \$1,622,279.75; maintenance of equipment (21 sub-heads), \$1,851,792.68; traffic expenses (5 sub-heads), \$179,882.61; transportation expenses (40 sub-heads), \$4,870,874.65, against which is a credit of \$86,206.89 for operating joint yards and terminals, making the net expenditure under this head, \$4,784,667.76; general expenses (8 sub-heads), \$206,447.53.

The aggregate expenditure under these five heads for the year was \$8,645,070.33.

The items of cost of 'maintenance of way and structures' include (omitting cents): ties, \$226,214; rails, \$222,626; other track material, \$128,667; roadway and track, \$533,502; removal of snow, ice and sand, \$91,124; bridges, trestles and culverts, \$66,082; grade crossings, fences, cattle-guards and signs, \$37,516; buildings, fixtures and grounds, \$140,304; and maintaining joint tracks, yards and other facilities, \$44,161 (against which last item is a credit, as above).

The items of 'maintenance of equipment' include (omitting cents): repairs and renewals of locomotives, \$759,381; repairs and renewals of passenger cars, \$338,494, and of freight cars, \$583,914; and shop machinery and tools, \$33,297.

The items of 'traffic expenses' include (omitting cents): for outside agencies, \$61,587; for advertising, \$37,232; and for stationery and printing, \$24,810.

The items of 'transportation expenses' include (omitting cents): despatching trains, \$142,103; station employees, \$626,729; station supplies and expenses, \$86,785; yard masters and clerks, \$33,544; yard conductors and brakemen, \$121,899; yard enginemen, \$112,975; fuel for yard locomotives, \$152,678; operating joint yards and terminals, \$104,241 (against which is a credit of \$86,206); road enginemen, \$482,068; engine house expenses, \$234,189; fuel for road locomotives, \$1,490,049; road trainmen, \$629,430; train supplies and expenses, \$177,702; and operating floating equipment, \$42,321.

The items of 'general expenses' include (omitting cents): pensions, \$63,313; and law expenses, \$7,307.

The gross earnings of the year, \$9,268,234.99, were derived as follows:—

The passenger earnings amounted to \$2,765,884.66, or 29.84 per cent of the gross earnings; the freight earnings were \$6,048,884.18, or 65.26 per cent of the gross; the mail and express earnings were \$408,847.66 or 4.41 per cent and the miscellaneous earnings amounted to \$44,618.49, or .48 per cent of the gross. The revenue derived from transportation was 99.32 per cent of the gross.

The gross earnings per mile of railway (1,447.13 miles), were \$6,404.56; per engine mile, \$1.08; per train mile, \$1.39; and per car mile, 9.82 cents.

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The total engine mileage was 8,608,486; the total train mileage 6,682,353; and the total car mileage, 94,384,628.

The expenses per mile of railway were as follows: maintenance of way and structures, \$1,121.03; maintenance of equipment, \$1,279.63; traffic expenses, \$124.30; transportation expenses, \$3,306.32; and general expenses, \$142.66, making a total of \$5,973.94.

The expenses per train mile were: maintenance of way and structures, 24.28 cents; maintenance of equipment, 27.71 cents; traffic expenses, 2.69 cents; transportation expenses, 71.60 cents; and general expenses, 3.09 cents, making a total of 129.37 cents.

The ratio of expenses to gross earnings was as follows: maintenance of way and structures, 17.50 per cent; maintenance of equipment, 19.98 per cent; traffic expenses, 1.94 per cent; transportation expenses, 51.62 per cent; and general expenses 2.23 per cent.

Comparing the twelve months ended March 31, 1909, with the corresponding period ended on March 31, 1910, the revenue last year showed an increase of \$741,165.53. The passenger traffic produced an increase of \$137,666.09; the freight traffic an increase of \$546,333.60; and the mails and express an increase of \$57,165.84. The increase per mile of railway was \$512.16, and per train mile 15 cents.

A comparison of working expenses for the same periods shows a decrease in the year 1909-10, of \$682,951.22, or per mile of railway, \$471.95; per engine mile of 0.87 cents, and per train mile of 6 cents.

The increased revenue, \$741,165.53, and the reduction in working expenses, \$682,951.22, make a total betterment, as compared with the previous year, of \$1,424,116.75.

GENERAL NOTES RE INTERCOLONIAL RAILWAY.

The number of passengers carried was 3,122,324, an increase compared with the previous year, of 215,087. There was an increase of 217,330 in the number of local passengers, and a decrease of 2,243 in the number of through passengers.

The actual quantity of freight carried, including non-revenue producing, was 4,071,692 tons. Of this, 144,452 tons consisted of supplies carried for the railway, such as ties, rails, station supplies, &c.

Of revenue producing freight, 3,927,240 tons were carried, an increase, compared with the previous year, of 353,268 tons. The local freight was increased by 216,188 tons, and the through freight by 137,080 tons; the principal items being the following:

Of agricultural products, 473,851 tons, including 155,484 tons of grain and 160,817 tons of flour; of animals, poultry and fish and their products, 76,732 tons, including 18,439 tons of dressed meats, 27,887 tons of fish and 6,667 tons of hides and leather; of products of mines, 1,266,572 tons, including 1,050,362 tons of coal and coke and 184,673 tons of stone, sand, &c.; of products of the forest 1,043,749 tons, including 416,774 tons of lumber, 185,385 tons of pulp wood, and 39,072 tons of wood pulp; of manufactured goods 708,373 tons, including 88,484 tons of iron and steel rails, 138,468 tons of pig and bloom iron, brick, lime and cement, 107,199 tons, sugar, 62,571 tons, and petroleum and oils, 27,537 tons. Of goods classed as miscellaneous, 357,963 tons were carried.

Of products of agriculture, there was an increase of 106,348 tons, including increases of 51,588 tons in grains, 14,125 tons in flour, and 36,208 in hay. Of products

of animals, the increase was 5,176 tons, chiefly in dressed meats and fish. Of products of mines, there was a decrease of 32,760 tons, coal and coke having decreased by 65,575 tons, and slate and granite by 1,732 tons, though other items showed increase. Of products of the forest, there was an increase of 164,702 tons, lumber having increased by 63,886 tons, and both pulp wood and wood pulp having shown considerable increase. Of manufactures, there was an increase of 79,208 tons, iron, pig and bloom, increased by 39,624 tons, wire rods by 35,365 tons, and other increases were made. Iron and steel rails fell off 12,856 tons, and steel billets 26,174 tons.)

The total rolling stock equipment of the railway on March 31, 1910, was as follows:

Locomotives, 414; cars of all kinds, 12,970, comprising sleeping cars, 1st class, 41, 2nd class, 50, parlour cars 9, dining cars 12, 1st class passenger cars 135, 2nd class 99, postal cars 34, baggage cars 65, box baggage cars 6, air brake instruction car 1, steam motor cars 4, box cars, 7,095, refrigerator cars 144, platform cars 3,058, pulp wood cars 52, oil tank cars 40, hopper cars 1,046, gondola coal cars 17, coal cars (20 tons capacity) 442, steel side dump coal cars 130, stock cars 148, convertible dump cars 200, auxiliary cars 23, vans 119; also 53 common snow ploughs, 20 wing ploughs, 2 rotary steam ploughs, 2 double track ploughs, 1 double end plough, 40 flangers; making a total of 118 ploughs and flangers; 2 ballast plough cars, and 1 well boring car.

Out of the foregoing list 11 locomotives, 645 cars of various kinds, and 1 common snow plough were condemned or destroyed and 11 locomotives, 445 cars, and 1 common snow plough were listed as to be replaced at the close of the year.

The following comparative statistics dealing with traffic will be of interest:—

In 1908-9, the average tons of freight carried per train, producing revenue, was 229.95, and the number of passengers 51.61; in 1909-10, the average freight tonnage was 260.02, and passengers 58.99.

In 1908-9, the average tons per loaded car, producing revenue, was 16.66, and the number of passengers 8.81; in 1909-10, the number of tons was 17.23, and of passengers, 9.62.

The number of tons per train, all freight, in 1908-9, was 235.46, and in 1909-10, 264.26.

The number of tons per car, all freight, in 1908-9, was 17.07, and in 1909-10, 17.51.

The average distance each ton of freight was carried in 1908-9, was 267.59 miles, and in 1909-10, the average distance was 271.69 miles. The average distances passengers were carried in those years were 48.04 miles, and 48.73 miles respectively.

The average number of loaded cars per train in 1908-9, was 13.80 cars of freight and 5.86 cars of passengers; in 1909-10, the number of freight cars per train was 15.09 and of passengers 6.13.

The average number of empty cars per train in 1908-9, was 3.93, and in 1909-10, 3.13.

In 1908-9, the average of train miles per mile of road was, for freight, 2,873.96; and for passengers, 1,870.06; in 1909-10, these figures were, respectively, 2,835.59, and 1,782.07.

In 1908-9, the average per mile of road of revenue producing freight carried one mile was 660,857.05 tons, and passengers 96,519.39; in 1909-10, the figures were, freight 737,317.14 tons, and passengers 105,131.40.

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The number of tons, all freight, per mile of road carried one mile in 1908-9, was 676,705.26, and in 1909-10, 749,338.04.

The train mileage in 1908-9 was: passenger, 2,706,214 miles; freight, 4,158,990 miles; in 1909-10, passenger, 2,578,885 miles; freight, 4,103,468 miles.

The loaded car mileage in 1908-9, was 57,381,108 miles, and in 1909-10, 61,916.687 miles.

The empty car mileage in 1908-9, was 16,356,184 miles, and in 1909-10, 12,843,789 miles.

The caboose car mileage in 1908-9, was 3,776,649 miles, and in 1909-10, 3,802,680 miles.

The steam motor car mileage (passenger) was 21,997 miles in 1908-9, and 16,563 miles in 1909-10.

The total car mileage in 1908-9 was: passenger, 15,860,178 miles, and freight, 77,513,941 miles; in 1909-10, the figures were: passenger, 15,821,472, and freight 78,563,156.

The total freight moved in 1908-9, was 3,751,724 tons; of this quantity, 3,573,972 tons were revenue-producing. In 1909-10, the total freight moved was 4,071,692 tons, of which 3,927,240 tons were revenue-producing.

Repairs to passenger cars cost, per car, in 1908-9, \$630.51, or per car mile, .0172 of a cent; and in 1909-10, \$604.87, or per car mile, .0171 of a cent.

Repairs to freight cars cost, per car, in 1908-9, \$47.86, or per car mile, .0078 of a cent; and in 1909-10, \$38.16, or per car mile, .0062 of a cent.

Repairs to locomotives cost, per locomotive, in 1908-9, \$1,884.53, or per locomotive mile, .0828 of a cent, and in 1909-10, \$1,504.72, or per locomotive mile, .0727 of a cent.

The value of stores on hand at the close of the year was \$1,243,181.69, comprising fuel, \$416,911.37; roadway and bridge material, \$314,377.42; and miscellaneous, \$511,892.90.

During the year the new shops at Moncton were occupied, and the locomotive repair work formerly executed at Halifax was transferred to the Moncton shops, a considerable reduction in the number of employees being thus effected.

The double tracking between Moncton and Painsec Junction, a distance of 7.2 miles, was completed and put in operation.

The general condition of the rolling stock is good, and the track of the railway, together with its bridges and other structures, has been maintained in good repair. It is believed that the whole road was never in better condition than at the present time.

Full details as to the various works of improvement and repair carried out during the year, and as to the mechanical department and the rolling stock, will be found in the appendices hereto; also the several statements of the comptroller in regard of the expenditures, &c.

WINDSOR BRANCH.

The road is 32 miles in length. It extends from Windsor Junction, on the Inter-colonial 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 con-

nection 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.

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 Interecolonial railway.

The gross government receipts for the twelve months of the fiscal year ended on March 31, 1910, amounted to \$60,653.98. The cost of maintenance aggregated \$23,549.90, leaving a profit of \$37,104.08. The government share of the receipts showed an increase of \$4,622.65 compared with the previous year.

PRINCE EDWARD ISLAND RAILWAY.

This is a narrow gauge railway, 3 feet 6 inches. The length of road operated was the same as in the previous year, 267.5 miles.

CAPITAL ACCOUNT.

There was an addition of \$206,396.97 to the capital account expenditure during the past year ended March 31, 1910, making the total capital expenditure up to that date, \$8,465,364.91. The added expenditure included \$156,531.57 for increased accommodation at Charlottetown, where a new twenty stall brick and concrete engine house has been built, and \$49,829.25 for the branch line from Harmony to Elmira, a distance of 9.9 miles, the construction of which was placed under contract during the year.

REVENUE ACCOUNT.

The gross earnings of the year amounted to \$319,074.74, and the working expenses to \$427,283.73, making an excess of expenditure over earnings of \$108,208.99. Compared with the previous year there was an increase of \$7,755.11 in the gross earnings, and an increase of \$16,953.32 in the working expenses.

The expenditure on revenue account (working expenses) is classified, as on the Interecolonial railway, under five heads, with their several sub-heads. It comprised: 'Maintenance of way and structures,' (25 sub-heads), \$121,046.70, which included ties \$10,232.32; rails, \$11,008.03; roadway and track, \$60,149.62; removal of snow, ice and sand, \$11,930.76; and telegraph and telephone lines, \$6,916.88; 'maintenance of equipment' (10 sub-heads), \$79,258.26, which included repairs to locomotives, \$27,005. to passenger cars, \$14,485.79, and to freight cars, \$11,471.06; 'traffic expenses' (3 sub-heads), \$968.97, of which \$894.09 was for advertising; 'transportation expenses' (30 sub-heads), \$211,004.76, which included, station employees, \$45,038.14; road engineers, \$23,425.86; road engine house expenses, \$10,837.48; fuel for road engines, \$46,482.45; road trainmen, \$31,955.39; train supplies and expenses, \$7,071.15; and telegraph and telephone operation, \$7,013.08; 'general expenses' (6 sub-heads), \$15,005.04, which included the salaries and expenses of general officers, clerks and attendants, and relief department expenses, \$6,142.67.

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The number of passengers carried was 351,038, an increase compared with the previous year of 18,280, producing \$140,076.83, an increase of \$3,542.79. Of freight, 105,741 tons were carried, a decrease of 349 tons, producing \$153,273.11, an increase of \$4,222.50. The earnings for mails and sundries amounted to \$25,624.80, a decrease of \$10.18 compared with the previous year.

The freight carried was agricultural products, 29,767 tons, including grain, 12,918 tons; flour, 4,374 tons; hay, 2,912 tons; fruit and vegetables, 7,886 tons, and tobacco, 166 tons; animals, poultry and fish and their products, 12,064 tons, including live stock, 3,562 tons; dressed meats, 2,307 tons; poultry, game and fish, 3,030 tons, and hides and leather, 421 tons; products of mines, 10,795 tons, including 7,523 tons of bituminous coal; forest products (lumber) 13,358 tons; manufactures, 6,593 tons, including iron and steel rails, 598 tons, pig and bloom iron, 439 tons; agricultural implements, 711 tons; cement, brick and lime, 1,334 tons, and sugar, 907 tons; miscellaneous commodities, 33,164 tons.

The engine mileage aggregated 441,837 miles, the train mileage, 323,522 miles, and the car mileage, 2,051,034 miles.

The gross earnings per mile of railway amounted to \$1,195.03; per engine mile, \$71.73 cents; per train mile, 98.63 cents; and per car mile to 15.56 cents.

The working expenses per mile of railway amounted to \$1,600.31, and per train mile to 132.07 cents.

The value of stores on hand on March 31, 1910, was \$59,306.18, including fuel, \$12,155.77.

The total rolling stock equipment of the railway on March 31, 1910, was as follows: Locomotives, 31; passenger cars, first-class, 23, second-class, 12; combined second-class and baggage, 7; postal and smoking, 4; combined postal and baggage, 4; baggage, 6; pay car, 1; vans, 4; box freight, 313; refrigerator, 3; stock, 21; coal, 22; platform, 147; total, 567. In addition, there were 10 snow ploughs and 9 flangers.

In the Charlottetown shops, which the mechanical superintendent states are modern and up to date; the machinery has all been installed. One first-class passenger car and ten platform cars were rebuilt, ten locomotives received heavy repairs, and considerable quantity of work was done; the rolling stock being maintained in a high state of efficiency.

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 $1\frac{1}{2}$ per cent of each month's salary and wages will be made by each employee to the fund, to which a like amount will be added by the railway. Interest at 3 per cent per annum will be 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 $1\frac{1}{2}$ 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 $\frac{3}{4}$ of his said average monthly pay. 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. By the amending Act of 1909, chap. 20, the government Railways Managing Board nominates one of its members as chairman of the Provident Board.

The third annual report of the Board, which is printed in the appendices hereto, shows that at the beginning of the fiscal year April 1, 1909, there was a balance to the credit of the fund of \$225,898.31, and that during the past fiscal year the contributions of the railway employees amounted to \$69,949.70; adding to this a like contribution from the government railways and the sum of \$483.06 for refunds, &c., together with interest on monthly balances, \$6,314.32, the total of the fund for the year aggregated, \$372,595.09. The total expenditure during the year was \$117,010.01, of which \$103,628.20 was paid out in retiring allowances, leaving at the credit of the fund on March 31, 1910, the sum of \$255,585.08. It should again be observed that the expenditure, in the early years of the operation of the scheme, would naturally be less than the receipts; but this condition cannot be expected to continue indefinitely. However, meantime, a considerable increase of the fund at credit, year by year, will serve as a source from which to meet the larger expenditures to be looked for in the future.

In the course of the year, 168 employees were retired and pensioned; and seventeen died.

During the three years that the system has been in operation the total contributions by employees amount to \$227,963.85, and the total contributions by the railways to \$227,963.85. The number of employees pensioned is 398, and forty-five have died, leaving 353 in enjoyment of their allowances at the close of the fiscal year 1910. The total paid for retiring allowances is \$191,608.87.

SURVEYS FOR A RAILWAY TO HUDSON BAY.

These surveys have been conducted from Le Pas Mission, a point on the River Saskatchewan, up to which point there is at present in operation a railway, part of the Canadian Northern railway system.

In last year's report there was printed a progress report made by Mr. John Armstrong, the chief engineer of the survey, dated February 15, 1909. This report, which was based on partial surveys, dealt with the two feasible routes discovered, one at Fort Churchill, on the River Churchill, and the other to Port Nelson, on the River Nelson.

Under date September 8, 1909, Mr. Armstrong has submitted a general report on the preliminary surveys, which now include preliminary surveys of the harbours at the mouth of the Nelson and Churchill rivers. His report is furnished with maps showing the two routes, with profiles, and charts with the soundings taken at Port Nelson. His report was laid before parliament last session and will be found printed in the appendices hereto.

From this report, the following information is summarized:—

The distance from Le Pas to Fort Churchill would be approximately 477 miles; its cost with 60-pound rails, \$10,586,520, or with 80-pound rails, \$11,351,520; adding to which the sum of \$7,757,152 for buildings, shops, grain elevators, &c., and for harbour works, \$6,675,000, the total is set down at \$19,108,672.

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The distance from Le Pas to Port Nelson would be approximately 410 miles; its cost with 60-pound rails, \$8,333,800, or with 80-pound rails, \$8,981,800; adding to which, for buildings, shops, grain elevators, &c., the sum of \$7,444,540, and for harbour works, \$5,065,000, the total cost is set down at \$16,426,340.

In both cases, the sum of \$4,000,000 is given as representing the cost of two 4,000,-000 bushel fireproof elevators to be erected at either terminal.

The grades obtained are, on the Churchill route, $\frac{1}{10}$ of 1 per cent for the north bound and $\frac{1}{10}$ for the south bound traffic. On the Nelson route the grade is $\frac{1}{10}$ both ways.

On the Churchill route the estimate provides for steel bridge structures over the River Saskatchewan and the Deer river, timber to be used for all other waterways.

On the Nelson route the bridge over the River Saskatchewan and the two crossings of the Nelson river are proposed to be of steel and concrete; all others to be of wood.

For about the first 150 miles from Le Pas the route is common to both lines of survey, and, of this, the first 120 miles runs through a comparatively level country, giving easy grades and cheap construction. This character is maintained generally on the whole of the Nelson route, the greater portion of the grading being in clay loam, a certain percentage of sand gravel and swamps. The profile shows a practically straight line of descent to the bay, varied only by stretches of level grade.

The Churchill route is at a higher elevation, and passes through a granite country. It involves a number of rising and falling grades between the 250th mile and the bay, and requires much curvature to secure the grade adopted, at reasonable cost.

The question of harbour facilities at the two points is one that constitutes a very important factor in the determination of the route to be adopted, and although a large amount of information has been obtained, as is indicated by the charts with their marked soundings, and Mr. Armstrong's statements as to tides, currents, ice conditions, anchorage, sites for railway terminals, &c., it is considered that further details should be gathered.

By the close of the fiscal year, March 31, 1910, location plans and profiles of the proposed line for a distance of about seventy-five miles from Le Pas were prepared, and further location work was in progress.

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. 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

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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, 1910, has been received, and will be laid before parliament in due course.

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 company incorporated by the Act of 1903, chap. 122, have undertaken certain obligations in respect 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, at or near Port Simpson or some other port in British Columbia, as may be agreed upon. 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 four 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 fifty 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, such amount 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 to be made).

The several government expenditures to be made under these 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 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.

The report of the Board for the fiscal period of twelve months ended March 31, 1910, has been prepared, and will be laid before parliament in due course.

The following summary shows the position at the close of the year, March 31, 1910.

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The entire line from Moncton to Winnipeg is under contract, the distance being 1804.84 miles.

Of this distance, 1,106 miles are graded. The track is laid for a distance of 698.7 miles of main line, with 114.5 miles of sidings; total 813.2 miles. The work is comprised in twenty-one contracts, and the total percentage done is 60.1 per cent of the whole.

The work is divided into six districts. On the first westward from Moncton, *District 'A,' 256.51 miles;* 246 miles are graded, and the main track is laid for 155.91 miles. The expenditure for construction during the year was \$4,996,543.26. 81.07 per cent of the work has been done.

District 'B,' 507.22 miles; 358.25 miles are graded, and the main track is laid for 216.4 miles. This district extends east and west of the Quebec bridge. The expenditure during the year on construction was \$5,313,240.10, and on transport, \$14,169.14. 64.87 per cent of the work has been done.

District 'C,' 192.91 miles; 13 miles have been graded. The expenditure during the year on construction was \$360,264.18; on transport, \$26,691.28, and on location, \$6,948.04. 5.31 per cent of the work has been done.

District 'D,' 216.11 miles; 127.5 miles have been graded, and 57.9 miles of main track laid. The expenditure during the year on construction was \$3,479,414.94, and on transport, \$27,286.12. 36.89 per cent of the work has been done.

District 'E,' 255.19 miles; 41.5 miles have been graded. The expenditure on construction during the year was \$857,325.09, and on transport, \$10,249.70; 20.58 per cent of the work has been done.

District 'F,' 376.80 miles; brings the road into the city of Winnipeg, crossing the Red river at St. Boniface. It embraces the construction of the yards and locomotive and other shops at a point about six miles east of Winnipeg. The track connecting the Lake Superior branch with the Dundee branch of the Canadian Northern railway at St. Boniface, was laid in October, 1909, and 46.7 per cent of the work of constructing the station buildings, &c., over this distance is completed. The substructure of a double track bridge over the Red river at Winnipeg is under contract, and six of the piers have been completed. The foundations of all the terminal shop buildings are completed, and about 2,500 tons of the general steel work have been erected. The expenditure during the year on construction was \$4,648,295.23, and on transport, \$11,982.58; 82.21 per cent of the work has been done.

The expenditure for the fiscal year up to March 31, 1910, on the entire eastern division amounted to \$19,968,126.86, of which \$19,655,682.80 was on construction. The total expenditure up to that date was \$71,918,843.88.

The yearly expenditures have been as follows:—

1904-5.	\$ 778,363 63
1905-6.	1,831,263 50
1906-7 (nine months).	5,537,867 50
1907-8.	18,910,449 41
1908-9.	24,892,772 98
1909-10.	19,968,126 86

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As the result of disputes between the government engineers and those of the Grand Trunk Pacific Railway Company respecting classification of material on districts 'B' and 'F,' and as to returns for rock moved outside the regular section in rockcuts, (commonly known as 'overbreak'), these matters have been referred for settlement to a board of three arbitrators, as provided for in the company's agreement with the government. Owing to snow on the ground, it was not found possible to deal with the question of classification before the close of the fiscal year. A number of adjustments of 'overbreak' were, however, made, and where they involved deductions these have been made in the contractors' progress estimates. In some cases remeasurements will be necessary before they can be dealt with.

On the western division of the railway, in course of construction by the Grand Trunk Pacific Railway Company, the position at the close of the fiscal year, March 31, 1910, is shown by the report made by the government chief engineer of that division, Mr. Collingwood Schreiber, C.M.G., to be as follows:—

The total length of this division is about 1,751 miles, divided into two sections, viz.: the 'Prairie Section' which extends from the west bank of the Assiniboine river, in the city of Winnipeg, to the east bank of Wolf creek, a distance of 915 miles, and the 'Mountain Section' extending from the east bank of Wolf creek to the western end of the city of Prince Rupert, the Pacific coast terminus, a distance of about 836 miles.

' PRAIRIE SECTION.'

The entire section is graded, and the structures are built. The main line track is laid, and sidings have been constructed at 138 stations, aggregating 140½ miles in length. 474 miles of main line are fully ballasted; 350 miles have a first lift of ballast of about five inches in depth, and there remain thirty-five miles of skeleton track between Entwistle and Wolf creek.

Seven hundred and thirty-two miles of double fence have been erected.

A telegraph line has been built over the entire 'Prairie Section' of 915 miles, of which 793 miles is a four wire line, and 122 miles a two wire line.

Eleven interlocking plants have been established at rail level crossing of other railways.

Water services have been introduced at forty-nine stations.

Six round houses have been built, viz.:—At Rivers, 18 stalls; Melville, 12 stalls; Watrous, 12 stalls; Biggar, 12 stalls; Wainwright, 12 stalls; Edmonton, 18 stalls; and two small engine houses have also been erected—one of two stalls at Portage la Prairie and one of two stalls at South Saskatoon.

Machine shops have been erected at Rivers, Melville, and Edmonton, three divisional stations.

Five divisional station houses; 26 way station houses; 54 section houses; 66 tool houses; 79 bunk houses; 5 coaling plants; 80 permanent and 22 temporary loading platforms; and 18 stock yards; 115 grain elevators have been erected at stations.

The portion of the road between Winnipeg and Edmonton—795 miles—has been regularly operated for public traffic since September 13, 1909, under authority of the Board of the Railway Commissioners. On the 120 miles west of Edmonton, though there is no regular operation, there has been attached to the construction trains since

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February 1, 1910, a combination passenger and freight car, for the convenience of those concerned.

' MOUNTAIN SECTION.'

Location plans and profiles have been approved by the government and Board of Railway Commissioners from Wolf creek westward for a distance of 289 miles, and from Prince Rupert easterly for 409 miles, leaving a gap of 138 miles.

Of the 289 miles from Wolf creek westerly, only 179 miles have, as yet, been put under contract.

As the contracts were only awarded late last autumn, very little work has been done beyond the first mile west of Wolf creek. The work on this mile is very heavy, there being two large steel bridges to be erected, and a cutting of over 130,000 cubic yards to be taken out. The first structure will be 622 feet in length and 130 feet high, crossing Wolf creek. The second structure is to span the MacLeod river; it will be 1,052 feet long, and 125 feet high. The concrete piers, pedestals and abutments of these two bridges are completed in readiness to receive the superstructure.

The erection of the superstructures of these two bridges will be carried on simultaneously, so as to have them completed at the earliest possible date, in order that the tracklaying may be proceeded with during the ensuing summer season.

During the winter season, over 3,600 car loads of plant and supplies reached Wolf creek and were at once forwarded and distributed by teams along the line of work.

Of the 409 miles from Prince Rupert easterly, 240 miles are under contract.

Of the first 100 miles out of Prince Rupert easterly the grading and culvert structures are far advanced towards completion.

About seven miles of track have been laid easterly from Prince Rupert, and sufficient rails and fastenings have been delivered to cover 200 miles, together with enough ties for 100 miles.

A wharf has been built at Prince Rupert; also a warehouse.

On the 140 miles east of the first 100 miles, very little work has been done pending the opening of navigation on the Skeena river.

QUEBEC BRIDGE RECONSTRUCTION.

By the Act of 1908, chapter 59, the Governor in Council was authorized to take over the whole undertaking, assets, property and franchises of the Quebec Bridge and Railway Company. By an order in council of August 17, 1908, such authority was given, and the property was assumed on December 1, 1908. The transfer was made by a deed of assignment and transfer, dated October 18, 1909.

The chairman of the special Board of Engineers, constituted by Order in Council of August 17, 1908, for the work of reconstruction, has reported on the progress made during the fiscal year, ended March 31, 1910; his report will be found printed in the appendices hereto.

Results of the borings made to determine the nature of the material in the vicinity of the present piers, and the location of bed rock have established the feasibility of sinking a new pier down to bedrock outside of the present pier on the north side

of the river, and that on the south side the foundations of the present pier are sufficient to support the enlarged work.

The contract for the construction of the piers and abutments of the new bridge was awarded in December, 1909, and preparatory work on the north side has been steadily carried on since.

In the same month, the contract for the removal of the debris was awarded, and by the close of the year about 21 per cent of the total work was executed.

Contracts have been made for the important work of carrying out compression and tension tests, and the question of the use of nickel steel rivets for joints instead of carbon steel was also submitted to careful test, but without developing any material advantage to be gained by the use of nickel steel.

By the close of the year the plans and specifications of the Board for a bridge on a cantilever design had made such progress as to ensure their being in readiness for the early calling for tenders. Intending tenderers, however, have been notified that, in addition, they will be allowed to submit plans prepared by themselves.

The expenditure during the year, for the preparation of plans, salaries, &c., amounted to \$111,788.02, adding to which the sum of \$355,279.07, the amount paid for acquiring the stock of the Quebec Bridge and Railway Company, and the further sum of \$31,765.44, the expenses of the commission of inquiry into the causes of the collapse of the old structure, the total expenditure since the date of the collapse is \$498,832.53.

There is, however, a credit of \$100,000, the amount paid to the government by the Phoenix Bridge Company, the original contractors for the superstructure, under an agreement, dated March 12, 1910, made with them, under authority of an order in council of February 22, 1910, in settlement of the claims of the government for damages and the counter claims of the company in this connection; the company releases to the government all its interest in the steel and manufactured materials used or intended to be used then at the bridge site and storage yards there and at Quebec, and the government releases to the company all its interest in the steel and manufactured materials then at the company's works at Phoenixville, Pa., U.S.A., together with the government lien on the company's working plant, equipment, &c., then at the site of the bridge and said storage yards.

By this agreement and settlement the company surrenders all rights it previously possessed under contract for the construction of the bridge.

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 statement shows 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.

CANALS.

The total expenditure on the Dominion canals for the twelve months ended March 31, 1910, was \$3,259,097.18, comprising, for works of construction, \$1,650,706.64, charged to capital; \$489,256.68 for maintenance, charged to income; \$604,899.26 for staff and \$514,234.60 for repairs; the last two items being charged to revenue.

The balance of rentals due on April 1, 1909, was \$148,795.35. The rentals accrued during the year amounted to \$176,126.70, making a total of \$324,922.05. Of this amount, there was collected during the year a total of \$168,893.63. The balance remaining due on March 31, 1910, after deducting abatements, was \$148,266.82. 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 net revenue collected amounted to \$194,685.84, the balance being made up of wharfage dues, fines, &c. Of this amount, refunds were made to the extent of \$1,301.56, leaving the net revenue \$193,384.28.

• 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 1909-10, but very voluminous statistics relating to canal traffic, and various commercial statistics for the season of navigation of the year 1909 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 1909 amounted to 33,720,748 tons, an increase of 16,217,928 tons compared with the previous year. 272,222 passengers were carried, a decrease of 8,608.

The following features of the principal canal traffic during the season of 1909, will be of interest:—

On the Welland canal, 2,025,951 tons of freight were moved, an increase of 322,498 tons. Of the total, 921,866 tons were agricultural products and 186,614 tons produce of the forest; of coal, 377,681 tons were carried; 1,976,040 tons were through freight, of which 1,325,023 tons passed eastward.

Of the through freight, Canadian vessels carried 1,247,694 tons, an increase of 326,373 tons, and United States vessels 728,346 tons, a decrease of 45,762.

The total through freight passed eastward and westward through this canal to United States ports was 445,419 tons, a decrease of 3,235 tons compared with the year 1908.

The quantity of grain passed down the Welland and St. Lawrence canals to Montreal, was 652,742 tons, a decrease of 103,399 tons as compared with the previous year; no transhipments have been made at Ogdensburg since 1903.

On the St. Lawrence canals, 2,410,629 tons of freight were moved, an increase of 123,652 tons, of which 1,564,584 tons were eastbound freight, and 846,045 tons westbound freight; 773,730 tons were agricultural products; 639,767 tons coal; and 509,157 tons forest products.

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On the Ottawa river canals, the total quantity of freight moved was 336,939 tons, an increase of 78,412 tons, of which 232,025 tons were produce of the forest.

On the Chambly canal, 752,117 tons were moved, an increase of 248,841 tons, of which 599,330 tons were produce of the forest and 98,533 tons of coal.

On the Rideau canal, 91,774 tons were carried, an increase of 2,134 tons; 26,727 tons being produce of the forest, and 15,633 tons of coal.

On the St. Peter's canal, 79,850 tons were carried, an increase of 7,835 tons; 41,301 tons were coal.

On the Murray canal, 102,291 tons passed, an increase of 76,390 tons.

On the Trent canal, 59,952 tons were moved, of which 55,086 tons were product of the forest.

On the Sault Ste. Marie canal the total movement of freight was 27,861,245 tons, being an increase of 15,102,029 tons, carried in 6,331 passages of vessels, the number of lockages being 5,046. Of wheat, 74,401,000 bushels and of other grain, 29,503,240 bushels were carried; 2,522,700 barrels of flour; 21,156,915 tons of iron ore; 2,797,699 tons of coal; and 34,309,300 feet, board measure, of lumber.*

By means of the enlarged Canadian canal system and the intermediate waterways, a minimum depth of fourteen feet of water from Lake Superior to the head of the ocean navigation at Montreal is afforded; the smallest locks being 270 feet in length and 45 feet in width, intended, for the purpose of ordinary traffic, to accommodate vessels 255 feet long and 44 feet beam.†

The foot note below relating to the Erie canal will be found of interest.**

* The following summary of the total traffic of the American and Canadian canals at Sault Ste. Marie for the season of 1909 is taken from the statistical report prepared under the direction of Lieut.-Col. C. McD. Townsend, Corps of Engineers, U.S. Army:—

Total freight carried, tons, 57,895,149; total tons, net register, 46,751,717; total mile-tons, 46,812,929,345; total valuation placed on freight carried, \$626,104,173; total amount paid for freight transportation, \$36,291,948; total number of registered vessels using the canals, 870; total number of passages by unregistered crafts carrying freight, 242; total valuation placed on registered vessels, \$126,899,000; total number of passengers transported, 59,948; average distance freight was carried, 809 miles; average cost per ton for freight transportation 63 cents; average cost per mile per ton, 0.78 mills; average value per ton of freight carried, \$10.81.

The total freight traffic of 57,895,149 net tons for the season of 1909, when compared with the season of 1908, shows an increase of 40 per cent, or 16,504,592 tons, and the net registered tonnage of 46,751,717 tons shows an increase of 50 per cent, or 15,659,987 tons.

The traffic through the American canal was 52 per cent of the total freight, 62 per cent of the net registered tonnage, and 46 per cent of the total number of passengers carried, the amounts being 30,132,374 tons of freight, 28,939,463 tons register, and 27,736 passengers. Compared with the season of 1908 there was an increase of 1,475,077 tons of freight, or 5 per cent; 7,451,964 tons register, or 35 per cent; and 4,657 passengers, or 20 per cent.

The traffic through the Canadian canal was 48 per cent of the total freight, 38 per cent of the total registered tonnage, and 54 per cent of the passengers carried, the amounts being 27,762,775 tons of freight, 17,812,254 tons register, and 32,212 passengers. Compared with the season of 1908, there was an increase of 15,029,515 tons of freight, or 113 per cent; 8,208,023 tons register, or 85 per cent; and 2,004 passengers, or 7 per cent.

It has to be observed that the traffic figures do not, in all cases, agree with those of the Canadian canal returns, a fact which is probably due to certain differences existing between the standards and classifications of the two countries.

† In exceptional cases this length can, with certain manœuvring, be somewhat increased, being governed, of course, by the form of the vessel. As a matter of fact, there are vessels now using the canals whose length, over all, is 265 feet, and width of beam 37 feet.

** The Erie canal, between Buffalo and Albany, is 350½ miles long; comprises 72 locks, 110 x 18 feet, with a depth of 7 feet of water, accommodating, as a maximum, vessels of 240 tons burden. The original canal was completed in 1836, and the enlargement to the above dimensions in 1862. The total cost of construction was \$51,609,200.

There is now under construction an enlarged canal, authority for which was given in 1903. The locks were to be 328 feet long by 28 feet wide in the clear, with 11 feet of water on the mitre sills. The estimated cost was \$100,562,993. It was intended to accommodate barges of 1,000 tons burden. In 1905 the width of the locks was increased to 45 feet, and construction is proceeding on this basis. When completed, it will permit the passage of lake boats carrying 2,600 tons.

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The through route between Montreal and Fort William and Port Arthur, on the west shore of Lake Superior, comprises 73 miles of canal, with 48 locks, and 1,167 miles of river and lake water, or a total of 1,230 miles. From Montreal to Duluth, at the southwest 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 VIII., with details of the several works. At Port Arthur and at Fort William (about six miles apart), the Canadian Pacific railway gives communication westward and eastward, and the Canadian Northern railway 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 to Winnipeg.

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, they are well lighted throughout by electricity. The Sault Ste. Marie, the Welland, the Cornwall, the Soulanges and the Lachine canals are electrically operated. The Farran's Point canal is lighted with acetylene gas.

On the Lachine canal, the principal features of work have been the facing with concrete of the slope walls in the reach above the Côte St. Paul locks, and the widening of the canal at this point, and the provision of wharf accommodation at St. Henri and Côte St. Paul, of which a large proportion was completed during the year.

On the Soulanges canal similar work of concrete protection has been carried on.

The action of the waters of Lake St. Francis on the clay dykes at Ste. Barbe and Hungry bay is being met by the construction of boulder protection, which is now completed at Hungry bay, at which point the macadamizing of the roadway on the top of the dyke has been completed for a considerable distance.

The high water in the River Ottawa prevented the completion of the repairs to the Carillon dam during the year, but all preparations had been made for resumption of work in the following season.

On the Chambly canal, the electric power house was completed, but the electric machinery has not yet been installed.

The improvements in the harbour of St. Johns, placed under contract in 1908, comprise the removal of an old wharf, an extension of the present canal wharf up to the railway bridge, the building of a new wharf, and a breakwater, &c. They were completed during the year so far as regards the works above the bridge.

On the Trent canal, the extent completed remains the same as in the previous year, namely, 160 miles, extending from Lake Simcoe to Healeys Falls, a point sixteen miles below the village of Hastings; the canal was operated for this distance. The water was satisfactorily maintained at a uniform height throughout the year.

A considerable amount of work in the way of repair and improvement was executed, notably in the dredging of portions of the River Otonabee, the raising of private wharfs in Stony lake to meet the raise in water level necessitated by the requirements of navigation, various improvements at Fenelon Falls, and in the repair of the

several dams controlling the various reservoir systems acquired from the Ontario government. In two important cases, new concrete dams were built.

The construction of the Ontario-Rice Lake division of the canal is dealt with in an interesting and comprehensive report of the superintending engineer, which will be found in the appendices hereto.

The division is 56½ miles in length, extending from Trenton, on Lake Ontario, to Rice lake, of which five out of the seven sections into which it has been divided are under contract. It follows the River Trent, and will comprise nine and a half miles of canal, thirteen miles of subaqueous channel, and thirty-four miles of deep river; the total rise between low water level on Lake Ontario and normal navigation level at Rice lake is 369 feet, to be overcome by eighteen locks. The river level will be controlled by fourteen concrete dams; sixteen bridges will be required, six of which are for the accommodation of railways; they will all be swing or bascule spans except one. The locks will be of concrete, with 8 feet 4 inches of water on the sills; they will be 175 feet long between the hollow quoins, and 33 feet in width, accommodating barges of 1,000 tons, about 150 feet long and of 30 feet beam, drawing 8 feet of water. The work involved will require 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 this, up to March 31, 1910, there had been expended the sum of \$1,285,092. Five of the locks and six of the dams have been built. Details of the work done will be found in the above mentioned report of the superintending engineer.

In addition to the work on this division, a contract for the construction of a new concrete dam at Burleigh Falls has been entered into to replace the present dilapidated wooden structure. This is part of a scheme to raise the level of Lovesick lake to the level of Deer bay, a difference of about four feet, dispensing with the present lift lock at Lovesick, and the flight lock at Burleigh Falls, and replacing them by a single lock at the latter place.

On the Lindsay section, the new lock and dam at Lindsay, placed under contract in January, 1909, are finished, and the dam sluices have been of service in dealing with the spring freshets, which have caused trouble in the past in the Scugog river above Lindsay.

On the Rosedale section, a contract was entered into in February, 1908, for the work of building a new canal between Lakes Camcron and Balsam, 1.8 mile in length, together with a new lock and dam to take the place of the old wooden structures; thus shortening by 1.2 mile, the distance between the two lakes. The lock is completed and the excavation for the canal.

The Holland River division extends from Cook's bay, Lake Simcoe, to Holland Landing, 8½ miles, all on the Lake Simcoe level, and from Holland Landing to Newmarket, 4½ miles, on which distance there is a rise of 43 feet, to overcome which three locks will be required, together with three dams; the work on this section (No. 2) was placed under contract in February, 1908, and about 37 per cent has been executed up to March 31, 1910.

Hydrographic surveys of the various lakes embraced in the Trent navigation have been carried on, with the object of making a complete set of charts of these waters.

SESSIONAL PAPER No. 20

No action has, so far, been taken with regard to the adoption of a route for the northern section of the canal, from Lake Simcoe to Georgian Bay, beyond the making of surveys of alternative routes.

On the Galops canal, the work of removing certain shoals in the River St. Lawrence west of the upper entrance to the canal was completed, the result being to afford a clear channel, 17 feet deep, between the upper entrance and the lower end of what is known as the 'north channel.' All the enlargement works undertaken in connection with the Ontario-St. Lawrence canals district have now been completed.

At the same time, it should be noted that the intermediate river stretches present some serious difficulties, vessels being compelled to cross the river from side to side in order to follow the devious marked channel; a drawback to navigation which could be remedied by straightening the channel at certain points, removing shoals and improving the entrances to the Farran Point and Rapide Plat canals.

On the Cornwall canal, preliminary steps were taken for the improvement of the upper entrance of the canal, where the approach to the lock is extremely difficult, and plans and specifications have been prepared for an approach wall and certain dredging, &c.

The permanent work of repair of the serious break in the south canal bank, which occurred in June, 1908, has been completed, under contract, during the year, and by carrying it on, day and night, the canal was opened for navigation on May 3, 1909. The whole of the works were completed in the following October. It may be observed that, notwithstanding the grave nature of the break, which carried away about 200 feet of the bank, the actual delay to navigation was only seventeen days, a temporary dam and diversion having been made to obtain this result. In view of evidence of weakness in the bank immediately west of the washout, it was decided to extend the new concrete wall for a further distance, and the work has been placed under contract.

On the Rideau canal, the freshets of 1909, the highest on record, caused a very serious washout at Black Rapids, the water cutting into the sand bank of the river at the end of the new dam, making a breach of about 200 feet in length. The work of repair, exceptionally difficult under the circumstances, entailed a delay of six weeks in opening the canal to navigation. A considerable amount of work of repair and improvement at various points on this extensive water course was carried out during the year.

On the Welland canal, the clearing up of the harbour at Port Colborne is in progress, and a channel to the elevator 22 feet deep when there is a depth of 14 feet on the lock sills, is now available. A spur line of railway has been built from the Grand Trunk railway to the elevator. In connection with the surveys that have been conducted in order to obtain information in the event of decision to build a new Welland canal, borings have been made to determine the nature of the ground at various points.

On the Sault Ste. Marie canal, the work of improving the channel at the upper entrance of the canal by deepening it to 21 feet 5 inches at low water stage and providing a width of 500 feet, was completed; the middle section, through the Vidal Shoals, about two miles above the lock, being finished during the year. The channel-way on the north side of the canal above the north pier is under contract.*

* It may be noted that a new lock is now in course of construction by the United States government, which is to be 1,350 feet long by 80 feet wide, and to have a depth of 25 feet on the sills at low water stage.

1 GEORGE V., A. 1911

On June 9, 1909, an accident of a most serious character occurred, the details of which are fully given in the report of the superintending engineer herewith. A steamer was in the lock, and another just entering the upper end when a third steamer entered the lower approach, and its engines failing to reverse at the proper time, the vessel was carried against one of the lower lock gates, forcing it back. The resultant rush of water was most disastrous, both to the vessels and the lock works, all four of the gates being broken, and other damage done. The immense movable dam above the lock was brought into action and proved of service, though some points of weakness developed in it. Navigation was not resumed until the 21st.

On two occasions during the season, the Poe lock, on the American side of the river, was out of commission for periods of three and eight days, respectively. As indicating the extent of traffic at this point, and the importance of having sufficient accommodation to deal with it in the event of accident, it may be observed that on the first of these occasions, the Canadian canal was worked continuously for 101 hours, passing 184 vessels of an aggregate of 553,287 tons register, and on the second for 264 continuous hours, passing 460 vessels of a total of 1,372,145 tons register. There were 112 vessels at one time waiting for passage; a formidable blockade which entailed a loss in their earnings estimated at \$250,000.

RAILWAY STATISTICS.

The digest of the sworn statements of railway companies relating to their operations in Canada for the twelve months ended June 30, 1909, 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 1909 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, and Chairman of the
Government Railways Managing Board.*

APPENDICES

PART I

STATEMENTS

OF THE

ACCOUNTANT OF THE DEPARTMENT

SHOWING

EXPENDITURE ON RAILWAYS AND ON CANALS

(INCLUDING SUBSIDIZED RAILWAYS)

AND RECEIPTS

FOR THE FISCAL YEAR 1909-10

ALSO FOR PREVIOUS YEARS

STATEMENT showing the amount expended by the Department of Railways and Canals,
Dominion of Canada, during the Fiscal Year ended March 31, 1910.

CANALS.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Staff.	Repairs.
CANALS.	§ cts.	§ cts.	§ cts.	§ cts.
Beauharnois.....		24,319 49		
Carillon. . . }				
Grenville. . . }		10,410 09	23,512 72	11,925 28
Chambly.....	30,479 41	8,207 00	29,198 76	22,825 53
Cornwall.....	89 54	35,549 06	76,519 49	51,330 83
Galops.....	2,057 86	13,694 97		
Lachine.....	215,611 98	70,000 20	77,701 55	75,247 71
Murray.....			4,378 74	2,674 57
Rideau.....		9,225 73	48,324 13	95,188 97
Sault Ste. Marie.....	46,809 13	147,147 52	18,976 64	20,300 77
Soulanges.....	153,022 23	2,299 93	32,851 69	46,287 16
St. Anne's Lock.....		2,339 76	2,267 60	2,446 28
St. Ours ".....		1,925 08	4,137 64	1,752 66
St. Lawrence River { Removal of shoals.....	28,815 36			
St. Lawrence River { District Office.....	5,573 96			
St. Peters.....			3,449 43	238 14
Trent.....	1,000,000 00	59,483 51	36,800 42	54,206 13
Welland.....	168,247 17	75,233 28	136,783 47	77,723 23
Williamsburg.....			29,682 88	29,645 76
Totals.....	1,650,706 64	459,835 62	515,585 16	491,793 02
GENERAL ON CANALS.				
Dredge Vessels—Lachine.....				7,668 29
" " Rideau.....				14,219 64
Miscellaneous.....			1,582 40	553 65
Salaries and Contingencies Statistical Officers, &c.....			37,502 73	
Sunday labour.....			30,109 89	
Surveys and Inspections.....		2,012 52		
Quebec Canals { Maintenance.....		4,596 96	20,119 08	
Quebec Canals { Remarking boundaries, &c.....		17,999 29		
Quebec Canals { Dredging.....		4,812 29		
Miscellaneous works not provided for.....				
		29,421 06	89,314 10	22,441 58
Total on Canals.....	1,650,706 64	489,256 68	604,899 26	514,234 60

Grand total, canals, \$3,259,097.18.

1 GEORGE V., A. 1911

STATEMENT showing the amount expended by the Department of Railways and Canals,
&c.—*Concluded.*

RAILWAYS.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Working Expenses.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
RAILWAYS.				
Intercolonial.	1,278,409 45		8,645,070 33	
National Transcontinental.	19,968,126 86			
Prince Edward Island	206,396 97		427,283 73	
Windsor Branch			23,549 90	
Total	21,452,933 28		9,095,903 96	
GENERAL ON RAILWAYS.				
Contribution to McGill University.		2,500 00		
Railway Subsidies		2,048,097 05		
Governor General's Car		1,966 62		
Railway Commission maintenance, &c.		112,465 04		
" " Statutory		46,500 00		
Subscription to Railway Congress, Brussels.		97 33		
Surveys and Inspections.		17,085 87		
Government Director Grand Trunk Pac. Ry.		2,000 00		
Inspections Grand Trunk Pac. Ry.		17,614 66		
Hudson Bay Railway Surveys.	53,042 63			
Quebec bridge—				
‡ Preparing plans, &c		111,788 02		
Railway Grade Crossing Fund		70 00		
		2,360,214 59		
Less amount received from the Phoenix Bridge Company		100,000 00		
Total	53,042, 63	2,260,214 59		
Total on railways	21,505,975 91	2,260,214 59	9,095,903 96	
Grand total Railways. \$32,862,094.46				
MISCELLANEOUS.				
Cost of litigation		4,706 79		
Grand totals railways and canals, including miscellaneous	23,156,682 55	2,754,178 06	9,700,803 22	514,234 60

Total amount of expenditure, \$36,125,898 43.

NOTE.—Up to and including the year 1906, the fiscal year ended June 30, after which it ends March 31.

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

STATEMENT showing the amount expended on Construction, Renewals, Ordinary Repairs and Working Staff, up to March 31, 1910.

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	889 35
" " "	1876	11,125 00		641 55	
" " "	1877	63,330 18		600 00	17 45
" " "	1878	26,511 51		600 00	
" " "	1879	107,337 75		631 50	
" " "	1880	80,120 54		400 00	
" " "	1881	69,434 76		959 58	
" " "	1882	484 00		1,920 54	200 63
" " "	1883			2,089 19	232 42
" " "	1884	2,471 40		2,601 47	367 85
" " "	1885	16,820 15		1,929 11	183 11
" " "	1886	2,316 85		2,360 67	297 81
" " "	1887	1,087 75	750 00	2,777 13	343 23
" " "	1888			3,217 77	1,588 40
" " "	1889		500 00	3,085 29	353 38
" " "	1890			3,110 15	255 34
" " "	1891	972 65	510 53	3,255 30	312 02
" " "	1892	14,387 00	30,936 82	3,007 70	1,461 24
" " "	1893	811 59	9,987 78	2,933 15	1,856 30
" " "	1894	437 05	3,852 21	2,935 94	1,086 70
" " "	1895	868 44	26,222 46	2,499 81	353 55
" " "	1896	1,453 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
LESS—Refunds in 1897—\$.....		648,755 64			
		208 50			
Total		*648,547 14	151,134 50	87,458 56	33,443 25

* Expenditure as above. \$ 648,547 14
 Less expenditure prior to Confederation 156,523 32

Agreeing with Public Accounts, 1910, page 4. \$ 492,023 82

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, July 23, 1910.

1 GEORGE V., A. 1911

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

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		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887		
" " "	1888		
" " "	1889		
" " "	1890		
" " "	1891		
" " "	1892		
" " "	1893		
" " "	1894		
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" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
" " "	1905		
" " "	1906		
" " "	1907		
" " "	1908		
" " "	1909		
" " "	1910		
Total.....			44,387 53

W. C. LITTLE,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

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

LACHINE CANAL.

	Year ending.	Capital.		Renewals Chargeable to Income.		Staff.		Repairs.			
		\$	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				2,589,532	85						
Expenditure by Dominion Government.....	1870						15,834	49	13,302	39	
"	1871					12,231	40	17,478	52	15,093	25
"	1872	36,708	15				16,076	93	12,334	69	
"	1873	7,824	28			35,158	21	23,601	03	34,300	60
"	1874	158,618	35				25,811	07	22,828	66	
"	1875	197,420	52				28,592	01	30,057	34	
"	1876	327,769	39				33,797	73	29,103	65	
"	1877	1,439,375	73				33,148	86	19,824	33	
"	1878	1,484,619	63				39,062	97	13,646	41	
"	1879	958,053	30				42,338	84	12,400	78	
"	1880	369,566	74				38,950	90	10,223	62	
"	1881	292,165	51				39,027	99	19,888	33	
"	1882	252,821	33			2,978	66	41,158	90	17,116	46
"	1883	396,496	96			1,859	68	45,554	91	18,199	59
"	1884	188,266	18				48,624	51	19,683	24	
"	1885	111,215	23				49,004	85	20,199	78	
"	1886	210,509	42				50,969	10	19,199	18	
"	1887	28,772	52			12,981	59	53,113	97	22,567	81
"	1888	19,414	34			7,996	38	52,229	61	19,999	64
"	1889	76,032	96			972	71	54,110	67	22,957	71
"	1890	7,448	03			8,238	46	53,114	34	22,999	38
"	1891	217	53			16,155	75	50,721	69	36,292	98
"	1892	87,852	35			27,480	80	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	60,064	84
"	1907	18,840	85			65,872	25	53,308	14	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
Cost of enlargement.....				9,786,178	93						
Total.....				12,375,711	78	1,238,590	15	2,101,636	23	1,412,676	79

Total expenditure on capital account as above.....\$12,375,711 78

Less charged to St. Lawrence River and Canals, see page 11. \$2,950,104 15

Less expenditure by Imperial Government 40,000 00

2,990,104 15

Agreeing with Public Accounts balance sheet, 1910, page 4..... \$ 9,385,607 63

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.W. C. LITTLE,
Accountant.

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			
" " prior " ..	1868		63,193 75	9,349 99	6,216 98
" " " " ..	1869		55 00	9,626 99	6,498 57
" " " " ..	1870		27 50	10,117 57	6,384 81
" " " " ..	1871			12,316 53	5,722 36
" " " " ..	1872		27 50	11,792 46	15,733 38
" " " " ..	1873		5,122 50	12,210 73	9,882 06
" " " " ..	1874		26 00	15,392 51	10,990 56
" " " " ..	1875		36 00	14,399 32	12,253 01
" " " " ..	1876			14,465 86	17,170 83
" " " " ..	1877			14,377 63	15,207 36
" " " " ..	1878			14,383 37	9,861 05
" " " " ..	1879			15,015 86	10,370 71
" " " " ..	1880	266 15		15,362 61	8,997 34
" " " " ..	1881			17,659 93	10,770 67
" " " " ..	1882			18,804 53	20,813 86
" " " " ..	1883		6,727 44	18,287 77	15,826 71
" " " " ..	1884		3,277 98	19,107 38	16,232 61
" " " " ..	1885		7,999 79	18,960 40	14,637 70
" " " " ..	1886		8,491 80	19,228 90	14,356 00
" " " " ..	1887		3,633 37	18,867 45	14,999 88
" " " " ..	1888		14,411 97	19,325 05	14,285 98
" " " " ..	1889		10,993 52	20,019 11	14,932 54
" " " " ..	1890			19,847 42	14,999 20
" " " " ..	1891		17,085 68	18,886 86	12,537 39
" " " " ..	1892		1,606 23	20,050 01	14,999 80
" " " " ..	1893			20,348 34	14,107 11
" " " " ..	1894		6,547 72	20,574 53	13,903 46
" " " " ..	1895		27,982 93	20,428 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 22	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	18,640 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		
Total		*1,636,690 26	265,810 84	649,574 89	525,691 23†

* See page 11 for total cost 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, July 23, 1910.

SESSIONAL PAPER No. 20

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	98,378 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	68,593 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
Total.....		1,718,778 83	483,830 20	1,039,895 65	3,469,913 41*	112,073 43

* In this total is included an expenditure on capital account of \$227,403.73 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, see page 10.....	1,636,690 26
Cornwall Canal " 14.....	7,234,767 14
Williamsburg Canal " 16 17.....	10,485,611 69
Lake St. Louis " 12.....	298,176 11
Soulanges Canal " 29.....	7,126,135 61
Lachine Canal, from prior to Confederation to June 30, 1875, see page 9 ..	2,950,104 15
Lake St. Francis, see page 13.....	75,906 71

Agreeing with Public Accounts balance sheet, 1910, page 4.....\$33,277,395 08

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, July 23, 1910.

W. C. LITTLE.

Accountant.

1 GEORGE V., A. 1911

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				
" " " "	1877				
" " " "	1878				
" " " "	1879				
" " " "	1880				
" " " "	1881				
" " " "	1882				
" " " "	1883				
" " " "	1884				
" " " "	1885				
" " " "	1886				
" " " "	1887				
" " " "	1888				
" " " "	1889				
" " " "	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		†		
Total.....			*298,176 11		

* Included in total cost of St. Lawrence River and Canals, *see* page 11.

† Transferred to Department of Marine and Fisheries in 1905

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

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

LAKE ST. FRANCIS.

	Year ending.	Capital.		Renewals Chargeable to Income.	
		\$	cts.	\$	cts.
Government expenditure since Confederation.....	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		3,420 00		
" " " "	1899		23,110 00		
" " " "	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		†		
Total.....			*75,906 71	22,548 21	

* Included in total cost of St. Lawrence River and Canals, see page 11.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

1 GEORGE V., A. 1911

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.
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 01		9,668 14	
" " ..	1894	404,990	22			15,344 02		7,733 54	
" " ..	1895	450,689	65		21,497 74	15,414 56		13,053 55	
" " ..	1896	448,408	31		2,175 00	15,472 26		25,259 56	
" " ..	1897	438,487	51			15,540 43		16,438 32	
" " ..	1898	133,208	96			15,011 50		15,431 02	
" " ..	1899	37,649	00		15,960 80	16,000 00		14,623 90	
" " ..	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	
Cost of enlargement				5,289,142	41				
Total				*7,234,767	14	351,599 63	1,060,839 36	661,016 93	

*Included in total cost of St. Lawrence River and Canals, see page 11.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, July 23, 1910.

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	1868	12,097 84		37,679 05	38,852 96
" " " " .. 1869	1869	43,486 36		39,060 61	50,773 03
" " " " .. 1870	1870		22,173 72	40,340 45	65,009 19
" " " " .. 1871	1871		48,569 10	42,383 33	53,381 02
" " " " .. 1872	1872	53,680 32	6,022 44	37,085 37	50,276 90
" " " " .. 1873	1873	82,282 20	47,876 27	45,382 99	66,550 73
" " " " .. 1874	1874	746,420 61		50,966 48	103,666 99
" " " " .. 1875	1875	1,047,119 91		52,595 00	88,539 99
" " " " .. 1876	1876	1,569,478 19	700 00	57,623 31	81,376 12
" " " " .. 1877	1877	2,199,962 61		59,963 47	49,783 93
" " " " .. 1878	1878	2,138,392 99		60,138 59	66,393 53
" " " " .. 1879	1879	1,552,697 41		59,942 23	56,755 57
" " " " .. 1880	1880	1,252,924 75		63,198 10	76,535 25
" " " " .. 1881	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
" " " " .. 1882	1882	603,402 17	13,664 80	74,641 51	84,374 97
" " " " .. 1883	1883	549,433 29	5,979 03	109,207 21	72,707 62
" " " " .. 1884	1884	432,336 21		113,276 87	90,926 97
" " " " .. 1885	1885	463,505 38	6,150 21	112,670 00	91,534 66
" " " " .. 1886	1886	215,380 75	1,359 00	111,660 22	69,507 48
" " " " .. 1887	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
" " " " .. 1888	1888	429,720 94	10,740 86	110,806 01	86,518 97
" " " " .. 1889	1889	225,910 21	43,803 80	113,587 05	77,547 77
" " " " .. 1890	1890	117,633 22	51,648 28	109,202 02	72,686 19
" " " " .. 1891	1891	36,371 03	19,767 73	107,662 63	82,548 30
" " " " .. 1892	1892	29,541 21	9,008 80	104,673 73	73,771 87
" " " " .. 1893	1893	8,259 94	25,103 13	104,926 73	65,016 84
" " " " .. 1894	1894	1,571 78	13,430 20	102,018 80	53,053 71
" " " " .. 1895	1895	3,809 35	24,245 02	90,438 07	48,270 94
" " " " .. 1896	1896	1,677 67	18,768 99	87,988 11	62,542 64
" " " " .. 1897	1897	2,282 35	22,283 06	88,065 20	41,247 81
" " " " .. 1898	1898		34,803 25	84,806 54	59,571 66
" " " " .. 1899	1899		30,099 84	86,110 88	56,270 60
" " " " .. 1900	1900	18,167 29	37,164 84	84,888 36	59,507 64
" " " " .. 1901	1901	224,536 96	87,777 43	86,889 24	72,055 89
" " " " .. 1902	1902	303,997 81	78,905 37	88,048 95	69,279 90
" " " " .. 1903	1903	315,819 49	94,127 21	90,684 05	72,004 59
" " " " .. 1904	1904	555,751 00	31,140 58	91,115 35	85,717 88
" " " " .. 1905	1905	890,457 82	34,559 42	91,928 96	111,418 62
" " " " .. 1906	1906	715,198 24	28,799 66	107,932 96	78,704 93
" " " " .. 1907	1907	480,305 03	56,036 47	75,031 24	53,247 50
" " " " .. 1908	1908	806,760 46	138,430 19	108,101 56	78,460 40
" " " " .. 1909	1909	255,986 16	129,489 99	115,934 78	88,409 53
" " " " .. 1910	1910	168,247 17	75,233 28	136,783 47	77,723 23
Total		28,506,863 19	1,358,283 83	3,601,239 21	3,029,214 65

*Total expenditure as above \$ 28,506,863 19

Less expenditure by Imperial Government

222,220 00

Agreeing with Public Accounts Balance Sheet, 1910, page 4 \$ 28,284,643 19

Original cost of construction, including first enlargement..... \$ 7,693,824 03

Enlargement, including new Welland Canal. 20,813,039 16

Total expenditure as above..... 28,506,863 19

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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

Year ending	CAPITAL.				Renewals Chargeable to Income.	Staff.	Repairs.
	Farran's Point.	Gallops.	Rapide Plat.	Total.			
	% cts.	% cts.	% cts.	% cts.			
Government expenditure prior to Confederation being amount of original construction.							
Government expenditure since Confederation				1,320,655 54			
1868						5,745 37	6,142 41
"						5,769 81	5,670 88
1869						5,573 13	6,546 16
1870						6,382 17	5,308 41
1871					1,077 06	5,542 94	3,230 47
1872						6,424 49	7,347 75
1873						6,857 19	7,395 92
1874						6,547 62	4,110 29
1875						7,418 39	11,690 98
1876						7,388 08	10,653 61
1877						7,430 11	4,449 78
1878						7,517 20	3,949 71
1879						3,990 15	3,999 77
1880						7,572 35	5,020 73
1881						7,589 44	7,447 69
1882						7,423 48	7,299 39
1883				13 19		7,757 04	7,349 37
1884				2,473 44		7,696 67	8,198 63
1885	70,761 07		32,473 65	103,237 12		7,671 54	7,847 65
1886	78,014 92		71,820 79	149,835 71		7,635 54	7,904 76
1887	32,862 02		82,950 98	115,853 00		7,446 79	8,190 13
1888	16,628 95		53,499 34	70,128 29	1,613 67	7,485 28	8,794 61
1889	37,661 15		22,296 11	59,867 26		8,954 53	8,191 69
1890	126,417 42		12,660 95	139,078 37		9,478 25	7,987 40
1891	2,853 76		55,636 96	239,670 50		8,676 33	8,551 32
1892	218,511 17		158,634 15	376,545 32	797 83	8,676 03	8,347 97
1893	154,524 01		217,669 28	372,193 29	3,075 00	10,230 95	7,629 95
1894	223,992 81		274,397 42	498,390 23		9,675 09	7,371 37
1895	118,464 53		228,892 70	347,357 23	13,720 36	9,588 51	8,210 71
1896	4,980 00		159,744 16	442,121 12	3,880 76	8,697 54	8,210 71
1897	262,793 78		205,480 55	468,274 33		10,708 66	8,032 84
1898	734,492 47		116,072 55	1,081,886 06			
1898	231,321 44						

SESSIONAL PAPER No. 20

"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
1899	346,956	54	987,186	44	57,869	18	1,392,012	16	7,410	00	9,96	64	10,000	00						
1900	100,534	64	752,799	27	14,298	74	867,632	65	4,137	04	11,092	06	10,897	79						
1901	111,158	39	380,112	78	76,501	57	577,772	74			12,842	32	11,755	09						
1902	42,209	89	421,945	81	137,818	22	601,973	92			14,403	28	13,673	26						
1903	10,266	92	320,354	92	18,483	31	349,105	18			15,246	91	20,042	79						
1904	18,700	00	256,536	30	26,774	27	302,010	57			20,570	17	19,430	05						
1905	8,108	99	292,337	29	8,109	98	8,209	63	5,573	69	23,399	45	21,492	46						
1906			140,920	65			308,556	26	20,483	00	17,289	42	16,118	66						
1907			45,782	52	754	91	46,537	43	18,405	65	13,953	58	8,501	57						
1908			100,312	81			100,312	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	29,645	76						
Total	877,090	57	6,118,927	32	2,158,242	00	*10,485,611	69	111,749	54	440,353	00	424,262	80						

* Original construction \$ 1,320,655 54
 Cost of enlargement 9,164,956 15

Total... \$10,485,611 69

Included in total cost of St. Lawrence, River and Canals, page II.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAY AND CANALS,
 OTTAWA, July 23, 1910.

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 Confederat ⁿ		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 63		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			2,493 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	2,294 86
" " "	1907		2,449 96	1,595 62	901 47
" " "	1908		2,501 42	2,248 29	1,693 63
" " "	1909		199 67	2,292 19	4,290 57
" " "	1910		2,339 76	2,267 60	2,446 28
Total.....		*1,170,215 63	66,740 53	92,707 39	115,069 75

* Included in total cost of Ottawa River Works, see page 22.

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

\$ 1,170,215 63

W. C. LITTLE.

Accountant.

SESSIONAL PAPER No. 20

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

CARILLON AND GRENVILLE CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government		*			
Government expenditure prior to Confederation		63,053 64			
since	1868		19,817 22	6,301 88	8,911 28
"	1869			6,549 38	10,157 42
"	1870		4,167 96	6,617 81	9,852 09
"	1871		23,119 37	8,676 90	8,218 24
"	1872	165,257 28		8,324 51	17,235 31
"	1873	133,199 10	3,051 38	10,068 28	8,781 50
"	1874	245,258 38		10,710 88	10,605 82
"	1875	339,864 76		10,378 57	18,520 44
"	1876	326,203 16		10,764 38	11,475 96
"	1877	245,738 04		11,050 27	10,304 06
"	1878	22,676 20		11,401 30	5,082 72
"	1879	243,141 24		11,501 22	7,629 98
"	1880	281,514 27		11,959 14	7,625 54
"	1881	336,707 53		13,059 18	8,076 91
"	1882	433,084 39		14,387 49	7,582 68
"	1883	433,575 10		17,479 58	8,310 02
"	1884	399,267 16		17,393 91	7,918 42
"	1885	157,187 72		19,702 30	10,429 26
"	1886	104,973 24	75 00	20,597 82	9,303 31
"	1887	20,747 11		20,911 36	19,554 41
"	1888	38,996 29		21,531 12	10,036 62
"	1889	298 17		22,098 88	10,135 66
"	1890	17 58	4,526 61	15,896 16	7,582 38
"	1891		4,395 25	21,230 22	10,796 68
"	1892	34,585 64	15,036 48	17,458 69	8,620 15
"	1893	207 00	42,298 74	16,762 71	10,669 28
"	1894	385 55	20,034 94	14,144 98	11,620 09
"	1895		5,963 76	15,453 21	12,303 25
"	1896	3,850 31		13,995 69	12,161 10
"	1897	1,908 44	4,939 20	13,780 29	11,607 95
"	1898	82,663 37	5,082 03	11,697 81	10,993 61
"	1899	39,999 37		11,919 27	11,478 88
"	1900	22,802 27	4,476 50	13,657 06	14,666 71
"	1901	4,930 65	9,331 95	13,342 22	13,416 00
"	1902		16,998 69	13,725 99	19,366 30
"	1903		15,992 52	14,348 17	17,766 28
"	1904		9,150 07	16,224 94	17,262 29
"	1905		8,715 46	15,858 19	19,977 19
"	1906		24,179 33	18,232 71	10,924 72
"	1907		9,393 38	16,749 03	7,036 40
"	1908		1,387 35	23,019 45	9,775 35
"	1909		68,597 35	23,085 54	10,758 01
"	1910		10,410 09	23,512 75	11,925 28
Total		†4,182,092 96	331,140 63	634,661 21	477,455 55

* Expenditure not given—records relating to same were kept in Ordnance Office at Montreal and were destroyed by fire in 1852.

† Included in total cost of Ottawa River Works, see page 22. Cost of enlargement, \$4,119,039.32.

W. C. LITTLE.

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

1 GEORGE V., A. 1911

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				
Total.....		*382,776 46	60,923 37	11,507 48	7,036 15

* Included in total cost of Ottawa River Works, see page 22.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

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 Confederation		153,062	60						
" " since	1868		166 50	7,298	12	18,397	28	16,475	21
" " " "	1869					19,250	71	13,140	77
" " " "	1870			13	16	20,022	37	19,469	33
" " " "	1871			11,732	98	22,814	58	18,120	52
" " " "	1872			4,967	50	22,139	48	14,005	32
" " " "	1873			18,070	97	22,841	51	26,074	49
" " " "	1874			5,793	16	26,815	44	22,957	40
" " " "	1875	9,310	85			26,553	37	19,699	81
" " " "	1876	2,163	96			26,430	77	14,428	25
" " " "	1877		214 11			25,959	56	14,198	18
" " " "	1878					26,651	51	11,034	22
" " " "	1879	7,703	88			26,042	52	7,134	55
" " " "	1880					26,463	88	11,434	05
" " " "	1881			133	50	26,024	71	8,627	00
" " " "	1882					26,915	29	13,860	28
" " " "	1883			70	65	27,322	81	23,524	84
" " " "	1884			4,597	50	26,938	95	19,245	02
" " " "	1885			2,098	76	26,971	32	18,189	55
" " " "	1886			550	00	27,045	95	35,648	04
" " " "	1887			20,823	06	29,440	46	18,565	34
" " " "	1888			18,889	48	33,458	83	25,478	87
" " " "	1889			6,665	22	33,801	77	18,106	36
" " " "	1890			21,124	10	34,270	57	18,025	21
" " " "	1891			20,967	25	34,641	98	21,537	56
" " " "	1892			31,363	23	35,500	82	21,507	16
" " " "	1893			24,274	71	35,022	49	18,789	50
" " " "	1894			14,485	11	34,943	35	16,939	47
" " " "	1895			31,559	48	33,827	08	19,897	32
" " " "	1896			21,452	29	34,052	77	30,196	38
" " " "	1897			19,079	11	31,461	55	29,535	94
" " " "	1898			13,608	39	30,759	05	26,599	93
" " " "	1899			700	29	30,751	20	28,199	49
" " " "	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	95,188	97
Total.....		*4,085,889	21	456,980	46	1,322,845	34	1,146,628	42

* Included in total cost of Ottawa River Works. See page 22.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.W. C. LITTLE,
Accountant.

1 GEORGE V., A. 1911

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

OTTAWA RIVER WORKS.

Ste. Anne's Lock, page 18.....	\$	1,170,215	63
Carillon and Grenville Canal, page 19.....		4,182,092	96
Culbute Canal, page 20.....		382,776	46
Rideau Canal, page 21.....	\$	4,085,889	21
Less expenditure by Imperial Government		3,911,701	47
		174,187	74
Total Ottawa River Works (Capital).....	\$	5,909,272	79
Add expenditure on slides and booms prior to confederation.....	\$	719,247	13
" " " since ".....		7,243	60
" on Chats Canals prior to confederation		482,950	81
" in 1881, charged to Miscellaneous, see page 220, part ii,		1,136	84
Public Accounts		233,555	85
Add amount transferred, see page xxxvi, Pub. Accounts Bal. Sheet, 1881.			
		1,444,134	23
	\$	7,353,407	02
Less expenditure prior to Confederation, transferred to Income Account.....	\$	320,618	28
Less expenditure in 1872, on Carillon and Grenville Canal, as shown in			
Publics Accounts Balance Sheet, page xx, under Miscellaneous.		165,257	28
		485,875	56
Agreeing, less outstanding cheques, with Balance Sheet, Public Accounts, 1910, page 4	\$	6,867,531	46

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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 17	2,315 37	1,494 99
" " " .. 1885		4,700 64	2,271 57	3,652 63
" " " .. 1886			2,311 70	4,143 47
" " " .. 1887			2,175 37	5,864 78
" " " .. 1888			2,216 04	2,801 17
" " " .. 1889		17,964 45	2,421 14	2,002 63
" " " .. 1890		24,571 96	2,138 40	1,935 44
" " " .. 1891		21,696 74	2,011 08	4,460 16
" " " .. 1892		3,585 34	2,168 44	1,944 33
" " " .. 1893			2,136 66	1,994 34
" " " .. 1894			2,216 68	924 55
" " " .. 1895			2,161 63	915 50
" " " .. 1896			2,094 91	1,678 49
" " " .. 1897			2,135 60	707 06
" " " .. 1898			2,049 67	692 04
" " " .. 1899			2,244 12	1,494 93
" " " .. 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	2,891 76	2,121 43
" " " .. 1909			2,294 78	3,693 19
" " " .. 1910		1,925 08	4,137 64	1,752 66
Total	*121,537 65	164,786 29	89,898 14	79,720 69

* Included in the total cost of Chambly Canal and Richelieu River, see page 24.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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	634,711 76			
" " since " " 1868			8,312 90	9,355 70
" " " " 1869			8,437 22	13,120 97
" " " " 1870			8,934 41	20,180 73
" " " " 1871		2,839 85	10,214 71	22,426 33
" " " " 1872		1,906 40	9,628 50	22,327 99
" " " " 1873		759 00	10,390 44	11,789 27
" " " " 1874		2,810 00	11,675 67	16,427 19
" " " " 1875	2,415 00		12,201 99	16,306 91
" " " " 1876			10,593 14	13,273 56
" " " " 1877	80 00		10,281 78	10,111 32
" " " " 1878			10,413 99	6,022 96
" " " " 1879			11,301 53	8,809 77
" " " " 1880			11,516 22	12,377 74
" " " " 1881			13,950 47	20,705 17
" " " " 1882		31,796 41	16,686 78	16,843 60
" " " " 1883		21,332 36	15,904 38	15,182 24
" " " " 1884		41,040 77	18,448 85	12,003 34
" " " " 1885		21,049 23	18,378 55	13,046 95
" " " " 1886		14,547 27	19,501 28	11,999 77
" " " " 1887		17,911 17	19,053 62	20,071 37
" " " " 1888		65,536 64	20,073 60	11,823 74
" " " " 1889		51,437 87	19,679 22	19,392 18
" " " " 1890		23,221 48	19,655 38	14,399 93
" " " " 1891		43,344 41	19,204 76	11,399 93
" " " " 1892		38,353 99	19,665 22	12,976 48
" " " " 1893		21,127 65	19,310 29	12,451 03
" " " " 1894		8,567 78	19,040 93	11,779 12
" " " " 1895		6,147 63	19,325 49	11,920 74
" " " " 1896		3,694 63	19,349 65	11,801 12
" " " " 1897		12,665 88	18,754 17	13,128 55
" " " " 1898		13,184 68	17,992 90	12,466 51
" " " " 1899		15,255 42	18,336 50	11,997 51
" " " " 1900		5,448 88	18,397 58	13,995 00
" " " " 1901		1,195 09	18,529 48	17,572 35
" " " " 1902		19,132 80	18,832 25	17,313 02
" " " " 1903		8,977 43	19,286 10	21,745 65
" " " " 1904		26,701 59	21,544 69	25,656 00
" " " " 1905		33,066 50	26,970 79	19,896 57
" " " " 1906		26,192 72	26,039 53	25,173 48
" " " " 1907		29,953 80	19,916 33	22,508 88
" " " " 1908	157 90	34,264 31	28,375 21	30,627 72
" " " " 1909	13,307 02	35,784 54	28,440 40	24,389 29
" " " " 1910	30,479 41	8,207 00	29,198 76	22,825 53
		681,151 09			
		150 00			
Less proceeds of sale of piece of land in 1898.				
Total	*681,001 09	688,055 18	741,745 76	689,623 21

Chamby Canal and River Richelieu.

Chamby Canal, as above. \$ 681,001 09
St. Ours Lock, see page 23. 121,537 65

Less amounts deducted at Confederation, see Public Accounts, 1868, part I, page 9, \$ 802,538 74

Government expenditure prior to Confederation,
Chamby Canal, as above. \$ 634,711 76
St. Ours Lock, see page 23. 121,537 65

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

322,441 58
Agreeing with Public Accounts, 1910, page 4. \$ 449,617 75

SESSIONAL PAPER No. 20

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	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			6,075 94	
" " " "	1905		100	00	740	45			4,452 68	
" " " "	1906				293	75			2,840 91	
" " " "	1907				10,423	00			1,710 55	
" " " "	1908				37,334	70			2,953 23	
" " " "	1909		126	45	20,250	61			3,374 82	
" " " "	1910								2,674 57	
Total			*1,248,946	71	71,963	64	103,520	67	76,003	07

Agreeing with Public Accounts Balance Sheet, 1910, page 4.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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	9,503 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	1,090,000 00	59,483 51	36,800 42	54,206 13
Total		*7,873,501 09	578,876 82	244,676 04	387,401 37

*Total expenditure on Capital Account as above..... \$7,873,501 09

Less—Expenditure prior to Confederation:..... \$ 309,371 31

" Year 1880..... 561 50

309,932 81

Agreeing with Public Accounts Balance Sheet, 1910, page 4. \$7,563,568 28

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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	65,561 51			
" " " "	1887	49,617 92			
" " " "	1888	54,166 57			
" " " "	1889	89,486 18			
" " " "	1890	22,226 23		*	*
" " " "	1891	17,114 78		*	*
" " " "	1892	29,771 65		*	*
" " " "	1893			*	*
" " " "	1894			*	*
" " " "	1895			*	*
" " " "	1896			*	*
" " " "	1897	10,720 50		*	*
" " " "	1898			*	*
" " " "	1899			*	*
" " " "	1900	2,750 00		*	*
" " " "	1901			*	*
" " " "	1902			*	*
" " " "	1903			*	*
" " " "	1904			*	*
" " " "	1905			*	*
" " " "	1906			*	*
" " " "	1907			*	*
" " " "	1908			*	*
" " " "	1909			*	*
" " " "	1910			*	*
Total		†439,599 23	748 65	*	*

* Included in Rideau Canal since 1890.

† Agreeing with Public Accounts 1910, page 4.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

1 GEORGE V., A. 1911

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	.....	.....	.....	.....
" " " "	1880	.....	.....	.....	.....
" " " "	1881	.....	.....	.....	.....
" " " "	1882	.....	.....	.....	.....
" " " "	1883	.....	.....	.....	.....
" " " "	1884	.....	.....	.....	.....
" " " "	1885	.....	.....	.....	.....
" " " "	1886	.....	.....	.....	.....
" " " "	1887	.....	.....	.....	.....
" " " "	1888	8,145 06	.....	.....	.....
" " " "	1889	34,018 95	.....	.....	.....
" " " "	1890	176,568 55	.....	.....	.....
" " " "	1891	325,336 33	.....	.....	.....
" " " "	1892	341,474 31	.....	.....	.....
" " " "	1893	589,801 25	.....	.....	.....
" " " "	1894	1,316,529 29	.....	.....	.....
" " " "	1895	466,151 50	.....	3,432 73	.....
" " " "	1896	189,986 59	.....	16,074 70	2,650 17
" " " "	1897	209,561 82	.....	15,381 59	7,671 79
" " " "	1898	21,004 56	.....	14,389 92	8,172 09
" " " "	1899	63,935 48	.....	13,840 24	6,564 40
" " " "	1900	27,157 98	.....	13,901 40	13,219 87 ^a
" " " "	1901	323,353 93	48 39	13,730 93	10,289 18
" " " "	1902	122,505 73	.....	15,920 80	14,839 71
" " " "	1903	65,933 43	.....	16,077 22	10,855 70
" " " "	1904	32,029 54	.....	14,653 35	9,491 44
" " " "	1905	110,181 69	.....	15,681 55	14,776 33
" " " "	1906	120,000 00	.....	15,878 11	20,086 15
" " " "	1907	95,504 63	.....	12,290 94	11,520 53
" " " "	1908	140,433 22	.....	20,345,38	23,206 00
" " " "	1909	42,109 63	11,453 28	15,231 79	16,462 29
" " " "	1910	46,809 13	147,147 52	18,976 64	20,300 77
Total		*4 868,532 60	159,598 54	235,807 29	190,106 42

* Agreeing with Public Accounts, 1910, page 4.

W. C. LITTLE,
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

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					
" " " " " "	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
Total.....		*7,126,135 61	84,288 91	276,130 58	233,552 66

* Included in total cost of St. Lawrence River and Canals, *see* page 11.

W. C. LITTLE.

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

1 GEORGE V., A. 1911

STATEMENT showing amount expended on Construction and Enlargement of Canals, to
March 31, 1910.

Canal.	Construction.	Enlargement.	Total.
	§ cts.	§ cts.	§ cts.
St. Peter's.....	648,547 14		648,547 14
Lachine.....	2,589,532 85	9,786,178 93	12,375,711 78
Beauharnois.....	1,636,699 26		1,636,699 26
St. Lawrence River and Canals.....	18,442 85	3,451,470 56	3,469,913 41
Lake St. Louis.....		298,176 11	298,176 11
Lake St. Francis.....		75,906 71	75,906 71
Cornwall.....	1,945,624 73	5,289,142 41	7,234,767 14
Williamsburg. {	Farran's Point.....	877,090 57	10,485,611 69
	Galops.....	6,118,927 32	
	Rapide Plat.....	2,158,242 00	
	Williamsburg.....	10,696 26	
Welland.....	7,693,824 03	20,813,039 16	28,506,863 19
Ste. Anne's.....	134,456 51	1,035,759 12	1,170,215 63
*Carillon and Grenville.....	63,053 64	4,119,039 32	4,182,092 96
Culbute.....	382,776 46		382,776 46
Rideau.....	4,085,889 21		4,085,889 21
St. Ours.....	121,537 65		121,537 65
Chambly.....	637,214 66	43,786 43	681,001 09
Murray.....	1,248,946 71		1,248,946 71
Trent.....	7,873,501 09		7,873,501 09
Tay.....	489,599 23		489,599 23
Sault Ste. Marie.....	4,868,532 60		4,868,532 60
Soulanges.....	7,126,135 61		7,126,135 61
Total.....	42,884,960 77	54,077,454 90	96,962,415 67

* 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, July 23, 1910.

SESSIONAL PAPER No. 20

RECAPITULATION.

EXPENDITURE on Canals and Revenue received.

	Year ending,	Capital.	Income.	Staff.	Repairs.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation, in- cluding Imperial Govern- ment 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	58,297 59	280,226 20	201,708 47	321,289 47
" "	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
" "	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
" "	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
" "	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
" "	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
" "	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
" "	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
" "	1893	2,069,573 30	196,185 84	291,588 97	204,759 39	357,089 87
" "	1894	3,027,164 19	109,216 33	294,446 34	179,630 13	387,788 97
" "	1895	2,452,273 65	216,037 58	281,477 04	164,033 71	339,890 49
" "	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	330,538 72
" "	1897	2,348,636 91	101,295 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	135,560 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	294,113 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	639,304 73	475,515 04	433,958 10	199,501 26
" "	1910	1,650,706 64	453,835 62	515,585 16	491,793 02	193,384 28
Total		96,962,415 67	6,221,471 41	11,695,850 15	9,488,902 94	14,156,354 14

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

W. C. LITTLE.

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

CANAL REVENUE STATEMENT FOR YEAR ENDING MARCH 31, 1910.

CANAL REVENUE.			COLLECTION DIVISIONS.		DEPOSITS TO THE CREDIT OF THE RECEIVER GENERAL.		Total.	Cost of Staff, Requirs and Officers of collection chargeable to Revenue.
Wharfage Storage, Harbour Dues, &c.	Elevator Receipts.	Total Canal Revenue Accrued.	Hydraulic and other Rents, &c.	Total.	On Account Canal Revenue.	On Account Hydraulic and other Rents.		
\$ cts.	% cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
51 60	51 60	4,528 80	.....	51 60	4,528 80	4,580 40	208,741 59
310 94	310 94	37,010 98	.....	310 94	37,010 98	37,321 92	2,601 29
.....	12,061 46	.....	.....	12,061 46	.....	12,061 46	2,151 48
362 54	12,424 00	41,539 78	.....	12,424 00	41,539 78	53,963 78	13,906 01
.....	227,400 37
1,193 70	1,193 70	16,691 50	.....	1,193 70	16,691 50	16,691 50	440,648 05
1,153 53	1,153 53	7,669 50	.....	1,153 53	7,669 50	8,863 30	1,708 30
10,241 18	10,241 18	5,240 00	.....	10,241 18	5,240 00	15,481 18	1,030 47
25 00	25 00	85,672 56	.....	25 00	85,672 56	85,717 56	2,417 89
.....	3,067 00	.....	.....	3,067 00	3,067 00	11,732 59
12,613 41	12,613 41	118,340 56	.....	12,613 41	118,340 56	130,953 97	1,486 97
.....	589 70
.....	154,673 97
.....	59,533 99
.....	1,289 40
.....	1,590 95
.....	700 35
.....	63,114 69
.....	42,815 88
8 00	8 00	5 00	.....	8 00	5 00	13 00	623 35
.....	104 00	.....	.....	104 00	104 00	802 55
.....	30 00	.....	.....	30 00	30 00	875 85
8 00	8 00	139 00	.....	8 00	139 00	147 00	45,117 63

SESSIONAL PAPER No. 20

147,308 89									
1,655 97									
490 78									
498 45									
150,014 09									
3,592 85	3,071 05	521 80							
466 00	391 00	75 00							
74 70	54 70	20 00							
4,133 55	3,516 75	616 80							
32 00	32 00								
1 00	1 00								
7,542 91									
91,006 55									
100 00									
100 00									
50 00									
107 88	4,596 54	80 00							
150 00									
91,514 43	4,596 54	80 00							
580 00	530 00	50 00							
1,089,158 23	168,893 63	25,792 21							
21,887 93									
5,097 26									
2,990 44									
1,119,133 86	168,893 63	25,792 21							
1,301 56									
193,384 28									

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

HYDRAULIC AND OTHER RENTS.

Balances due April 1, 1900.	Accrued during the year ended March 31, 1910.	Totals.	1909-1910.	Abatement.	Deposited to the credit of the Receiver General.	Paid into hands of the Collectors.	Balance due March 31, 1910.	Totals.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
57,167 77	47,188 88	104,356 65	Welland Canal	101 64	41,539 78	41,539 78	62,715 23	104,356 65
7,878 17	3,438 00	11,316 17	Williamsburg Canal	2,000 00	5,240 00	5,240 00	4,076 17	11,316 17
7,940 37	7,654 50	15,594 87	Cornwall Canal		7,669 50	7,669 50	7,925 37	15,594 87
8,658 34	15,001 00	23,659 34	Beauharnois Canal		16,691 50	16,691 50	6,967 84	23,659 34
33,485 38	91,059 78	124,545 16	Lachine Canal	5,275 96	85,672 56	85,672 56	33,596 64	124,545 16
889 84	186 00	1,075 84	Chambly Canal		198 00	198 00	877 84	1,075 84
4,254 20	4,201 50	8,455 70	Rideau Canal	10 50	3,516 75	3,516 75	4,928 45	8,455 70
2,004 45	3,072 04	5,076 49	Trent Canal	373 50	4,596 54	4,596 54	106 45	5,076 49
15 00	575 00	590 00	Sault Ste. Marie Canal		530 00	530 00	60 00	590 00
26,492 83	615 00	27,107 83	Castillon and Grenville Canal		109 00	109 00	26,998 83	27,107 83
9 00	68 00	77 00	Sundry Canals		63 00	63 00	14 00	77 00
	3,067 00	3,067 00	Sonlanges Canals		3,067 00	3,067 00		3,067 00
148,765 35	176,126 70	324,892 05	Totals	7,761 60	168,893 63	168,893 63	148,266 82	324,892 05

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

(Including amounts paid to Nova Scotia Railway and European and North American Railway, N.B.)

—	Year ending	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	2,892,605 00
" " " 1886		544,958 17		2,508,473 10	2,406,858 88
" " " 1887		823,070 86		2,854,158 91	2,621,337 41
" " " 1888		742,203 09		3,300,481 94	2,937,337 40
" " " 1889		655,228 13		3,174,785 19	2,923,736 46
" " " 1890		365,246 48		3,500,455 80	2,958,243 38
" " " 1891		79,929 34		3,691,273 65	3,007,630 51
" " " 1892		168,101 77		3,458,891 39	2,978,950 82
" " " 1893		228,984 79		3,062,207 45	3,099,815 20
" " " 1894		166,362 43		2,999,317 07	3,020,485 74
" " " 1895		327,034 51		2,964,940 98	2,979,795 59
" " " 1896		259,105 23		3,029,304 08	2,994,201 93
" " " 1897		145,142 00		2,936,789 71	2,906,631 25
" " " 1898		252,367 20	70,000 00	3,275,830 14	3,154,896 49
" " " 1899		1,081,929 94	210,000 00	3,478,559 30	3,775,558 08
" " " 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	6,838,561 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
Total		*82,819,218 53	280,000 00	147,797,763 73	140,060,973 83

* Including \$296,872.90 charged to 'Consolidated Fund.'

† Expenditure for year	\$ 1,894,856 90
Less refunds of previous years	14,000 30
	<u>\$ 1,880,856 60</u>

‡ Expenditure for year	\$ 3,760,942 95
Add refunded cheque of 1901-2 paid during fiscal year 1905-6	4,227 95
	<u>\$ 3,765,170 90</u>

1 GEORGE V., A. 1911

INTERCOLONIAL RAILWAY—*Concluded.*

Total cost of Construction as shown on page 35..... \$82,819,213 53
 Less amounts transferred from Capital to Consolidated Fund as follows :—

	Nova Scotia Ry.	European and North American Ry.	
1868.....	\$ 16,800 99	\$ 11,302 89	
1870.....	34,403 45	1,749 21	
1871.....	50,405 69	.....
1873.....	106,899 59	75,311 08	
	<u>\$ 208,509 72</u>	<u>\$ 88,363 18</u>	
		<u>208,509 72</u>	
			296,872 90
			<u>†\$82,522,345 03</u>
Cape Breton Railway, page 40.....		3,860,679 14	
Oxford and New Glasgow Railway, page 39.....		1,949,063 21	
Eastern Extension Railway, page 37.....		1,324,042 81	
Montreal and European Short Line Railway, page 41.....		333,942 72	
Drummond County Railway, page 45.....		1,464,000 00	
Canada Eastern Railway, page 48.....		819,000 00	
			<u>*9,750,727 88</u>
Total capital cost of Intercolonial Railway system.....			<u>\$92,273,073 51</u>

* Agreeing, less outstanding cheques, with Public Accounts, 1908-1909, 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, July 23, 1910.

SESSIONAL PAPER No. 20

EASTERN EXTENSION RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue Received.
		\$ cts.	\$ cts.	\$ cts.
Government ex penditure prior to Confederation.....				
" " since "	1868			
" " "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
" " "	1875			
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" " "	1881			
" " "	1882			
" " "	1883			
" " "	1884	1,284,311 97	10,033 77	30,767 66
" " "	1885	2,055 92	78,273 65	73,050 01
" " "	1886	183 79	94,756 06	66,893 11
" " "	1887		94,254 04	64,107 10
" " "	1888		90,954 73	70,552 20
" " "	1889	34,235 73	90,719 04	72,436 65
" " "	1890		79,102 77	84,658 95
" " "	1891	3,255 40	*	†
" " "	1892		*	†
" " "	1893		*	†
" " "	1894		*	†
" " "	1895		*	†
" " "	1896		*	†
" " "	1897		*	†
" " "	1898		*	†
" " "	1899		*	†
" " "	1900		*	†
" " "	1901		*	†
" " "	1902		*	†
" " "	1903		*	†
" " "	1904		*	†
" " "	1905		*	†
" " "	1906		*	†
" " "	1907		*	†
" " "	*908		*	†
" " "	1909		*	†
" " "	1910		*	†
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 36.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

CARLETON BRANCH RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue Received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
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" " "	1885			
" " "	1886	\$5,610 69		
" " "	1887	2,299 62		
" " "	1888	500 17		
" " "	1889			
" " "	1890			
" " "	1891			
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" " "	1910			
Total		*\$8,410 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, July 23, 1910.

CAPE BRETON RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
" " since "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
" " " "	1874		
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" " " "	1886		
" " " "	1887	76,501 89	
" " " "	1888	689,450 50	
" " " "	1889	1,083,276 60	
" " " "	1890	1,170,523 62*	
" " " "	1891	521,441 62	
" " " "	1892	99,936 96	
" " " "	1893	59,982 74	
" " " "	1894	158,770 61	
" " " "	1895	*	
" " " "	1896	*	
" " " "	1897	405 00	
" " " "	1898	389 60	
" " " "	1899		
" " " "	1900		
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" " " "	1910		
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 36.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.		Working Expenses.	
		\$	cts.	\$	cts.
Government expenditure prior to Confederation.....	1868				
" " since "	1869				
" " "	1870				
" " "	1871				
" " "	1872				
" " "	1873				
" " "	1874				
" " "	1875				
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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				
" " "	1896				
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" " "	1910				
Total.....			*333,942 72		

*Included in total cost of Intercolonial Railway system, page 36.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

PRINCE EDWARD ISLAND RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....		3,114,735 11		
" " " since	1874		750 00	
" " " " " "	1875	46,086 63	49,344 62	24,493 99
" " " " " "	1876	42,546 10	219,930 43	118,060 96
" " " " " "	1877	200,000 00	228,595 25	130,664 92
" " " " " "	1878	6,551 86	221,599 49	135,899 60
" " " " " "	1879	40,129 05	223,313 12	125,855 91
" " " " " "	1880	16,539 82	164,640 55	113,851 11
" " " " " "	1881		203,122 88	131,131 43
" " " " " "	1882	402 03	228,259 97	137,267 54
" " " " " "	1883	57,186 02	252,808 41	146,170 42
" " " " " "	1884	130,663 38	236,428 13	144,504 12
" " " " " "	1885	76,956 56	211,207 01	158,588 06
" " " " " "	1886	4,668 33	216,744 34	155,584 36
" " " " " "	1887	5,800 00	204,237 45	155,303 37
" " " " " "	1888		229,639 95	158,363 62
" " " " " "	1889		247,559 44	171,369 56
" " " " " "	1890		266,485 85	160,971 78
" " " " " "	1891		257,990 08	174,258 05
" " " " " "	1892	8,300 49	289,796 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
Total.....		*8,465,430 56	9,077,301 29	6,238,279 59

*Agrees with Public Accounts Balance Sheet, 1909-1910, page 4.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, July 23, 1910.

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Income Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....			
" since " 	1868		
" " " 	1869		
" " " 	1870		
" " " 	1871		
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" " " 	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		
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" " " 	1907		
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" " " 	1910		
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.

W. C. LITTLE.

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

DRUMMOND COUNTY RAILWAY.

	Year.	Construction.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
" " since "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
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" " " "	1900	1,459,000 00	
" " " "	1901		
" " " "	1902	5,000 00	
" " " "	1903		
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Total.....		*1464,000 00	

*Included in total cost of Intercolonial Railway system, page 36.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

YUKON TERRITORY WORKS.
(Stikine-Teslin Railway.)

			Year	Construction.
				\$ cts.
Government expenditure prior to Confederation.....			1868
" " since " ".....			1869
" " " ".....			1870
" " " ".....			1871
" " " ".....			1872
" " " ".....			1873
" " " ".....			1874
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" " " ".....			1898
" " " ".....			1899
" " " ".....			1900
" " " ".....			1901
" " " ".....			1902	283,323 55
" " " ".....			1903
" " " ".....			1904
" " " ".....			1905
" " " ".....			1906
" " " ".....			1907
" " " ".....			1908
" " " ".....			1909
" " " ".....			1910
Total.....				*283,323 55

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

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

NATIONAL TRANSCONTINENTAL RAILWAY.

	Year.	Construction.
		§ cts.
Government expenditure prior to Confederation.....		
" since " 	1868	
" " " 	1869	
" " " 	1870	
" " " 	1871	
" " " 	1872	
" " " 	1873	
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" " " 	1899	
" " " 	1900	
" " " 	1901	
" " " 	1902	
" " " 	1903	
" " " 	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
Total.....		*71,934,877 08

*Agrees with Public Accounts Balance Sheet, 1909-1910, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

CANADA EASTERN RAILWAY.

		Year.	Construction.
			§ cts.
Government expenditure prior to Confederation.....			
"	since "	1868	
"	" "	1869	
"	" "	1870	
"	" "	1871	
"	" "	1872	
"	" "	1873	
"	" "	1874	
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"	" "	1900	
"	" "	1901	
"	" "	1902	
"	" "	1903	
"	" "	1904	
"	" "	1905	800,000 00
"	" "	1906	
"	" "	1907	
"	" "	1908	19,000 00
"	" "	1909	
"	" "	1910	
Total.....			* 819,000 00

*Included in total cost of Intercolonial Railway system, page 36.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

STATEMENT showing amount expended on Capital Account on Railways.

Railways.	—	—
	\$	\$
	cts.	cts.
Intercolonial.....	82,522,345	
Cape Breton.....	3,860,679	
Oxford and New Glasgow.....	1,949,283	
Eastern Extension.....	1,324,042	
Drummond County.....	1,464,000	
Montreal and European Short Line.....	333,942	
Canada Eastern.....	819,000	
		92,273,073 51
Carleton Branch.....		48,410 48
Prince Edward Island.....		8,465,430 56
Canadian Pacific.....		62,786,857 74
Annapolis and Digby.....		660,683 09
Yukon Territory Works (Stikine-Teslin Ry.).....		283,323 55
National Transcontinental.....		71,934,877 08
Governor General's car.....		56,538 82
Hudson Bay Railway Surveys.....		145,470 51
Total.....		236,654,665 29
<i>Memo. re Recapitulation—Railways.</i>		
Total cost as per statement above.....		236,654,665 29
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, see statement, page 36.....		296,872 90
Agreeing with total of Construction, as per statement, page 50.....		236,951,538 19

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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	1,729,881 49	443,208 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	11,767,619 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	3,300,130 42	4,665,228 06	4,774,161 87
" " " " " "	1901	3,922,989 37	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	8,894,420 42
" " " " " "	1910	21,505,975 91	9,095,903 96	9,647,963 71
Total .....	.....	*236,991,538 19	158,650,055 35	147,157,192 85

* Total amount paid on Construction \$236,991,538 19
 Less amount received from the City of St. John, N.B., as purchase price of the
 Carleton Branch Railway 40,000 00

Total cost of Construction †\$236,951,538 19

† Agreeing with amount expended on Capital Account on Railways, see page 49.

W. C. LITTLE,
 Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, July 23, 1910.

SESSIONAL PAPER No. 20

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

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.		20,873 21	23,545 34		649 04			45,067 59
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.		4,178 85	4,855 11	15,746 31	60,265 22			85,045 49
1895.		10,695 48	13,221 27	19,304 87	60,769 56			103,991 18
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	63,770 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	604,483 02	20,912 04	106,065 87			765,314 47
1910.		29,421 06	212,117 54	4,706 79	111,755 68			358,001 07
	20,033 70	346,078 68	1,810,672 53	740,647 27	1,594,204 03	45,039 97	69,711 05	4,626,387 23

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

1 GEORGE V., A. 1911

RECAPITULATION—RAILWAYS AND CANALS, TO MARCH 31, 1910.

EXPENDITURE.

<i>Chargeable to Capital Account—</i>				
Railways, <i>see</i> Statement page 49.....		\$	236,654,665	29
Canals " " 31 and 51			96,982,449	37
			<u>333,637,114</u>	66
<i>Chargeable to Consolidated Fund—</i>				
*Railway Subsidies as per Statement page 54 to 63.....		\$	41,450,116	28
<i>Income Account—</i>				
Intercolonial Railway <i>see</i> page 35.....	\$	280,000	00	
Add transferred from Capital " 36.....		296,872	90	
Railways " 51.....		1,810,672	53	
Canals " 31		6,221,471	41	
" " 51		346,078	68	
General, Railways and Canals " 51		740,647	27	
			<u>9,695,742</u>	79
<i>Revenue Account—</i>				
Canals—Operating and maintaining staff, <i>see</i> page 31.	\$	11,695,850	15	
Canals—Repairs, <i>see</i> page 31		9,488,902	94	
" " " 51.....		1,594,204	03	
Railways—Working expenses, <i>see</i> page 50.....		158,650,055	35	
" " " 51		45,039	97	
General—Railways and Canals " 51.....		69,711	05	
			<u>181,543,763</u>	49
			<u>232,689,622</u>	56
Total expenditure on Railways and Canals.....			<u>\$ 566,326,737</u>	22

EXPENDITURE AS ABOVE SEPARATED AS BETWEEN RAILWAYS AND CANALS.

RAILWAYS.

Capital Account.....	\$	236,654,665	29
Consolidated Fund.....		202,532,757	03
		<u>\$ 439,187,422</u>	32

CANALS.

Capital Account.....	\$	96,982,449	37
Consolidated Fund.....		29,346,507	21
		<u>\$ 126,328,956</u>	58

Total.....\$ 565,516,378 90

GENERAL, COMMON TO BOTH.

Consolidated Fund.....		810,358	32
------------------------	--	---------	----

Total expenditure on Railways and Canals.....\$ 566,326,737 22

REVENUE, SEPARATED AS BETWEEN RAILWAYS AND CANALS.

Railways—Revenue received from July 1, 1867, to March 31, 1910 (for details <i>see</i> page 50).	\$	147,157,192	85
Canals " " " " (" " 31).		14,156,354	14
Total revenue, Railways and Canals.....		<u>\$ 161,313,546</u>	99

* This amount does not include the subsidy of \$25,000,000 to the Canadian Pacific Railway, nor the amount \$660,683 09 expended on the Annapolis and Digby Railway, both of which are included in Capital Account, nor the annual payment of \$119,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 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, 1898-1910, and page 79, 1908).

W. C. LITTLE,

Accountant.

STATEMENT

SHOWING SUBSIDIES VOTED FOR RAILWAYS AS TO WHICH CONTRACTS
HAVE BEEN ENTERED INTO AND PAYMENTS MADE FROM JULY 1,
1883 TO MARCH 31, 1910.

1 GEORGE V., A. 1911

STATEMENT showing subsidies voted for Railways as to which Contracts

SUBSIDIES VOTED.		RAILWAYS.	July 1, 1883, to June 30, 1903.				
Authority.	Amount.		§	cts.			
			§	cts.			
46 Vic., chap. 25	156,800 00	International Railway, Quebec	156,800	00			
53 " "	2	Quebec and Lake St. John Railway, Quebec	1,006,743	50			
45 " "	14						
46 " "	25						
48-49 " "	59						
49 " "	10						
50-1 " "	24						
51 " "	3						
52 " "	3						
53 " "	2						
54-5 " "	8						
57-8 " "	4	Kingston, Napanee and Western Ry., formerly Napanee, Tamworth and Quebec Ry., Ontario...	208,732	89			
46 " "	25						
49 " "	10						
50-1 " "	24						
52 " "	3						
55-6 " "	5						
47 " "	8						
51 " "	3						
53 " "	2						
46 " "	25						
47 " "	8	Pontiac Pacific Junction Railway, Quebec	193,578	00			
50-1 " "	24						
47 " "	8						
49 " "	10						
52 " "	3						
53 " "	2						
46 " "	25						
47 " "	8						
50-1 " "	24						
47 " "	8						
49 " "	10	Caraquette, Railway, N.B.	224,000	00			
52 " "	3						
53 " "	2						
46 " "	25						
47 " "	8						
50-1 " "	24						
47 " "	8						
49 " "	10						
52 " "	3						
53 " "	2						
56 " "	2	Canadian Northern Quebec Ry. Co., formerly Great Northern Ry., Quebec	557,788	31			
57-8 " "	4						
47 " "	8						
45 " "	14						
46 " "	26				Kingston and Pembroke Railway, Ontario	48,000	00
53 " "	2						
47 " "	8						
48-9 " "	59						
49 " "	10						
48-9 " "	59						
51 " "	3						
57-8 " "	4						
62-3 " "	7						
47 " "	8	Northern and Pacific Junction Railway, Quebec	1,320,000	00			
51 " "	3						
53 " "	2						
47 " "	8						
48-9 " "	59						
49 " "	10						
48-9 " "	59						
51 " "	3						
57-8 " "	4						
62-3 " "	7						
47 " "	8	Canada Eastern Ry., formerly Northern and Western Ry., N.B., including also Chatham Branch Ry..	374,839	84			
51 " "	3						
57-8 " "	4						
62-3 " "	7						
47 " "	8						
51 " "	3						
53 " "	2						
48-9 " "	59						
53 " "	2						
48-9 " "	59				Quebec Central Railway, Quebec	348,342	00
50-1 " "	24						
51 " "	3						
46 " "	25						
51 " "	3						
47 " "	8						
48-9 " "	59						
49 " "	10						
50-1 " "	24						
47 " "	6	Montreal and Sorel Railway, Quebec	93,757	57			
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Montreal and Champlain Junction Railway, Quebec.	103,600	00			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Elgin, Petitediac and Havelock Railway, Quebec...	82,652	82			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	St. Louis and Richibucto Railway, N.B.	22,400	00			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Canada Atlantic Railway, Ontario	282,355	20			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Esquimalt and Nanaimo Railway, B. C.	750,000	00			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Erie and Huron Railway, Ontario	96,000	00			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Baie des Chaleurs Railway, Quebec	620,000	00			
47 " "	6						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
47 " "	8						
46 " "	25						
47 " "	8						
52 " "	3	Carried forward	6,489,590	04			

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have been entered into and Payments made up to March 31, 1910.

PAYMENTS.							Total March 31, 1910.
1903-1904.	1904-1905.	1905-1906.	1906-1907.	1907-1908.	1908-1909.	1909-1910.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
							156,800 00
		86,016 00	67,712 00	73,472 00			1,233,943 50
							208,732 80
							193,578 00
							224,000 00
				256,870 40	55,449 60	164,172 29	1,034,280 60
							48,000 00
							1,320,000 00
							374,839 84
				55,638 69			403,980 69
							93,757 57
							103,600 00
							82,652 82
							22,400 00
							282,355 20
							750,000 00
							96,000 00
							620,000 00
		86,016 00	67,712 00	385,981 09	55,449 60	164,172 29	248,921 02

1 GEORGE V., A. 1911

STATEMENT showing Subsidies Voted for Railways as to which Contracts have

SUBSIDIES VOTED.		RAILWAYS.		July 1, 1883 to June 30, 1903.
Authority.	Amount.			
	\$ cts.			\$ cts.
		Brought forward		6,489,590 04
48-9 Vic., c.	59	118,400 00	New Brunswick and Prince Edward Island, Ry. N. B..	113,440 00
50-1 "	24	217,600 00	Laurentian Railway, formerly St. Lawrence, Lower Laurentian and Saguenay Ry., Quebec	217,600 00
49 "	10	11,200 00	L'Assomption Railway, Quebec.....	11,200 00
49 "	10	32,000 00		
50-1 "	24	96,000 00	} Great Eastern Railway, Quebec.....	40,345 00
56 "	2	64,000 00		
53 "	2	37,500 00		
47 "	8	160,000 00	} Irondale, Bancroft and Ottawa Railway, Ontario.....	144,000 00
52 "	3			
49 "	10			
50-1 "	24	96,000 00	} Buctouche and Moucton Railway, N.B.	101,600 00
47 "	8	6,400 00		
52 "	3	51,200 00	Albert Southern Railway, N. B.....	50,460 00
50-1 "	24	65,200 00	} Lake Temiscamingue Colonization Railway, Quebec..	310,335 95
47 "	8	274,940 00		
56-1 "	24	38,400 00	} Jogjins Railway, N.S.	37,500 00
57-8 "	4	4,000 00		
49 "	10	240,000 00	} Témiscouata Railway, N.B., and Quebec.....	645,950 00
50-1 "	24	258,000 00		
45 "	14	100,000 00		
48-9 "	58	51,200 00	} Leamington and Saint Clair Railway, Ontario.....	51,200 00
51 "	3	44,800 00		
53 "	2	6,400 00	} Toronto, Grey and Bruce Railway, Ontario.....	14,656 00
48-9 "	59	16,000 00		
50-1 "	24	22,400 00	} Dominion Line Co., Quebec.....	15,360 00
49 "	10	256,000 00		
53 "	2	96,000 00	} West Ontario Pacific Railway and Ontario and Quebec Railway	256,000 00
50-1 "	24	14,400 00		
52 "	3	76,800 00	} Drummond County Railway, Quebec	423,936 00
53 "	2	96,000 00		
57-8 "	4	128,000 00	} Brockville, Westport and Sault Ste. Marie Ry., Ont..	105,200 00
48-9 "	59	64,000 00		
53 "	2	32,000 00		
54-5 "	8	10,200 00	} Montreal and Lake Maskinongé Railway, Québec....	41,280 00
57-8 "	4	54,400 00		
49 "	10	51,200 00	South Norfolk Railway, Ontario	54,400 00
53 "	2	22,400 00	Guelph Junction Railway, Ontario.....	46,000 00
50-1 "	24	108,800 00	} Belleville and North Hastings Railway, Ontario.....	21,888 00
50-1 "	24	48,000 00		
48-9 "	59	118,400 00	} Hereford Railway, Quebec.....	155,200 00
49 "	10	224,000 00		
49 "	10	*	} Lake Erie and Detroit River Railway, Ontario.....	475,851 00
50-1 "	24	62,400 00		
55-6 "	5	138,400 00	} Beauharnois Junction Railway, Quebec.....	62,400 00
62-3 "	7	108,000 00		
50-1 "	24	108,800 00	} St. Catharines and Niagara Central Railway, Ontario	38,400 00
56 "	2	30,000 00		
50-1 "	24	30,000 00	Fredericton and St. Mary's Railway Bridge Co., N. B..	30,000 00
50-1 "	24	9,600 00	Harvey Branch Railway Co., N.-B.....	5,553 57
55-6 "	5	240,000 00	Nova Scotia Central Railway Co., N. S.....	235,200 00
61 "	1	44,800 00	Cumberland Railway and Coal Co., N. S.....	39,850 00
50-1 "	24	19,200 00	Pontiac and Renfrew Railway Co., Ontario.....	13,600 00
52 "	3	54,400 00	} Thousand Islands Railway Co., Ontario.....	29,840 00
52 "	3	*		
63-4 "	8			
		Carried forward.....		10,277,835 56

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been entered into and Payments made up to March 31, 1910—Continued.

PAYMENTS.							Total March 31, 1910.
1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
		86,016 00	67,712 00	385,981 09	55,449 60	164,172 29	248,921 02
							113,440 00
							217,600 00
							11,200 00
							40,345 00
							144,000 00
							101,600 00
							50,460 00
							310,335 95
							37,500 00
							645,950 00
							51,200 00
							14,656 00
							15,360 00
							256,000 00
							423,936 00
			35,600 00				140,800 00
							41,280 00
							54,400 00
							46,000 00
							21,888 00
							155,200 00
							475,851 00
							62,400 00
							38,400 00
							30,000 00
							5,553 57
							235,200 00
							39,850 00
							13,600 00
							29,840 00
		86,016 00	103,312 00	385,981 09	55,449 60	164,172 29	11,072,766 54

1 GEORGE V., A. 1911

STATEMENT showing the subsidies voted for Railways as to which Contracts have

SUBSIDIES VOTED.		RAILWAYS.		July 1, 1883, to June 30, 1903.
Authority.	Amount.			
	§ c.			§ cts.
		Brought forward.....		10,277,835 56
52 Vic., chap. 3	96,000 00	Quebec. Moutmorency and Charlevoix. Ry. Co. Quebec		96,000 00
56 "	375,000 00	St. Clair Froutier Tunnel Co., Ontario.....		375,000 00
52 "	57,600 00	Brantford, Waterloo and Lake Erie, Railway, Ontario		57,600 00
50-1 "	24	287,200 00 Port Arthur, Duluth and Western Railway, Ontario...		271,200 00
57-8 "	4			
51 "	3			
53 "	2			
50-1 "	24	192,000 00 Montreal and Ottawa Railway, Ontario.....		192,000 00
53 "	2			
54-5 "	8			
57-8 "	4	44,800 00 Cornwallis Valley Railway, N.S.....		44,800 00
50-1 "	24			
52 "	3			
52 "	3	320,000 00 } 64,000 00 } Ottawa, Northern and Western Ry., Quebec, form- * } erly Ottawa and Gatineau Railway.....		292,320 00
57-8 "	6			
60-1 "	4			
47 "	8	83,612 54 } 142,400 00 } Central Railway, N.B.....		226,012 54
51 "	3			
52 "	3			
53 "	2	48,000 00 }		
57-8 "	4			
61 "	1			
62-3 "	1	361,270 00 Montreal and Western Railway, Quebec.....		361,270 00
53 "	2			
52 "	3			
57-8 "	4	128,000 00 Parry Sound Colonization Railway, Ontario.....		152,800 00
52 "	3			
52 "	3			
54-5 "	8	64,000 00 } 163,200 00 } Shuswap and Okanagan, Railway, B.C.....		163,200 00
53 "	2			
55-6 "	5			
53 "	2	89,600 00 } 35,200 00 } Tobique, Valley Railway N. B		134,016 00
53 "	2			
53 "	2			
55-6 "	5	9,600 00 } 112,000 00 } Columbia and Kootenay Railway, B.C.....		88,800 00
53 "	2			
53 "	2			
53 "	2	35,200 00 } 99,200 00 } Waterloo Junction Railway, Ontario.....		32,800 00
55-6 "	5			
53 "	2			
53 "	2	57,600 00 } 25,024 00 } St. Lawrence and Adirondack Railway, Quebec.....		84,800 00
55-6 "	5			
55-6 "	5			
56 "	2	40,000 00 } 102,400 00 } New Glasgow Iron, Coal and Railway Co., N.S.....		39,840 00
57-8 "	4			
55-6 "	5			
56 "	2	102,400 00 } 102,400 00 } United Counties Railway, Quebec.....		188,816 00
57-8 "	4			
55-6 "	5			
55-6 "	5	*21,600 00 } *430,400 00 } Philipsburg Junction Ry. Quarry Company, Quebec... Ottawa, Arnprior and Parry Sound Railway, Ontario..		23,712 00
56 "	2			
57-8 "	4			
60-61 "	4	67,200 00 } 38,400 00 } Montfort Colonization Railway, Quebec.....		167,440 00
55-6 "	5			
57-8 "	4			
56 "	2	48,000 00 } 48,000 00 } Lotbinière and Mégantic Railway, Quebec... ..		96,000 00
55-6 "	5			
57-8 "	4			
56 "	2	48,000 00 } 80,000 00 } Grand Trunk, Georgian Bay and Lake Erie Ry., Ont... Canadian Pacific Ry., B.C., Revelstoke to Arrow Lake.		39,744 00
55-6 "	5			
57-8 "	4			
55-7 "	5	121,600 00 } 89,600 00 } Nakusp and Slocan, Railway, B.C..... Dominion Coal Company, N.S.....		117,760 00
56 "	2			
57-8 "	4			
56 "	2	22,400 00 } *51,200 00 } Oshawa Railway and Navigation Company, Ontario... Tilsonburg, Lake Erie and Pacific Railway, Ontario...		22,400 00
57-8 "	4			
56 "	2			
57-8 "	4	*11,200 00 } *38,400 00 } St. Stephen's and Milltown Railway, N.B..... Gulf Shore Railway Company, N.B.....		14,848 00
57-8 "	4			
57-8 "	4			
56 "	2	9,000 00 } 32,000 00 } Cap de la Madeleine Railway, Quebec..... Ontario, Belmont and Northern Ry. Company, Ont... Coast line of Nova Scotia, now Halifax and Yarmouth R. Ottawa and New York Railway Company, Ontario....		7,424 00
56 "	2			
* "	*			
* "	*			30,720 00
				150,400 00
				262,384 00
		Carried forward.....		15,276,074 38

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been entered into and Payments made up to March 31, 1910—Continued.

PAYMENTS.							Total
1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	March 31, 1910.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
		86,016 00	103,312 00	385,981 09	55,449 60	164,172 29	11,072,766 54
							96,000 00
							375,000 00
							57,600 00
							271,200 00
							192,000 00
							44,800 00
118,368 00				4,243 20			414,931 20
							226,012 54
							361,270 00
							152,800 00
							163,200 00
							134,016 00
							88,800 00
							32,800 00
	38,250 00	45,764 50		24,123 00			192,942 50
							149,481 60
							39,840 00
							188,816 00
							23,712 00
							779,712 00
							167,440 00
							96,000 00
							39,744 00
							80,000 00
							117,760 00
							87,808 00
							22,400 00
4,000 00							117,431 48
							14,848 00
							53,699 20
							7,424 00
							30,720 00
9,600 00							160,000 00
							262,384 00
131,968 00	38,250 00	131,780 50	103,312 00	414,352 29	55,449 60	164,172 29	16,323,359 06

1 GEORGE V., A. 1911

STATEMENT showing Subsidies Voted for Railways as to which Contracts have

SUBSIDIES VOTED.		RAILWAYS.		July 1, 1883, to June 30, 1903.
Authority.	Amount.			
	\$ c.			\$ cts.
		Brought forward		15,276,074 38
60-61 Vic., c. 5	3,630,000 00	Canadian Pacific Railway Co., B.C. (Crow's nest Pass).		3,381,774 00
60-61 " 4	500,000 00	Grand Trunk Ry. Co., 'Victoria Jubilee Bridge,' Que.		500,000 00
63 " 3				
" "	*	International Ry. of New Brunswick, formerly Restigouche and Western Ry. Co.		46,930 00
" "	*	East Rich-lieu Railway Co., Que-bee		69,952 00
" "	*	South Shore Railway (Que-bee, Montreal and Southern)		119,290 19
" "	*	Pembroke Southern Railway, Ontario		64,000 00
" "	*	Massawippi Valley Railway Co., Quebec.		5,376 00
" "	*	Inverness and Richmond Co., N.S., now Inverness Ry. and Coal Co.		311,375 53
" "	*	Canadian Northern Railway Co., Ontario, Manitoba and N.W.T.		1,534,976 00
" "	*	Canadian Pacific Railway Co. (Pipstone Branch).		160,000 00
" "	*	Central Ontario Railway Co., Ontario.		67,200 00
" "	*	Midland Railway Co., N.S.		360,450 30
62-3 Vic., c. 7	1,000,000 00	Quebec Bridge Co., Quebec.		374,353 33
63-4 " 8				
60-1 Vic., c. 4	212,500 00	St. Mary River Railway Co., N.W.T.		75,000 00
63-4 " 2				
1 Ed. VII, c. 7	*	{ Pontiac and Pacific and Ottawa and Gatineau Ry. Co. (Interprovincial Bridge over Ottawa River)		212,500 00
1 " 7	*	Atlantic and Lake Superior Railway Quebec		67,153 98
62-3 Vic., c. 7	*	Montreal and Province Line Railway, Quebec.		58,560 00
62-3 " 7	*	York and Carleton Railway, N.B.		18,336 00
63-4 " 8				
1 Ed. VII, c. 7	*	Algoma Central and Hudson Bay Railway, Ontario.		583,536 00
" "	*	Cape Breton Extension Railway, N.S.		65,280 00
" "	*	Can. Pacific Ry. Co. (Kootenay and Arrowhead Br'ch).		42,771 00
" "	*	" (Selkirk Branch).		83,200 00
" "	*	" (Dyment Branch).		23,336 00
" "	*	" (Waskada Branch).		50,480 00
" "	*	Manitoulin and North Shore Railway Co., Ont.		32,000 00
" "	*	Bay of Quinte Railway Ont.		19,200 00
" "	*	Bruce Mines and Algoma Railway, Ont.		28,800 00
" "	*	Magnetawan River Railway Co., Ont.		3,552 00
" "	*	The Canadian Northern Quebec Ry., formerly Chateauguay and Northern Ry., Quebec		
" "	*	Canadian Pacific Ry. Co. (Pheasant Hill Branch).		
" "	*	Halifax and Southwestern Railway Co., N.S.		
" "	*	Northern Colonization Railway Co., Quebec.		
" "	*	New Brunswick Coal and Railway Co., N.B.		
" "	*	Schomberg and Aurora Railway Co., Ont.		
" "	*	Lindsay, Bobcaygeon and Pontypool Ry. Co., Ont.		
" "	*	Middleton and Victoria Beach Ry. Co., N.S.		
" "	*	Beersville Coal and Railway Co., N.B.		
3 Ed. VII, c. 57	*	Nicola, Kamloops and Similkameen Coal and Ry. Co.		
4 " 34	*	Canadian Pacific Railway (Staynerville Branch).		
6 " 43	*	Klondike Mines Railway		
6 " 43	*	Kettle River Valley Ry. Co., B.C.		
6 " 43	*	Colchester Coal and Ry. Co., N.S.		
3 " 57	*	Minudie Coal Co., N.S.		
6 " 43	*	Atlantic, Quebec and Western Ry. Co., Quebec.		
6 " 43	*	Napierville Jct. Ry. Co., Quebec.		
6-7 " 40	*	Edmonton, Yukon and Pacific Ry. Co., Alberta.		
6-7 " 40	*	Canadian Northern Ontario Ry. Co., formerly James Bay Ry. Co., Ontario		
		Carried forward.		23,657,402 71

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

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been entered into and Payments made up to March 31, 1910—Continued.

PAYMENTS.							Total March 31, 1910.
1903-1904.	1904-1905.	1905-1906.	1906-1907.	1907-1908.	1908-1909.	1909-1910.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
131,968 00	38,250 00	131,780 50	103,312 00	414,352 29	55,449 60	164,172 29	16,323,359 06
							3,404,726 00
							500,000 00
30,208 00		50,070 07	51,200 00		189,849 60	187,494 40	555,752 07
					43,414 55		69,952 00
80,494 16	3,456 46					184,320 00	430,975 36
							64,000 00
							5,376 00
57,170 44							368,545 97
374,156 00							1,909,132 00
							160,000 00
				76,861 36	35,404 64		179,466 00
1,750 00			4,967 70	31,892 40			399,060 40
							374,353 33
40,960 00	32,134 00						148,094 00
							212,500 00
37,000 00	42,336 86		‡1,521 82				144,969 02
				14,560 00			58,560 00
							32,896 00
	341,440 00						924,976 00
117,120 00						14,400 60	196,800 00
17,842 85	4,176 15	89,076 00					153,866 00
							83,200 00
							22,336 00
13,520 00							64,000 00
							32,000 00
49,920 00			72,602 45				141,722 45
	25,120 00						53,920 00
							3,552 00
191,595 00		116,000 00	84,224 75				391,819 75
378,624 00	56,576 00						435,200 00
185,422 00	291,842 00	176,512 00	268,107 20	316,567 73			1,238,450 93
58,384 00		75,376 00			68,320 00	153,120 00	355,200 00
48,000 00							48,000 00
46,144 00							46,144 00
	185,173 06						185,173 06
	47,789 00	50,303 80	27,667 20				125,760 00
	20,736 00						20,736 00
		110,592 00		190,208 00			300,800 00
			9,600 00	3,424 00			13,024 00
			96,000 00	101,184 00			197,184 00
				97,771 52			97,771 52
				12,800 00			12,800 00
				18,544 00			18,544 00
				64,000 00	92,672 00	208,896 00	365,568 00
				173,440 00			173,440 00
				91,200 00			91,200 00
		651,264 00	420,608 00	244,224 00	556,864 00	250,982 40	2,123,942 40
1,860,278 45	1,089,029 53	1,450,974 37	1,136,767 48	1,851,029 30	1,041,974 39	1,163,385 09	32,087,456 23

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

‡ Refunds for duplicate claims and claims still unpaid.

1 GEORGE V., A. 1911

STATEMENT showing Subsidies voted for Railways as to which Contracts

SUBSIDIES VOTED.		RAILWAYS.	July 1, 1883 to June 30, 1903.	
Authority.	Amount.		§	cts.
	§ cts.		§	cts.
		Brought forward.....	23,657,402	71
7-8 Ed. VII, c.63	*	Maritime Coal and Ry. Co.....		
7-8 " 63	*	St. Mary and Western Ontario Ry. Co.....		
7-8 " 63	*	North Shore Ry. Co.....		
7-8 " 63	*	St. Maurice Valley Ry. Co.....		
7-8 " 63	*	Grand Trunk Pacific Ry. Co.....		
6 " 43	*	Canadian Pacific Ry. Co., Teulon to Icelandic River....		
7-8 " 63	*	Canadian Pacific Ry. Co., Moosejaw northwesterly....		
			23,657,402	71
	186,600 annually for 20 years.	Atlantic and Northwestern Railway.....	2,425,800	00
37 Vic., ch. 14	} 1,525,250 00	Canada Central Railway.....	1,525,250	00
46 " 2				
47 " 8	} 1,500,000 00	Canadian Pacific, extension.....	1,500,000	00
48-9 " 58				
		Totals.....	29,295,052	71

* 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, authorize \$3,200 per mile subsidy if the cost does not average of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 23, 1910.

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have been entered into and Payments made up to March 31, 1910 — *Concluded.*

PAYMENTS.							Total March 31, 1910.
1903-1904.	1904-1905	1905-1906.	1906-1907.	1907-1908.	1908-1909.	1909-1910.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1,860,278 45	1,089,029 53	1,450,974 37	1,136,767 48	1,851,029 30	1,041,974 39	1,163,385 09	32,087,456 23
.....	.....	.....	.....	.....	3,200 00	.....	3,200 00
.....	.....	.....	.....	.....	67,344 00	.....	67,344 00
.....	.....	.....	.....	.....	6,880 00	.....	6,880 00
.....	.....	.....	.....	.....	112,640 00	.....	112,640 00
.....	.....	.....	.....	.....	367,249 00	550,551 96	367,249 00
.....	.....	.....	.....	.....	.....	30,800 00	30,800 00
.....	.....	.....	.....	.....	.....	303,360 00	303,360 00
1,860,278 45	1,089,029 53	1,450,974 37	1,136,767 48	1,851,029 30	1,599,287 39	2,048,097 05	34,695,866 28
186,600 00	186,600 00	186,600 00	186,600 00	186,600 00	186,600 00	.....	3,732,000 00
.....	.....	.....	.....	.....	.....	.....	1,525,250 00
.....	.....	.....	.....	.....	.....	.....	1,500,000 00
2,046,878 45	1,275,629 53	1,637,574 37	1,323,367 48	2,037,629 30	1,785,887 39	2,048,097 05	41,450,116 28

3 Edward VII., Cap. 57, 4 Edward VII., Cap. 34, 6 Edward VII., Cap. 43, 6-7 Edward VII., Cap. more than \$15,000 per mile, if over that amount, a further sum of fifty per cent on so much exceeding in the whole the sum of \$6,400 per mile.

W. C. LITTLE,
Accountant.

PART II

STATEMENTS

OF THE

DEPARTMENTAL SOLICITOR

FOR THE YEAR 1909-10

SHOWING

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

1 GEORGE V., A. 1911

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.
	1909.				1909.
17992	Oct. 20 . . .	Atlantic, Quebec and Western Ry. Co.	25 bridges on line of company's railway.	Can., 1908, c. 63.	July 29 . . .
17631*	April 5 . . .	Canadian Northern Quebec Ry. Co.	From or from near Garneau Jct. to Quebec, with branch lines towards Quebec bridge.	Can., 1908, c. 63.	Feb. 1 . . .
17792	June 28 . . .	" "	From Hawkesbury to Ottawa, 60 miles.	Can., 1908, c. 63.	March 9 . . .
17802†	July 7 . . .	Cape Breton Ry. Co., Ltd.	From Point Hawkesbury or Point Tupper on Strait of Canso to St. Peters.	Can., 1908, c. 63.	May 15 . . .
17831	July 22 . . .	Matane and Gaspé Ry. Co.	From point at or near Ste. Flavie on I.C. Ry. to Matane in lieu of subsidy granted by c. 43 of 1906.	Can., 1908, c. 63.	April 16 . . .
					1908.
18053‡	Nov. 23 . . .	The Manitoulin and North Shore Ry. Co.	(a) From a point on the said line of railway, between Little Current and Sudbury westerly towards the Algoma Central and Hudson Bay Railway, 100 miles; (b) from Little Current crossing C.P.R. at or near Stanley and thence to Sudbury, 64 miles. (c) from point near Sudbury, northerly 30 miles in lieu of the subsidies granted by Cap. 43 of 1906, S. 1, item 1, not exceeding in all 194 miles.	Can., 1908, c. 63.	Nov. 21 . . .
					1909.
18069	Dec. 7 . . .	Quebec Central Ry. Co.	From St. George to or towards St. Justine.	Can., 1908, c. 63.	July 29 . . .
18082	Dec. 14 . . .	Tobique & Campbellton Ry. Co.	From point on Canadian Pacific Railway at or near Plaster Rock to Riley Brook.	Can., 1908, c. 63.	Nov. 1 . . .
	1910.				
18114	Jan. 10 . . .	Quebec and Lake St. John Ry. Co.	From end of 35th mile of La Tuque branch on St. Maurice river, to La Tuque Falls.	Can., 1908, c. 63.	Dec. 9 . . .

*Assigned to Canadian Northern Ontario Railway Company by Assignment No. 17931, dated Aug. 30, 1909.

†Cancels and supersedes No. 13948 of Sept. 15, 1900.

‡Cancels and supersedes No. 14690 of May 15, 1902.

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entered into during the Fiscal Year ended March 31, 1910.

AMOUNT OF SUBSIDY.		Number of Miles Subsidized.	Maximum Grade Feet per Mile.	Radius of Curvature not less than	Width of Clearing each Side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per lineal yard.	Date for Completion.
Per Mile.	Not exceeding								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
	250,000								Aug. 1, 1912
3,200	6,400	83	152.80	955	50	20	15	56	July 31, 1910
3,200	6,400	60	26	955	50	20	15	56	Aug. 1, 1910
3,200	6,400	31	80	819	50	20	15	56	Dec. 31, 1910
3,200	6,400	38	42	955	50	20	15	56	Aug. 1, 1912
3,200	6,400	194	79	12°	50	20	15	56	Nov. 30, 1911
3,200	6,400	30	63	955	50	20	15	56	Dec. 1, 1910
3,200	6,400	28	80	819 or 7°	50	20	15	56	Dec. 1, 1911
3,200	6,400	5	152.80	717	50	20	15	56	Sept. 1, 1910

H. F. ALWARD,
Departmental Solicitor.

CONTRACTS entered into during the Fiscal Year ended March 31, 1910.

INTERCOLONIAL RAILWAY.

No. of Contract.	Date of Signature.	Contractors.	Description.
1909.			
17625	April 1.	New Brunswick Wire Fence Company, Ltd.	Erection of fencing on line of Intercolonial Railway.
17632	" 16.	Wm. Hood & Sons.....	Repairs to railway between Indiantown and Blackville
17653	" 23.	Rhodes, Curry & Company, Ltd.....	Deliver 150 box cars.
17673	" 16.	The Vaughan Electric Company, Ltd.	Install fire alarm box, &c., for yard station grain elevators and sheds at St. John, N.B.
17689	May 4.	Farquhar Brothers.....	Electric wiring of passenger station, &c., at Maccan, N.S.
17690	" 4.	Bahcock & Wilcox, Ltd.....	Complete installation of present 500 h.p., and install additional Bahcock boiler of 500 h.p., &c.
17693	" 4.	New Brunswick Telephone Company	Replacing of telephone instruments in the several stations and offices of the Intercolonial Railway in the towns and cities along company's long line system in New Brunswick.
17694	" 5.	Rhodes, Curry and Company, Ltd..	Deliver 2,500 33-inch car wheels, 5-in. core.
17704	" 12.	Canada Foundry Company, Ltd. ...	Supply, &c., 15-inch lap-welded steam heater for the boilers in power house at Moncton, N.B.
17705	" 10.	Canada Iron and Foundry Company, Ltd.	Deliver 1,500 33-inch car wheels, 4½-inch core.
17707	" 12.	Emil A. Wallberg.	Supply, &c., fan system of heating for machine shop, erecting shop, &c., at Rivière du Loup, Que.
17709	" 12.	W. I. Snook & Company.....	Electric wiring of round house, &c., at Newcastle, N.B.
17710	" 25.	Jno. L. Richardson & Company,....	Deliver 1,000 33-inch car wheels, 5-inch core.
17738	June 3.	A. A. Portugais.....	Install hot water heating plant at Amqui, Que.
17786	" 11.	A. Charles Thompson.....	Install plumbing and heating system in Iona station, N.S.
17787	" 21.	Wm. Gallas (The Shade Electric Co.)	Electric wiring of new train service building at Chaudière Junction, Que.
17790	" 24.	Crossen Car Mfg. Co. of Cohourg....	Deliver three (3) baggage cars.
17791	" 26.	Wm. A. and John M. Skidd.....	Install ten 16 c.p. incandescent lamps at new freight shed at Bathurst, N.B.
17823	July 23.	F. A. Ronan & Company	Erect fencing on Intercolonial Railway in district No. 10, Dartmouth to Windsor.
17827	" 22.	Montreal Steel Works, Ltd.....	Install mechanical interlocking switch and signal plant with electric lock on machine at Buctouche Junction, on line of Intercolonial Railway.
17869	Aug. 7.	George H. Evans.....	Supply, &c., one 10-ton, 3 motor electric travelling crane in Intercolonial Railway shops at Rivière du Loup, Que.
17874	" 10.	W. C. Wetmore & Company.....	Install hot water heating apparatus in station building at Maccan, N.S.
17917	Sept. 1.	Hiram G. V. Farrar.....	Electric wiring freight shed at Campbellton, N.B.
17918	Aug. 4.	Chappell Bros. & Co., Ltd.....	Addition to freight shed at Merigomish, N.S.
17919	" 1.	Goulette & Laviolette.....	Construct and erect freight shed at Loggieville, N.B.
17920	" 1.	S. E. Bowser & Company, Ltd.....	Supply and install necessary equipment in Intercolonial Railway oil houses at Kempt Road yards, Halifax, N.S.
17921	" 1.	Fred Forrester.....	Erect, &c., combined baggage, coal and oil building at Hampton, N.B.
17922	" 1.	Florian Dumont.....	Erect, &c., combined baggage, coal and oil building at Montmagny, Que.
17923	" 1.	T. A. Barnhill & Company.....	Erect rest house at Point Tupper.
17924	" 1.	C. E. Fish.....	Extension to water system at Harcourt, N.S.
17925	" 1.	Frank W. Wilson.....	Extension of water system at Sussex, N.B.
17945	" 22.	Preston Car & Coach Co., Ltd.....	Deliver one (1) baggage car.
17955	" 25.	H. J. McManus.....	Extension to water works at St. Charles Junction and Little Metis, Que.
17956	" 18.	Cloutier & Gaudreau.....	Erect combined station, &c., at Carmel, Que.
17963	Oct. 1	Zenon Ouellet.....	Erect addition to existing freight shed and baggage room at St. Pascal, Que.
17965	" 5.	Zenon Ouellet.....	Construct combined station and dwelling, combined freight and baggage building and a combined coal oil and privy building at Daveluyville, Que.
17986	" 11.	Chappel Bros. & Co., Ltd.....	Erect addition to freight shed on wharf at North Sydney, C.B.
17999	" 28.	Frank W. Wilson.....	Erect 50,000 gallon water tanks at Windsor Junction, N.S., Rogersville and Beaver Brook, N.B., and Cedar Hall, Que.
18009	" 29.	Oxford Foundry & Machine Co.	Addition to freight office and installation of hot water heating in freight shed at New Glasgow.

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CONTRACTS entered into during the Fiscal Year ended March 31, 1910—Continued.

INTERCOLONIAL RAILWAY.

No. of Contract.	Date of Signature.	Contractors.	Description.
1909.			
18025	Nov. 8.	H. Boulay et Cie.....	Erect freight shed, &c., at Lac au Saumon, Que.
18026	" 2.	Dumont & McLean.....	Construct addition of six (6) stalls to brick engine house at Rivière du Loup, Que.
18033	" 8.	Corporation of the Town of Stellarton.	Supply water.
18041	" 17.	Provincial Steel Company.....	For the reolling of used rails weighing 110 lbs. per yard His Majesty furnishing the used rails.
18042	Nov. 17.	H. Boulay & Cie.....	Erect and complete extension to existing freight shed at St. Alexis, Que.
18052	" 20.	A. E. Hamilton.....	Erect car repair shop at St. John, N.B.
18070	Dec. 7.	Rhodes, Curry & Company, Ltd.....	Delivery of 5,500, 33 in. car wheels.
18071	" 11.	Wm. Watson.....	Install toilet accommodation and plumbing in station at Dorchester, N.B.
18085	" 14.	Rhodes, Curry & Co.....	Deliver six (6) 80,000 lbs. box-baggage cars.
18104	" 27.	H. G. Hagen.....	Construct and complete 6 in. terra cotta drain for station building at Dorchester, N.B.
1910.			
18112	Jan. 7.	Canadian Locomotive Company, Limited.	10 simple consolidation locomotives.
18119	" 10.	Henry Swim.....	Erect, &c., combined station and dwelling at Cross Creek station, county of Northumberland, N.B.
18183	" 29.	Allis-Chalmers Bullock, Ltd.....	Supply and install electric power plant in Tower bouse at Rivière du Loup, Que.
18210	Feb. 15.	Lacbance & Fils.....	Addition to freight shed and enlarging of office at Rivière du Loup, Que.
18211	" 15.	Montreal Locomotive Works, Limited.	Deliver one (1) 'Pacific Type' passenger locomotive.
18239	Oct. 8.	Great Northwestern Telegraph Company.	For repeating of messages at Quebec.
18240	March 7.	Laura M. McManus.....	Extension of water service pipe line and construction of dam at Cedar Hall, Que.
18250	" 15.	Renous Bridge Lumber Company, Limited.	Erect combined passenger station and freight room at Renous, N.B.
18253	" 15.	Louis E. Couture.....	Construction of siding at Lévis, Que.
18254	" 19.	Laura M. McManus.....	Erect fencing from Campbellton, &c.
18271	Feb. 7.	City of Halifax.....	Supply water at Richmond street station, Deep Water Terminus and Willow Park yards, all in Halifax.

PRINCE EDWARD ISLAND RAILWAY.

1909.			
17624	April 1.	John M. Clark.....	Erect extension to railway wharf at Souris.
1908.			
17675*	Aug. 15.	E. A. Wallberg.....	Erection of power house and a chimney at Charlottetown, P.E.I.
1909.			
17826	July 23.	Thomas Campbell.....	Erect extension to railway wharf at Charlottetown, P.E.I.
17832	" 26.	J. M. Clark.....	Erect freight shed on wharf at Charlottetown, P.E.I.
17926	Sept. 1.	Whitehead Bros.....	Construct branch line of railway from Harmony station to Elmira.
17944	" 18.	D. R. Morrison & P. G. Clark.....	Construct 20-stall brick engine bouse, turntable foundation, &c., at Charlottetown, P.E.I.
18043	Nov. 17.	Canada Foundry Co., Ltd.....	Deliver one (1) 55-foot steel through turntable at Charlottetown, P.E.I.

QUEBEC BRIDGE.

1910.			
18113	Jan. 10.	M. P. and J. T. Davis.....	Substructure of Quebec bridge.

* Too late for last year's report.

1 GEORGE V., A. 1911

CONTRACTS entered into during the Fiscal Year ended March 31, 1910—*Continued.*

BEAUHARNOIS CANAL.

No. of Contract.	Date of Signature.	Contractors.	Description.
	1909.		
17981	Oct. 5..	Alfred Cossette.....	Crushed stone for macadamizing portion of public road on Hungry Bay Dyke, county of Beauharnois, Que.

CHAMBLY CANAL.

	1909.		
18101	Dec. 27..	Phoenix Bridge and Iron Works, Limited.	Structural steel work for new power house at Chambly Canton, Que.

CORNWALL CANAL.

	1909.		
18038	Nov. 10..	Gordon R. Phillips.....	Extension of concrete wall across wash-out in south bank of canal at lock No. 18.
18242	March 15..	Canada Cement Company, Limited.	Deliver 1,000 barrels of cement.

FARRAN'S POINT.

	1910.		
18248	March 15..	Canada Cement Company, Limited.	Deliver 3,350 barrels of cement for Ontario St. Lawrence Canals.

GALOPS CANAL.

	1909.		
17868	Aug. 6..	McCoy and Wilford.....	Removal of old wooden piers and bridges above and below lock 27 of canal, and rebuild same with concrete and steel.

LACHINE CANAL.

	1909.		
17766	June 1..	S. Paul.....	Furnish tug for towing of vessels through lock No. 2.
17825	July 15..	Canada Foundry Company, Limited.	Supply and erect roller lift bridge over canal.
	1910.		
18247	Mar. 15..	Canada Cement Company, Limited.	Deliver 34,750 barrels of cement.
18280	" 23..	M. Connolly.....	Construct concrete walls to improve the approach to the St. Gabriel locks.

RIDEAU CANAL.

	1909.		
17706	May 12..	Hurdman Lumber Company.....	Supply timber for 1909 and 1910.
17822	July 20..	Fallon Brothers.....	Construct abutments and approaches of highway bridge at Kingston Mills, Ont.
17824	" 22..	Hamilton Bridge Works Company, Limited.	Erect highway bridge at Kingston Mills lock station.
18023	Nov. 4..	International Marine Signal Company, Limited.	To lay rectangular steel plate covering required on timber retaining dam at Black Rapids lock station.
	1910.		
18244	Mar. 15..	Canada Cement Company, Limited.	Deliver 1,500 barrels of cement.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1910—*Continued.*

SAULT STE. MARIE CANAL.

No. of Contract.	Date of Signature.	Contractors.	Description.
1909.			
17957	Sept. 18..	J. J. Collins.....	Rebuild north pier of upper entrance to canal.
17992	Oct. 16..	Roger Miller & Sons.....	Construct 7 pairs of gates for lift lock of canal.
17998	" 23..	J. J. Collins.....	Deepen and widen channel way of upper entrance of canal.
1910.			
18249	Mar. 15..	Canada Cement Company, Limited.	Deliver 250 barrels of cement.

SOULANGES CANAL.

1909.			
17736	June 3..	The Hall Engineering Works.....	Construct, &c., 2 winches on deck of gate lifter.

TRENT CANAL.

1909.			
17703	May 7..	Herbert B. Collier.....	Deliver 96 operating machines, 96 sets of anchorage fittings and 96 pivots for lock gates.
17938	Sept. 10..	William Hamilton, Company Limited.	Deliver metal-works for lock gates of Rosedale and Lindsay locks.
18086	Dec. 14..	Bishop & Buchanan.....	Concrete metal-works for lock gates of Rosedale and Lindsay locks.
1910.			
18245	Mar. 15..	Canada Cement Company, Limited.	Deliver 102,000 barrels of cement.

WELLAND CANAL.

1909.			
17616	April 1..	David Walker and Wm. Walker....	Repair foundation at lock No. 2.
17746	June 9..	David Walker.....	Placing of stone protection along certain portions of summit level of canal, between Thorold and Port Colborne, Ont.
17959	Sept. 23..	Hamilton Bridge Works Company, Limited.	Erection of steel highway bridge over raceway near old lock No. 2 of Old Welland canal, St. Catharines, Ont.
1910.			
18118	Jan. 10..	M. Beatty & Sons, Limited.....	Construct steel pontoon gate lifter.
18246	Mar. 15..	Canada Cement Company, Limited.	Deliver 800 barrels of cement.

H. F. ALWARD,
Departmental Solicitor.

WATER POWER and other Public Property leased by the Department of
INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Lands or Rights demised.
1909.			
17672	April 26	Transcontinental Railway Commissioners.	Re granting permission to cross Intercolonial Railway by Transcontinental Railway at mileage 4.65, county of Lévis, Que.
17754	June 9	Emile Paturel.	Land at Point du Chene, N.B.
17801	" 30	James H. Adams.	Land at Glen Emma, Bonaventure county, Que.
17838	July 23	Albert Cowperthwaite.	Privilege to lay, &c., 1 inch iron pipe across lands and under tracks of railway about 2 miles north of Durham station.
17870	Aug. 7	Robert Finley.	Land at Aulac, N.B.
17927	Sept. 1	Geo. Cooper and Jas. P. Cunningham.	Land at Shediac station, N.B.
17932	" 10	Louison Lumber Co., Ltd.	Land at Nashes Creek, Restigouche county, N.B.
17934	" 1	E. A. Goodwin.	Privilege to lay, &c., a 14-in. gas pipe along railway lands at Moncton, N.B.
17935	" 10	Angus McLellan.	Land on Dalhousie St., Campbellton, N.B.
17946	" 22	Starr Mfg. Co., Ltd.	Privilege to lay, &c., 8-in. terra cotta sewer pipe across lands and tracks of railway at Dartmouth, N.S.
17967	" 29	Ronald Chisholm.	Land at Yankee Grant, N.B.
17988	Oct. 9	Robert Crawford.	The right, &c., to lay, &c., 6-in. terra cotta sewer pipe across Intercolonial Railway right of way at Campbellton, N.B.
17989	" 11	S. H. Dimock.	To erect, &c., telephone line over and across Intercolonial Railway right of way about 3 miles east of Campbellton, N.B.
18002	" 23	Transcontinental Railway Commissioners.	Right and privilege to lay 6 in. cast iron water pipe across Intercolonial Railway right of way at McGivney's Junction, N.B.
18004	" 23	James Jocelyn.	Privilege to lay and maintain 1 in. water pipe across lands and under tracks of the Intercolonial Railway at Antigonish, N.S.
18012	" 29	J. E. Morissette.	Land at Assametquaghan, Que.
18027	Nov. 8	MacKay Milling Co., Ltd.	Land at North Sydney, C.B., N.S.
18031	" 9	Corporation of the Town of Fraserville, Que.	Land at Fraserville, Que.
18046	" 17	Wilfred Irvine.	Land at Assametquaghan, county of Bonaventure, Que.
18056	" 23	British Nathaniel Tryan Underhill.	Two parcels of railway land at Underhill, county of Northumberland, N.B.
18063	" 26	Ernest Charette.	Land at Rivière du Loup, county of Temiscouata, Que.
18073	Dec. 1	Brown Machine Co., Ltd.	Lay 6 in. water pipe at New Glasgow, N.S.
18074	Nov. 24	Stephen Bros.	Land at Windsor Junction, N.S.
18083	Dec. 14	Jas. D. LeBlanc.	Land at Moncton, N.B.
18084	" 14	Arch. Fraser.	Land at Falleh Station, county of Colchester, N.S.
18089	" 18	The MacKay Mining Co., Ltd.	Land at Sydney, N.S.
18099	" 9	Imperial Oil Co., Ltd.	Privilege to pass and repass over strip of land on Campbell Road, city and county of Halifax, N.S.
18100	Sept. 15	Imperial Oil Co., Ltd.	Land and right of way over 906 square feet of land on Campbell Road, city and county of Halifax, N.S.
*18102	Dec. 27	Spence McLean.	Land on west side of Stanley St., St. John, N.B.; and sale of dwelling house thereon.
1910.			
18116	Jan. 7	R. W. Scribner.	Land at Anagance, Kings county, N.B.
18173	" 22	Albert Caron.	Land at St. Fabien, Rimouski.
18174	" 22	Blaise Vaillancourt.	Land at St. Fabien, Rimouski.
18175	" 22	Alphonse Leclerc.	Land at St. Fabien, Rimouski.
18176	" 22	Thos. Belanger.	The right, &c., to lay 1 in. galvanized iron water pipe across railway right of way, about one-half mile west of St. Simon, county of Rimouski, Que.
18177	" 22	Sixte Belanger.	Land at St. Fabien, county of Rimouski, Que.
18178	" 22	Antoine Ouellet.	Land at St. Fabien, county of Rimouski, Que.
18179	" 22	Theophile Michaud.	Land at St. Fabien, county of Rimouski, Que.
18180	" 22	Joseph Michaud.	Land at St. Fabien, county of Rimouski, Que.
18184	" 22	Town of Truro.	Privilege to lay, &c., 18 in. sewer pipe under tracks of railway on line of Cottage St.

* Price of house \$450.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1910.

RAILWAY.

Area.	Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.		
				Annual Rental.	Due each Year.	First Instalment Due.
				\$	cts.	
1,667½ sq. ft.		During pleasure.	April 1, 1909.	1 00	April 1.	April 1, 1909
547 sq. ft.			May 1, 1909. Jan. 1, 1909.	1 00 1 00	May 1. Jan. 1.	May 1, 1909 Jan. 1, 1909
5,000 sq. ft.		"	May 1, 1909. Dec. 1, 1908.	1 00 2 00	May 1. Dec. 1.	May 1, 1909 Dec. 1, 1908
6,824 sq. ft.		"	Nov. 1, 1906	5 00	Nov. 1.	Nov. 1, 1906
1,210 sq. ft.		"	Feb. 1, 1909.	1 00	Feb. 1.	Feb 1, 1909
2.07 acres.		"	July 1, 1909. Aug. 1, 1909.	1 00 10 00	July 1. Aug. 1.	July 1, 1909 Aug. 1, 1909
465 sq. ft.		"	July 1, 1909. " 1, 1909.	1 00 1 00	July 1. " 1.	July 1, 1909 " 1, 1909
		"	Sept. 1, 1909.	1 00	Sept. 1.	Sept. 1, 1909
		"	" 1, 1909.	1 00	" 1.	" 1, 1909
		"	" 1, 1909.	1 00	" 1.	" 1, 1909
		"	" 1, 1909.	1 00	" 1.	" 1, 1909
10,000 sq. ft.		"	July 1, 1909.	1 00	July 1.	July 1, 1909
0.1891 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
903 sq. ft.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
0.22 acre.		"	Sept. 1, 1909.	1 00	Sept. 1.	Sept. 1, 1909
7,925 sq. ft.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
3,893 sq. ft.		"	Oct. 1, 1909.	4 00	Oct. 1.	Oct. 1, 1909
		"	Nov. 1, 1909.	1 00	Nov. 1.	Nov. 1, 1909
0.22 acre.		"	Oct. 1, 1909.	1 00	Oct. 1.	Oct. 1, 1909
120 sq. ft.		"	Nov. 1, 1909.	1 00	Nov. 1.	Nov. 1, 1909
6,409 sq. ft.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
4,440 sq. ft.		"	" 1, 1909.	5 00	" 1.	" 1, 1909
		21 yrs., renewable	Jan. 1, 1909.	1 00	Jan. 1.	Jan. 1, 1909
1,952 sq. ft.		During pleasure.	" 1, 1009.	2 00	" 1.	" 1, 1909
2,960 sq. ft.		"	Nov. 1, 1909.	5 00	Nov. 1.	Nov. 1, 1909
750 sq. ft.		"	Dec. 1, 1909.	1 00	Dec. 1.	Dec. 1, 1909
0.137 acre.		"	Nov. 1, 1909.	1 00	Nov. 1.	Nov. 1, 1909
0.126 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
0.085 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
		"	" 1, 1909.	1 00	" 1.	" 1, 1909
0.116 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
0.135 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
0.007 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
0,054 acre.		"	" 1, 1909.	1 00	" 1.	" 1, 1909
		"	July 1, 1909.	1 00	July 1.	July 1, 1909

* Cancelled.

1 GEORGE V., A. 1911

WATER POWER and other Public Property leased by the Department of

INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Lands or Rights demised.
1910.			
18186	Jan. 25..	Imperial Oil Company.....	Privilege to lay, &c., 9 wrought iron pipes across railway right of way at Fairview, N.S.....
18212	Feb. 15..	Trustees Y.M.C.A. of Campbellton.	Land at Campbellton, N.B.....
18213	" 15..	George St. Pierre & Co.....	Land at Rivière du Loup, Temiscouata county, Que....
18214	" 15..	Sterling L. Stockton.....	Land at Petitcodiac, N.B.....
18241	March 7..	The Dartmouth Ferry Commission	Privilege to lay, &c., 2-12 in. sewer pipes, at Ferry Slip Crossing, Dartmouth, N.S.....
18255	" 18..	Corporation of the City of Sydney.	Right to lay, &c., 20 in. salt glazed vitrified clay sewage pipe over railway right of way at Sydney, C.B.....
18256	" 23..	Emile Paturel.....	Land at Point du Chêne, Westmorland county, N.B.....
18273	" 30..	The Swedish-Canadian Lumber Co., Ltd.	Land at Kent Junction, N.B.....
18274	" 30..	J. H. Stewart.....	Land at Antigonish, N.S.....

PRINCE EDWARD

1909.			
17840	July 26..	Dept. Marine and Fisheries.....	Land in Souris, county of Kings, P.E.I.....
18005	Oct. 20..	J. T. Arbing.....	Land in lot No. 67, Queen's county, P.E.I.....
18006	" 20..	Benedict Richard.....	Land Lot No. 1, county of Prince, P.E.I.....

BEAUHARNOIS

1909.			
18078	Dec. 11..	Valleyfield Electric Co., Ltd.....	Part lot S30 on Grande Isle de Beauharnois, town Valleyfield, Que., and surplus water from River St. Lawrence at foot of St. Francis lake, &c.....

CORNWALL

1909.			
17982	Oct. 7..	Montreal and Cornwall Nav. Co..	Land on south side of Water street, Cornwall, Ont.....
17983	" 7..	Richelieu and Ontario Nav. Co..	Land on south side of Water street, Cornwall, Ont.....

GALOPS

1909.			
17783	June 17..	Customs Department.....	Certain buildings at Old Lock No. 26, Cardinal, Ont.....
17785	" 23..	W. E. Burchill, Hugh McArthur and Jas. W. Leacy.	Two parcels of canal reserve, village of Cardinal, township of Edwardsburg, county Grenville, Ont.....
17933	Sept. 1..	George Robinson.....	Land and land covered with water on north side of public highway on west half lot 30, concession 1, township of Matilda, county of Dundas, Ont.....
17947	" 22..	Mahlon F. Beach.....	Privilege to erect, &c., electric transmission line at the village of Iroquois.....

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1910—Continued.

RAILWAY—Concluded.

Area.	Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.		
				Annual Rental.	Due each Year.	First Instalment Due.
				\$ cts.		
.....		During pleasure.	May 1, 1909.	1 00	May 1..	May 1, 1909
0.29 acres.....		21 yrs., renewable	Oct. 1, 1909.	10 00	Oct. 1..	Oct. 1, 1909
5.540 sq. ft.....		During pleasure..	" 1, 1909.	5 00	" 1..	" 1, 1909
1,800 sq. ft.....		" ..	July 1, 1909.	10 00	July 1..	July 1, 1909
.....		" ..	Dec. 1, 1909.	1 00	Dec. 1..	Dec. 1, 1909
.....		" ..	" 1, 1909.	1 00	" 1..	" 1, 1909
3,197 sq. ft.....		" ..	May 1, 1910.	1 00	May 1..	May 1, 1910
3,015 sq. ft.....		" ..	Jan. 1, 1910.	5 00	Jan. 1..	Jan. 1, 1910
13,100 sq. ft.....		" ..	Oct. 1, 1910.	2 50	Oct. 1..	Oct. 1, 1909

ISLAND RAILWAY.

4,800 sq. ft.....		During pleasure..	Sept. 1, 1904.	1 00	Sept. 1..	Sept. 1, 1904
270 sq. ft.....		" ..	July 1, 1909.	1 00	July 1..	July 1, 1909
1,200 sq. ft.....		" ..	Sept. 1, 1909.	1 00	Sept. 1..	Sept. 1, 1909

CANAL.

2,700 sq. ft....	135 h.p.....	9 years.....	Jan. 1, 1910.	250 00	Jan. & July	Jan. 1, 1910
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CANAL.

1,980 sq. ft.....		10 years.....	Aug. 1, 1909.	15 00	Aug. 1..	Aug. 1, 1909
980 sq. ft.....		10 years.....	" 1, 1909.	10 00	" 1..	" 1, 1909

CANAL.

.....		During pleasure..	June 1, 1909.	60 00	June 1..	June 1, 1909
.....		" ..	" 1, 1909.	5 00	" 1..	" 1, 1909
1.43 acres.....		" ..	July 1, 1909.	1 00	July 1..	July 1, 1909
.....		13 yrs., renewable	" 1, 1909.	1 00	" 1..	" 1, 1909

1 GEORGE V., A. 1911

WATER POWER and other Public Property leased by the Department of

LACHINE

No. of Lease.	Date of Signature.	Lessee.	Lands on Rights demised.
1909.			
17634	April 13.	Ottawa Forwarding Co., Ltd.	Space in flour shed No. 1 between flour basins Nos. 3 and 4.
17654	" 14.	Montreal Water and Power Co.	Privilege to lay, &c., 14 in. cast iron pipe across land and under canal in St. Henri.
17696	" 28.	Philomene Decarie.	Privilege to lay, &c., 1 in. water pipe from canal to lot 1011, Lachine, and draw water.
17697	May 3.	The Davies, Limited.	Privilege to lay, &c., 8 in. iron water pipe from canal at Wellington basin, St. Ann's ward, Montreal.
17698	April 28.	Canada Car Co., Ltd.	Land on north side of canal.
17699	May 5.	Messrs. Latour & Dupuis.	Canal reserve on south side of canal, above Côte St. Paul bridge, Montreal, P. Q.
17714	" 21.	Dominion Guarantee Co., Ltd.	Privilege to lay, &c., 3 in. iron conduit under canal west of Seigneurs street bridge, &c.
17755	June 9.	Parish Priest, parish of Holy Angels of Lachine.	Land forming south bank of old abandoned entrance to canal.
17784	May 1.	Canadian Pacific Railway Co.	Land on south side of canal, town of St. Paul, parish of Montreal, Que.
17818	July 5.	Jno. H. Hutchison.	Privilege to erect, &c., overhead travelling crane on canal lands in St. Henri, Montreal.
17820	June 30.	Pariseau Freres.	Land between St. Gabriel basins 2 and 3, St. Ann's Ward, Montreal.
17834	July 21.	Farquhar Robertson.	Part of northeast wharf, St. Gabriel basin, No. 3, St. Ann's ward, Montreal.
17835	July 21.	Merchants Cotton Co.	Land on north side of canal in town of St. Henri, Montreal.
17837	July 21.	L. Monette and H. Cardinal.	Land on northwest side of canal in town of St. Henri, parish of Montreal, Que.
17839	July 22.	Capt. Zephirin Leroux.	Land on north wharf of basin No. 2, St. Ann's ward, Montreal, and right to erect freight shed and office thereon.
17871	Aug. 3.	Montreal Street Ry. Co.	Privilege to lay, &c., railway siding on north side of canal between Wellington street bridge and Seminary st.
17873	" 3.	Montreal Warehousing Co.	Wharf lot on west side of Flour basin No. 4, St. Ann's ward, Montreal.
17876	" 4.	Grand Trunk Ry. Co. of Canada.	Privilege to maintain, &c., railway siding on north bank of canal from main track opposite Canada Car Company's works at Montreal, west.
17878	" 10.	F. E. Hall & Co.	Privilege to erect and maintain two-ton derrick on north west wall of Flour basin No. 4.
17936	" 18.	Montreal Rolling Mills Company.	Two parcels of land on north bank of canal in town of St. Henri, Montreal.
17958	Sept. 10.	Joseph Touzin.	Wharf lot on northeast side of St. Gabriel basin No. 1, St. Ann's ward, Montreal.
17968	" 11.	D. G. Loomis & Sons.	Land on south side of canal, above Côte St. Paul bridge, parish of Montreal, Que.
17987	Oct. 1.	Molsons Bank.	Land on north side of canal in town of Lachine, Que.
17990	Sept. 25.	Inland Navigation Co., Limited.	Land along north side of old basin No. 1.
18013	Oct. 22.	Canadian Lake Transportation Co.	Space in St. Gabriel shed No. 1, St. Gabriel basin No. 1.
18024	Nov. 4.	Canadian Pacific Ry. Co.	Substituting for land leased to the Canadian Pacific Railway by lease dated August 15th, 1904, but required in connection with the widening of the canal at Côte St. Paul, certain other land in the vicinity; also granting permission to lessee to use bridge across entrance to basin.
18029	" 9.	Dominion Bridge Co., Ltd.	Land on north side of canal, parish of Lachine, Que.
18030	" 9.	Adolph Goldwater.	Land on St. Joseph street, town of Lachine, Que.
18040	" 8.	J. H. Redfern.	Land on south side of canal, St. Gabriel ward, Montreal, Que.
18044	" 10.	The Bishop Construction Company, Ltd.	Land on north side of canal above Côte St. Paul bridge.
1910.			
18120	Jan. 13.	J. T. Steel & Co.	Land at Boulevard St. Paul, Montreal, Que.
18172	" 14.	R. MacFarlane & Co., Ltd.	Part of wharf fronting on canal between St. Gabriel basins 3 and 4, St. Ann's ward, Montreal, Que.
18185	" 29.	Canadian Oil Company, Ltd.	Wharf lots Nos. 1, 2 and 3, Montreal, Que.
18251	Mar. 1.	Montreal Stock yards Company.	Part cadastral lot 326, St. Ann's ward, Montreal, and buildings thereon; and water power.
18289	" 22.	Ogdensburg Coal and Towing Company.	Land on north side of canal in town of St. Henri, Montreal, and privilege to erect coal elevator thereon.

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1910—Continued.

CANAL.

Area.	Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.		
				Annual Rental.	Due each Year.	First Instalment Due.
				\$	cts.	
12,355 sq. ft.		During pleasure.	May 1, 1909.	1,087	24	May 1, 1909
		"	Mar. 18, 1908.	5	00	Mar. 18, 1908
		"	May 1, 1909.	10	00	May 1, 1909
		"	" 1, 1909.	360	00	" 1, 1909
13,500 sq. ft.		"	Jan 1, 1909.	135	00	Jan. 1, 1909
26,507 } 1,870 } sq. ft.		"	May 1, 1909.	225	00	May 1, 1909
9,165 } 101,246 sq. ft.		"	" 1, 1909.	10	00	" 1, 1909
		21 yrs. renewable.	May 1, 1908.	5	00	May 1, 1908
7,000 sq. ft.		During pleasure.	" 1, 1909.	140	00	" 1, 1909
		"	Mar. 18, 1909 .	25	00	Mar. 18, 1909
2,500 sq. ft.		"	June 1, 1909.	100	00	June 1, 1909
7,300 sq. ft.		"	May 1, 1909.	292	00	May 1, 1909
3,745 sq. ft.		"	June 1, 1909.	74	90	June 1, 1909
5,200 sq. ft.		"	May 1, 1909.	104	00	May 1, 1909
325 sq. ft.		"	May 1, 1909.	13	00	May 1, 1909
		"	July 1, 1909.	50	00	July 1, 1909
7,275 sq. ft.		"	May 1, 1909	291	00	May 1, 1909
		17 years.	Jan. 1, 1908.	166	00	Jan. 1, 1908
{ 2,100 sq. ft. } { 2,400 sq. ft. }		During pleasure.	June 1, 1909.	10	00	June 1, 1909
		"	May 1, 1909.	90	00	May 1, 1909
2,375 sq. ft.		"	July 1, 1909.	95	00	July 1, 1909
{ 2,200 sq. ft. } { 1,750 sq. ft. } { 6,875 sq. ft. }		"	July 1, 1909.	90	76	July 1, 1909
1,269 sq. ft.		21 yrs. renewable.	Oct. 1, 1909.	12	69	Oct. 1, 1909
34,802 sq. ft.		During pleasure.	July 1, 1908.	1,376	08	July 1, 1908
22,000 sq. ft.		"	Oct. 1, 1909.	1,856	25	Apl.-Oct. 1, 1909
107,580 sq. ft.		During pleasure.	April 1, 1909.	645	54	April 1, 1909
1,046 sq. ft.		"	Oct. 1, 1909.	10	46	Oct. 1, 1909
18,475 sq. ft.		"	Nov. 1, 1909.	389	50	Nov. 1, 1909
6,000 sq. ft.		"	Oct. 1, 1909.	60	00	Oct. 1, 1909
1,935 sq. ft.		"	May 1, 1909.	9	23	May 1, 1909
2,500 sq. ft.		"	Jan. 1, 1910.	100	00	Jan. 1, 1910
2.37 acres.		21 years.	May 1, 1910.	2,300	00	May 1, 1910
22,443 sq. ft.		"	Mar. 1, 1909.	2,000	00	Mar-Sep. 1, 1909
3,600 sq. ft.		"	Mar. 1, 1910.	144	00	March. 1, 1910

1 GEORGE V., A. 1911

WATER POWER and other Public Property leased by the Department of

RIDEAU

No. of Lease.	Date of Signature.	Lessee.	Lands or Rights demised.
1909.			
17763	June 11.	Rideau Canoe Club, Limited.....	Submerged land, part of lot 'I', concession 'C,' township Nepean, county of Carleton, Ont.
17793	June 23.	Henry K. Wampole & Co., Ltd..	Lay and maintain water pipe in town of Perth, Ont.
17819	July 10.	Elgin-Chaffey's Lock Telephone Company.	Privilege to lay, &c., telephone line on canal lands at Chaffey's lock station and to place telephone in lock house of each section.....
18003	Oct. 23.	E. P. McGrath.....	2.25 acres of land at Long island lock station on Nichol's island, part north half of lot No. 8, 1st concession of the township of Nepean, county of Carleton, Ont.
18054	Nov. 23.	Canadian Northern Ontario Railway Company.	Land at south end of "deep cut," lot 'F,' concession 'D,' township of Nepean, county of Carleton.....

TRENT

1909.			
17829	July 8.	Jno. G. G. Kerry.....	All surplus water at Steppen's mill site, dam 1, section 5, of canal and right of way.....
17872	Aug. 6.	Crusbed Stone, Limited.....	Parts of lots 32 and 48, concession 8, township of Eldon, county of Victoria, Ont.....
18094	Dec. 21.	Henry Pierce.....	Land west of Colborne street, Fenelon Falls, Ont.....
18095	Dec. 21.	The Fenelon Falls Milling Co....	Land west of Colborne street, Fenelon Falls, Ont.....
18096	" 21.	H. A. McIntosh.....	Land west of Colborne street, Fenelon Falls, Ont.....
18097	" 21.	L. L. Arnold.....	Land west of Colborne street, Fenelon Falls, Ont.....
1910.			
18108	Jan. 3.	Jas. Healey.....	Land in city of Peterborough.....
18109	Jan. 3.	Samuel Edwards.....	Lots 1 and 2, concession 12, township of Douro, county of Peterborough, Ont.....
1909..			
18115	Dec. 25.	Town of Campbellford.....	Part lot 15, concession 6, township of Seymour, county of Northumberland, Ont., surplus water at point "X X" on plan.....
1910.			
18117	Jan. 11.	William Kean.....	Part of lot No. 6, concession 11, township of Thorold, county of Ontario, Ont.....
18275	Mar. 30.	Edward Mayhew.....	Part of lot 49, concession 'A,' township of Eldon, Victoria county, Ont.....
18276	Mar. 30.	Wm. H. Gryles.....	Part of lot 49, concession 'A' township of Eldon, Victoria county, Ont.....

WELLAND

1909.			
17633	April 6.	Reuben Hains.....	Parts lots Nos. 143 and 186, in township of Thorold, County of Welland, Ont.....
17636	" 7.	Bell Telephone Company.....	Privilege to lay, &c., telephone cable across canal lands and under canal between 6th and 7th concessions, township of Crowland.....
17676	" 23.	Niagara, St. Catharines and Toronto Railway Company.....	Privilege to lay, &c., railway siding on canal lands, from point near lessee's swing bridge to Welland Vale Mfg. Company's works.....
17737	June 3.	Samuel Lambert.....	Parts lots 25 and 26, concession 'S,' township of Crowland, county of Welland, Ont.....
17836	" 23.	S. W. Dickinson.....	Land on west side of canal, between George and Haney streets, Humberstone, Ont.....
17877	Aug. 12.	C. T. Ware.....	Part of lot 14, township of Thorold, county of Welland, Ont.....

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1910—Continued.

CANAL.

Area.	Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.		
				Annual Rental.	Due each Year.	First Instalment Due.
				\$	cts.	
21,000 sq. ft.		During pleasure..	June 1, 1909.	1 00	June 1..	June 1, 1909
			" 1, 1909.	1 00	" 1..	" 1, 1909
		" ..	" 1, 1909.	6 00	" 1..	" 1, 1909
2.25 ac.		" ..	Oct. 1, 1909.	5 00	Oct. 1..	Oct. 1, 1909
0.573 ac.		99 years.....	Oct. 1, 1909.	50 00	" 1..	" 1, 1909

CANAL.

		21 years.....	Nov. 1, 1909.	2 00 per h.p.	Nov. 1..	Nov. 1, 1909
		During pleasure..	June 1, 1909.	10 00	June 1..	June 1, 1909
700 sq. ft.		" ..	Jan. 1, 1909.	7 50	Jan. 1..	Jan. 1, 1909
0.32 ac.		" ..	Jan. 1, 1909.	50 00	Jan. 1..	Jan. 1, 1909
0.35 ac.		" ..	" 1, 1909.	10 00	" 1..	" 1, 1909
0.47 ac.		" ..	" 1, 1909.	7 50	" 1..	" 1, 1909
1.11 ac.		" ..	Dec. 1, 1909.	10 00	Dec. 1..	Dec. 1, 1909
10.64 ac.		" ..	Jan. 1, 1910.	10 00	Jan. 1..	Jan. 1, 1910
6.5 ac.		21 years.....	" 1, 1910.	1 00	" 1..	" 1, 1910
5,922 sq. ft.		During pleasure..	" 1, 1910.	1 00	" 1..	" 1, 1910
4.91 ac.		" ..	Mar. 1, 1910.	10 00	Mar. 1..	Mar. 1, 1910
1.65 ac.		" ..	" 1, 1910.	15 00	" 1..	" 1, 1910

CANAL.

10.25 } acres		During pleasure..	April 1, 1909.	10 00	April 1..	April 1, 1909
5.06 }		" ..	July 1, 1909.	5 00	July 1..	July 1, 1909
		" ..	April 1, 1909.	50 00	April 1..	April 1, 1909
1.21 ac.		" ..	" 1, 1909.	60 00	" 1..	" 1, 1909
0.8 ac.		" ..	July 1, 1909.	10 00	July 1..	July 1, 1909
14.06 ac.		" ..	June 1, 1909.	14 00	June 1..	June 1, 1909

1 GEORGE V., A. 1911

WATER POWER and other Public Property leased by the Department of

WELLAND

No. of Lease.	Date of Signature.	Lessee.	Lands or Rights demised.
1909.			
17937	Sept. 1..	The Hedley Shaw Milling Company, Limited.	Land and land covered with water on Port Colborne harbour, county of Welland, Ont.....
17976	Oct. 5..	Joseph Battle.....	Part of lot 26, concession 6, township of Crowland, county of Welland, Ont.....
18010	" 29..	Western Co-operative Grape Shipping Co.	Part of lot 21, concession 5, township of Grantham, county of Lincoln.....
18028	Nov. 8..	Thorold Natural Gas Co., Limited.	Right to lay, &c., 6 in. gas pipe line along Welland canal reserve land, in Dunnville, Ont.....
18036	" 12..	Canadian Portland Cement Company, Limited.	Land on west pier at Port Colborne, Ont., and privileges.
18055	" 20..	Robert Cooper.....	Part of lot 25, concession 5, township of Crowland, county of Welland, Ont., and water power.....
18072	Dec. 7..	W. J. Aikins.....	Land on south side of feeder, Dunnville, Ont., and 25 h.p. surplus water.....
1909.			
18076	Dec. 1..	Ontario Power Co., Ltd.....	Privilege to lay, &c., cable across canal land and under canal, together with a short transmission line on canal lands near Thorold, Ont.....
18077	" 7..	Ontario Hydro-Electric Power Commission.	Privilege to lay, &c., telephone cable across canal lands and under new and old canal at Allanburg, county of Welland, Ont.....
18098	Nov. 1..	Provincial Natural Gas and Fuel Co, Ltd.	Privilege to lay, &c., 4 in. gas pipe across reserve land and under canal at Welland, Ont.....
1910.			
18252	Mar. 12..	The Rector and Church Wardens of Christ Church, village of Marshville.	Land on west side of millrace, being part of lot No. 19, concession 4, township of Wainfleet, county of Welland, Ont.....
18277	" 23..	The Corporation of the Town of Dunnville.	The right and privilege to lay and maintain a 15 in. sewage pipe across the Welland canal feeder at Dunnville, county of Haldimand, Ont.....

SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1910—Continued..

CANAL—Concluded.

Area.	Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.		
				Annual Rental.	Due each Year.	First Instalment Due.
				\$ cts.		
6.43 ac.....		20 years.....	May 1, 1909.	1,000 00	May 1..	May 1, 1909
0.12 ac.....		During pleasure..	Aug. 1, 1909.	25 00	Aug. 1..	Aug. 1, 1909
0.15 ac.....	"	.....	Sept. 1, 1909.	10 00	Sept. 1..	Sept. 1, 1909
.....		"	Nov. 1, 1909.	10 00	Nov. 1..	Nov. 1, 1909
1.15 ac.....		21 yrs., renewable	June 1, 1909.	167 00	June 1..	June 1, 1909
0.13 ac.....	100 cu. ft. per second.	21 "	Nov. 1, 1909.	413 00	Nov. 1..	Nov. 1, 1909
0.05 ac.....	25 h.p.....	During pleasure..	May 1, 1909.	100 00	May 1..	May 1, 1909
.....		During pleasure..	Nov. 1, 1909.	10 00	Nov. 1..	Nov. 1, 1909
.....		"	Sept. 1, 1909.	5 00	Sept. 1..	Sept. 1, 1909
.....		"	Nov. 1, 1909.	5 00	Nov. 1..	Nov. 1, 1909
.....		"	Jan. 1, 1910.	1 00	Jan. 1..	Jan. 1, 1910
.....		"	" 1, 1910.	5 00	" 1..	" 1, 1910

1 GEORGE V., A. 1911

PROPERTY leased to the Department of Railways and Canals by-

INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessor.	Lands or Rights demised.
	1909.		
17715	May 18..	Montreal Board of Trade.....	Rooms 6, 7, 8, 9 and 10 ground floor, building (Board of Trade), Montreal, Que.....
17966	Sept. 27..	Town of Campbellton.....	To lay, &c., 6 in. water main along Sugar Loaf street, in Campbellton, N.B.....
18103	Dec. 28..	Town of Amherst*.....	Permission to connect sewer pipe of Intercolonial Railway with those of the town at a point at the intersection of the centre lines of Crescent avenue and Station street.....

QUEBEC

	1909.		
17695	May 4	Quebec Board of Trade.....	The east half of the first floor of the Board of Trade building, Quebec.....

TRENT

	1909.		
17635	April 1..	Jno. Collins.....	Land in village of Hastings, county of Northumberland, Ont.....
18047	Nov. 20..	Jno. Jos. English, Ernest F. Mason and the Randolph McDonald Co., Ltd.	Certain tracks of land in village of Hastings, county of Northumberland, estimated at two or three-quarter acre, composed of park lots 2 and 3, for storage purposes <i>re</i> contract No. 17156.....

*Consideration certain work by the Intercolonial Railway.

SESSIONAL PAPER No. 20

various parties during the Fiscal Year ended March 31, 1910.

RAILWAY.

Area.	Term.	Commence- ment of Term.	TERMS OF PAYMENT.		
			Annual Rental.	Due each year.	First Instalment due.
			\$ cts.		
.....	3 years.....	May 1, 1909.	1,896 00	Quarterly..	May 1, 1909
465 sq. ft.	During pleasure.....	July 1, 1909.	1 00	July 1..	July 1, 1909
.....	In perpetuity.....	Apr. 20, 1909.

BRIDGE.

.....	2 years.....	May 1, 1909.	600 00	May 1..	May 1, 1909
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CANAL.

.....	3 years.....	Mar. 1, 1909.	25 00	Mar. 1..	Mar. 1, 1909
.....	To March 31, 1910.....	Nov. 20, 1909.	1 00	Nov. 20..	Nov. 20, 1909

H. F. ALWARD,
Departmental Solicitor.

PROPERTY CONVEYED to the Department of Railways and Canals and
INTERCOLONIAL

No. of Deed.	Date of Deed.	Grantor.	Lot.
1909.			
17896	June 16..	W. Clowater <i>et ux.</i>	Land at.....
*17897	Mar. 30..	M. MacDonald <i>et ux.</i>	Land at.....
17915	Aug. 20..	Town of Drummondville.....	Public road in north ward.....
17943	June 11..	Jno. Morris <i>et ux.</i>	Land at.....
17960	May 31..	Henry Appleton (trustee).....	Land on Campbell road.....
*17961	Feb. 22..	James McNeil <i>et ux.</i>	Land at.....
17962	May 17..	Ida Woodworth.....	Land in north suburbs of.....
1908.			
*17964	April 29..	Minnie S. King <i>et vir.</i>	Land at.....
1909.			
17969	July 22..	Isaac Creighton <i>et ux.</i>	Land near Campbell road.....
17970	" 3..	Geo. H. Taylor, assignee, <i>et al.</i>	Land in north suburb of.....
18051	" 21..	Walter Thomas.....	Land in north suburb of.....
18059	May 12..	Ann Brown <i>et vir.</i>	Land at Africville, city of Halifax.....
18060	July 30..	Walter U. Jones.....	Land near Campbell road, city of Halifax, N.S.
18064	" 10..	Geo. W. Johnson <i>et ux.</i>	Land on southwest side of Gottinger St., Halifax.....
1907.			
*18065	Jan. 31..	Jno. Greenaway.....	Land on west side of Upper Water St.
1909.			
18079	Oct. 12..	Alex. McKay <i>et ux.</i>	Lots 14, 21 and 23.....
18080	" 14..	Alex. C. Hamilton <i>et ux.</i>	Land at.....
18090	May 14..	James White <i>et ux.</i>	Land on Campbell road.....
18105	July 9..	Hannab Spurr.....	Land at Moncton.....
18106	Aug. 16..	Edwin E. D. Record <i>et al.</i>	Land on north side of Mountain road.....
1908.			
*18111	Mar. 26..	Isaie Laplante.....	Part of lot 529.....
1906.			
*18163	June 30 and Oct. 1	Robt. A. Lowerison.....	Of certain rights and privileges for installation of a water system at Milton Mill Brook, to supply Intercolonial Railway with water.....
1908.			
*18218	Mar. 11..	Precille Blanchard.....	Part of cadastral lots 172 and 176.....
*18219	May 6..	Urbic Belisle.....	Parts of cadastral lot 167.....
*18220	" 6..	Samuel Langlier.....	" " 179.....
*18221	" 6..	Alfred Dufresne.....	" " 162 and 163.....
*18222	" 6..	Philias Benoit.....	" " 165.....
*18223	" 6..	Isaie Desmarais.....	" " 130.....
*18224	Feb. 18..	Edmond Simard.....	" " 163.....
*18225	Mar. 11..	Dieudonne Vertefeuille.....	" " 168.....
1909.			
18226	July 7..	David Cameron <i>et ux.</i>	Land on north east side of Kempt road.....
18257	Aug. 17..	Ed. Clayton <i>et al.</i>	Land near Campbell road.....
18258	Nov. 30..	Jno. Fulton <i>et ux.</i>	Land at Truro.....
18259	July 31..	Harry Lynds.....	".....
18260	" 31..	Jno. C. McDonald.....	".....
18261	" 30..	Peter McLean.....	".....
18263	Nov. 23..	Jno. W. Francis <i>et ux.</i>	Land between.....

*Too late for last year's report.

SESSIONAL PAPER No. 20

Letters Patent granted during the Fiscal Year ended March 31, 1910.

RAILWAY.

District	County.	Area.	Amount.	Remarks.
			\$ cts.	
Durham.....	York, N.B.....	½ acre.....	175 00	
North Sydney.....	Cape Breton.....	864 sq. ft.....	342 82	
Drummondville.....	Drummondville, Que.....		1,300 00	
Mulgrave.....	Guysborough, N.S.....	0,3061 sq. ft.....	300 00	
Halifax.....	Halifax, N.S.....	0,027 acre.....	240 04	
		0,031 acre.....		
Sydney.....	Cape Breton, N.S.....	5,355 sq. ft.....	900 00	
Halifax.....	Halifax, N.S.....	2,030 sq. ft.....	367 60	
		39,990 sq. ft... }		
Lakeview.....	".....	0,105 acre.....	56 50	
Halifax.....	".....	0,022 acre.....	93 99	
".....	".....	12,045 sq. ft.....	100 00	
".....	".....	5,538 sq. ft.....	125 39	
".....	".....	7,305 sq. ft.....	150 00	
".....	".....	2,636 sq. ft.....	394 37	
".....	".....	13,146 sq. ft.....	300 00	
".....	".....	860 sq. ft.....	1,100 00	
North Sydney.....	Cape Breton, N.S.....	{ 2,484 sq. ft... }	671 37	
".....	".....	{ 2,461 sq. ft... }		
".....	".....	{ 4,683 sq. ft... }		
Halifax.....	Halifax, N.S.....	42,649.2 sq. ft.....	1,100 00	
Moncton.....	Westmorland, N.B.....	920 sq. ft.....	82 80	
".....	".....	0,322 acres.....	2,000 00	
".....	".....	3,795 sq. ft.....	150 00	
Mitchell.....	Nicolet, Que.....	0.3 acre.....	50 00	
}.....	Sackville, N.B.....		1,100 00	
			1 00	
St. Rosalie.....	Bagot, Que.....	1,98 acres.....	1,000 00	
".....	".....	2,14 acres.....	3,000 00	
".....	".....	0,09 acre.....	75 00	
".....	".....	0.3 acre.....	1,500 00	
".....	".....	1,44 acres.....	3,500 00	
".....	".....	0.53 acre.....	1,200 00	
".....	".....	0,184 acre.....	250 00	
".....	".....	2,94 acres.....	2,000 00	
Halifax.....	Halifax, N.S.....	4,225 sq. ft.....	1,161 94	
".....	".....	780 sq. ft.....	78 33	
Truro.....	Colchester, N.S.....	32,120 sq. ft.....	334 49	
".....	".....	0.28 acre.....	227 56	
".....	".....	35,000 sq. ft.....	757 94	
".....	".....	25,137 sq. ft.....		
".....	".....	10,800 sq. ft.....	270 54	
North Sidney and Sydney Mines.....	Cape Breton.....	51,645 sq. ft.....	750 00	

PROPERTY CONVEYED to the Department of Railways and Canals and
INTERCOLONIAL

No. of Deed.	Date of Deed.	Grantor.	Lot.
1908.			
*18264	Sept. 25.	James S. Byron <i>et al.</i>	Land at, and courses of water pipes through other lands.
*18265	May 6.	Zacharie Belisle	Parts cadastral lot 166
*18266	Dec. 16.	Irene Bilodeau <i>et al.</i>	Land in
*18267	May 14.	Mrs. M. Tanguay	Part cadastral lot 176
*18268	" 14.	Hector Girard	" " 170
*18269	June 11.	Henri Girard	" " 132
*18270	Sept. 1.	Government of Nova Scotia	Land at
1909.			
18272	Nov. 10.	Geo. Aikenhead	Land near Campbell road
18300	Aug. 26.	Clarence Hay <i>et ux.</i>	Land in parish of Harecourt
1906.			
*18301	Sept. 25.	Eunice Smith <i>et al.</i>	Land on west side of Upper Water St.
1909.			
18302	Dec. 30.	Onésime Poulin	Of privilege to take water for railway purposes from Lake Beaumont, situated between parishes of St. Charles and de Beaumont
18417	Nov. 13.	Alphonse Lauzier	Part of lot 279, and privilege to lay water pipe
18418	" 13.	Etienne Couture	Right of entry in and upon lands and privilege to lay, &c., water pipe
1905.			
*18436	Mar. 11.	Mrs. J. F. Rioux	Part of lot 613
1910.			
18437	Jan. 13.	Stafford Loggie <i>et al.</i>	Land at
18438	" 29.	James Adams <i>et ux.</i>	Land on Kempt Road
18439	" 15.	Susan A. Veith <i>et al.</i> (Estate Geo. A. Veith)	Land in north suburbs
1909.			
18440	Oct. 30.	Nellie A. Archibald	Land at
18441	Nov. 6.	Frank Stanfield <i>et ux.</i>	"
18442	Oct. 13.	Henry A. McKenzie	"
18443	Dec. 24.	Robt. Millar	Land in ward 6
1910.			
18444	Feb. 17.	Donald McDougal <i>et ux.</i>	Land at Loggieville
1909.			
18445	Dec. 22.	Alex. T. McCrae	Land at
SOULANGES			
1909.			
17899	May 25.	Nerce Moreau	Parts lots 423 and 425

*Too late for last year's report.

SESSIONAL PAPER No. 20

Letters Patent granted during the Fiscal Year ended March 31, 1910—*Continued.*RAILWAY—*Continued.*

District.	County.	Area.	Amount.	Remarks.
			\$ cts.	
Morton.....	Kings, N.S.....	5·000 sq ft.....	350 00	
St. Rosalie.....	Bagot, Que.....	1·91 acres.....	3,000 00	
".....	".....	5·83 arpent.....	1,800 00	
".....	".....	0·28 acre.....	150 00	
".....	".....	0·766 acres.....	182 00	
".....	".....	1·3 acre.....	300 00	
Truro.....	Colchester, N.S.....	4·1 acres.....	927 50	
Halifax.....	Halifax, N.S.....	1,607 sq ft.....	151 05	
Harcourt.....	Kent, N.B.....	0·1762 acre.....	400 00	
Halifax, N.S.....	Halifax, N.S.....	2,553 sq. ft.....	3,896 96	
St. Pierre du Lac (Cedar Hall).	Bellechasse.....		4,000 00	
"	Rimouski.....	½ acre.....	200 00	
"	".....	10,000 sq. ft.....	50 00	
Fraserville, Que.....			800 00	
Loggieville.....	Northumberland, N.B.....	0·29 acres.....	294 43	
Halifax.....	Halifax, N.S.....	9,870 sq. ft.....	1,950 65	
".....	".....	39,726 sq. ft.....	258 08	
Truro.....	Colchester, N.S.....	2·3 acre.....	2,012 82	
".....	".....	1·05 acre.....	2,173 56	
Springhill Jct.....	Cumberland, N.S.....	7·10 acre.....	532 50	
Halifax.....	Halifax, N.S.....	1·15 acre.....	402 50	
Loggieville.....	Northumberland, N.B.....	0·37 } acre.....	276 28	
".....	".....	0·28 }		
Glengarry.....	Pictou, N.S.....	9,830 sq. ft.....	10 00	

CANAL.

Parish of St. Joseph de Soulanges.	Soulanges.....	0·65 } acres.....	2,424 79	
		3·02 }		
		1·18 }		

1 GEORGE V., A. 1911

PROPERTY CONVEYED by the Department of Railways and Canals by

TRENT

No. of Deed.	Date of Deed.	Grantor.	Lot.
1909.			
17778	May 3..	Corporation of the township of Seymour.	Part allowance for road between lots 5 and 6, concession 14, township of Seymour, county of Northumberland, Ont.....
17828	" 22..	John G. G. Kerry <i>et ux.</i>	Parts of lot 13, concession 7.....
17898	June 28..	Charles Armstrong <i>et ux.</i>	0.15 acre, part lot No. 5, in 14th concession, township of Seymour, county of Northumberland.....
17942	Aug. 11..	Northumberland-Durham Power Co.	Parts 15 and 16, concession 11, and part 15, concession 12.....
17972	June 14..	B. W. Powers and J. S. Dench <i>et al.</i>	Island in River Trent, opposite shore, between Radeski and Wall streets.....
17971	" 24..	B. W. Powers and R. Powers <i>et al.</i>	South part of Lecaus island, town of.....
*18016	Feh. 17..	George Victor Bamber <i>et ux.</i>	Nos. 7 and 8, north side of Bridge street, village of Frankford.....
*18017	Mar. 26..	Murrey Sinc <i>et ux.</i>	No. 7, south side of Bridge street, village of Frankford..
18018	May 13..	Charles Gallagher <i>et ux.</i>	No. 8, south side of Bridge street, village of Frankford..
18019	June 22..	William M. Moynes <i>et ux.</i>	No. 9, south side of Bridge street, village of Frankford..
18020	Aug. 12..	Elizabeth Lozo <i>et al.</i>	Parcels Nos. 3 and 4, Lecaus island.....
*18049	Mar. 26..	Ed. Francis Turley <i>et al.</i>	Parts of No. 4, &c., concession 5.....
18061	June 29..	Thos. Parish <i>et al.</i>	Part of lot 1, concession 2.....
18171	Oct. 16..	Ann Jane Sweetman <i>et al.</i>	Lot No. 6, south side of Bridge street, Frankford.....
18227	Dec. 20..	Wm. Foster <i>et ux.</i>	Part of lot 4, concession 5.....
18228	Sept. 30..	Eleanor Jane Forsyth.....	Part lots 1 and 2, concession 4.....
18231	Dec. 20..	Tina Smith <i>et al.</i>	Part lot No. 2, concession 3.....
18232	Aug. 12..	Jas. T. Howard <i>et ux.</i>	Part lot No. 5, concession 6.....
18262	" 16..	Wm. J. Lyons <i>et ux.</i>	Lots 4, 5 and 6, north side of Bridge street, Frankford..
1908.			
*18299	May 24..	Corporation of town of Seymour.	Parts of lots 12, 13 and 14, concession 7, and of lot 14, concessions 8 and 9, township of Seymour, county of Northumberland, Ont.....
1909.			
18434	July 5..	Town of Campbellford.....	Parcels Nos. 1, 6, 7, 8, 9, 10, 11, 12 and 13, parts lot 14, concession 9, lots 14 and 15, concession 8, and six islands in Trent river, township of Seymour, county of Northumberland.....
18435 Nov. 9.. Roht. Eli. Westcott..... Part lot 10, township of Thorah, county of Victoria, Ont.			

WELLAND

1909.			
17779	June 12..	Aaron Vandevere <i>et ux.</i>	Lot 18, south side of Clarence street.....
17842	May 1..	Daniel Philip Perlet <i>et ux.</i>	Part of lot 28, concession 2, township of.....
17843	" 21..	Emma Margaret Perlet.....	" " " ".....
17844	" 21..	Ahram Fredrick Perlet <i>et ux.</i>	" " " ".....
17845	" 21..	Sarah Josephine Schlehr <i>et mar.</i>	" " " ".....
17846	" 21..	Catharine Jones.....	" " " ".....
17847	" 21..	Theodosia Suess <i>et mar.</i>	" " " ".....
17848	" 21..	Mary Williard <i>et mar.</i>	" " " ".....
17849	" 21..	Otto Louis Perlet <i>et ux.</i>	" " " ".....
17850	July 12..	Duncan Armstrong <i>et ux.</i>	Lot No. 1, north side of Ash street, village of Port Colborne.....
17900	July 29..	Jane Peterson.....	Lot No. 1, south side of Ash street, village of Port Colborne.....
1910.			
18187	Jan. 8..	Mary A. Pringle.....	Part of lot No. 1, north side of Sugar Loaf street.....

* Too late for last year's report.

SESSIONAL PAPER No. 20

Letters Patent during the Fiscal Year ended March 31, 1910—Continued.

CANAL.

District.	County.	Area.	Amount.	Remarks.
			\$ cts.	
Seymour.....	Northumberland.....	0.06 acre.....	1 00	
".....	".....	14.83 acres.....	1 00	
".....	".....	0.15 acre.....	100 00	
".....	".....	19.37 acres.....	1 00	And lease of surplus water.
Trenton.....	Hastings.....	.....	700 00	
".....	".....	4 acres.....	600 00	
Sydney.....	".....	.....	2,350 00	
".....	".....	.....	1,075 00	
".....	".....	.....	1,500 00	
".....	".....	.....	800 00	
Trenton.....	".....	.....	250 00	
Sydney.....	".....	.....	6,252 50	
Murray.....	".....	0.6 acre.....	50 00	
Sydney.....	".....	0.16 acre.....	225 00	
".....	".....	6.8 acres.....	1,700 00	
".....	".....	6.10 acres.....	444 00	
".....	".....	13.89 acres.....	555 60	
".....	".....	7.6 acres.....	900 00	
Sydney.....	Hastings.....	0.48 acre.....	2,500 00	
Seymour.....	Northumberland.....	6.55 acres.....	1 00	Exchange, see 18182.
".....	".....	.....	1 00	Lease No. 18115, dated Dec. 29, 1909, in perpetuity, of 6.5 acres of land and all surplus water at dam at Middle Falls, together with right of way for electrical transmission line.
Thorah.....	Victoria.....	0.75 acre.....	100 00	

CANAL.

Port Colborne.....	Welland, Ont.....	0.25 acres.....	2,000 00	
Humberstone.....	".....	0.16 acres.....	275 00	
".....	".....	0.16 acres.....	275 00	
".....	".....	0.16 acres.....	275 00	
".....	".....	0.16 acres.....	275 00	
".....	".....	0.16 acres.....	275 00	
".....	".....	0.16 acres.....	275 00	
".....	".....	0.16 acres.....	275 00	
Welland, Ont.....	".....	.....	350 00	
".....	".....	.....	1,600 00	
Port Colborne.....	".....	0.75 acres.....	1,800 00	

1 GEORGE V., A. 1911

PROPERTY CONVEYED by the Department of Railways and Canals by Letters

INTERCOLONIAL

No. of Deed.	Date of Deed.	Grantor.	Lot.
18034	1909. Oct. 19.	The Imperial Oil Company, Ltd.	Land on south shore of Bedford river.....

TRENT

18182	1910. Jan. 10.	The Corporation of the Town of Seymour.	Parts of lots 12, 13 and 14, concession 7, and lot 14, concession 8 and 9, township of Seymour, county of Northumberland.....
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SESSIONAL PAPER No. 20

Letters Patent during the Fiscal Year ended March 31, 1910—Continued.

RAILWAY.

District.	County.	Area.	Amount.	Remarks.
			\$ cts.	
Halifax.....	Halifax, N.S.....	16,988 sq. ft.....		Letters patent.

CANAL.

} Seymour.....	Northumberland.....	0.62 acre	}	Letters Patent Exchange. See No. 18,299.
		1.46 acres.....		
		4.00 acres.....		
		0.84 acre		
		3.2 acres.....		

H. F. ALWARD,
Departmental Solicitor.

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910.

INTERCOLONIAL RAILWAY.

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1909.			\$ cts.
17973	Aug. 25..	Amelia Groslet (widow F. Savary, employee Intercolonial Railway.	Of all claims arising out of the death of her late husband, Francois Savary.	250 00
18035	Oct. 25..	A. F. Jardine.....	Injuries sustained at station of Derby Junction, N. B., whilst travelling as a passenger.	3,000 00
18110	Dec. 29..	J. M. Slayter.....	For all claims for damages, &c., that may at any time arise in exercise of privileges of travelling on I. C. Ry. engines for purpose of acquiring knowledge of engine driving.	200 00
17683	April 6..	George Foster.....	For damages to property consequent upon the erection of the Stanley street bridge, St. John, N.B.	200 00

SOULANGES CANAL

	1909.			
18067	Oct. 20..	Quebec Transportation and Forwarding Co., Ltd.	For damages to barge <i>Ad</i> , by striking of swing bridge against said barge.	55 00

WELLAND CANAL

	1909.			
17702	May S..	Chas. E. Stewart.....	For damages consequent upon injuries to a horse..	50 00

QUEBEC BRIDGE.

	1910.			\$ cts.
18242	Mar. 12..	Phoenix Bridge Company.	Releasing the company from all liability in connection with the collapse of the Quebec bridge.	100,000

TRENT CANAL.

	1909.			
17649	April 6..	Jno. O'Keefe <i>et ux</i>	Damages by water to lot 10, concession 4, and to lot 10, concession 5, township of Otonabee, county of Peterborough, Ont.	200 00
17650	" 10..	Robt. A. Robertson <i>et ux</i> ..	Damages by water to part of west half of lot 5, concession 8, township of Monaghan, county of Peterborough, Ont.	50 00
17700	" 21..	Annie Davis <i>et al.</i>	Damages by water to lots 1, 2 and 3, concession 18, township of Harvey, county of Peterborough, Ont.	210 00
17701	" 16..	Jas. Kiley <i>et ux</i>	Damages by water to lot No. 3, block 'A' and part of lot 4, Lot 'A', Hiawatha, Indian reservation, township of Otonabee, county of Peterborough, Ont.	135 00
17718	May 5..	A. W. McIntyre <i>et al.</i>	Release for damages by water to lot 6, concession 9, township of Otonabee, county of Peterborough, Ont.	460 00
17719	April 15..	Wm. T. Smith <i>et al.</i>	Damages by water to east half of lot No. 2 and west half of lot No. 3, concession 5, township of Monaghan, county of Northumberland, Ont.	180 00
17720	" 15..	Edmund C. Foley <i>et al.</i>	Damages by water to east half of lots 11 and 12, concession 4, township of Otonabee, county of Peterborough, Ont.	380 00
17722	May S..	Jno. J. Lundy.....	Damages by water to lots 5 and 6, concession 11, township of Ennisnore, county of Peterborough, Ont.	50 00

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—Continued.

TRENT CANAL—Continued.

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts.
17725	April 27..	Robt. J. Adamson <i>et al.</i> ...	Damages by water to east half of lot 8, concession 9, township of Otonabee, county of Peterborough, Ont.	200 00
17727	" 9..	Herbert A. Cairnduff, <i>et al.</i>	Damages by water to north three-quarters of lot 20, concession 16, township of Harvey, county of Peterborough, Ont.	100 00
17728	" 28..	Quintin Moore <i>et ux.</i>	Damages by water to east half of lot 21, concession 17, township of Harvey, county of Peterborough, Ont.	200 00
17729	May 8..	Raglan Richmond <i>et al.</i> ...	Damages by water to part of lot 19 and west half lot 20, concession 15, township of Harvey, county of Peterborough, Ont.	100 00
17730	" 13..	Wm. P. Chase <i>et ux.</i>	Damages by water to lot 'A' in the 16th concession of the township of Harvey, county of Peterborough, Ont.	175 00
17731	" 1..	Jane Coward <i>et al.</i>	Damages by water to part of lot 10, concession 11, and broken lots 7 and 8, concession 12, township of Otonabee, county of Peterborough, Ont.	320 00
17732	April 9..	Francis McElroy <i>et ux.</i>	Damages by water to north half of lot No. 2 and east half of lot No. 3, in concession 5, and to lot 3, concession 6, township of Carden, county of Victoria, Ont.	180 00
17733	" 10..	Selena Jane McQuade <i>et al.</i>	Damages by water to south half of lot No. 9, southeast quarter lot 8, concession 5, and to northeast quarter of lot 8 and west half of lot 9, in 4th concession of township of Emily, county of Victoria, Ont.	400 00
17734	" 13..	Wm. E. Burke <i>et ux.</i>	Damages by water to lot No. 2, concession 4, township of Carden, county of Victoria, Ont.	120 00
17753	" 27..	Micbael F. Lynch <i>et ux.</i>	Damages by water to east half of lots Nos. 1 and 2 in the 2nd concession, and to lot No. 1 in the 3rd concession of the township of Aspodel, county of Peterborough, Ont.	1,050 00
17760	" 11..	Jno. D. McGregor <i>et al.</i>	Damages by water to west half of lots 9 and 10, concession 7, township of Otonabee, county of Peterborough, Ont.	200 00
17761	May 20..	Pbæbe Wedlock.....	Damages by water to parts of broken lot No. 18, concession 2, township of South Monaghan, county of Northumberland, Ont.	20 00
17762	April 27..	Adam A. Humphries <i>et ux.</i>	Damages by water to block 'A' in 1st concession, block 'A' and west part of lot No. 1, concession 2, township of Aspodel, county of Peterborough, Ont.	911 00
17769	" 30..	James D. Byers.....	Damages to south 50 acres of No. 35 in 9th concession of Hamilton, county of Northumberland, Ont.	180 00
17770	" 30..	D. Heaslip.....	Damages to north half lot No. 34, concession 9 of township of Hamilton, county of Northumberland, Ont.	675 00
17771	" 29..	H. Allen.....	Damages to west half lot 3, 14th concession of Harvey, county of Peterborough.	120 00
17774	May 26..	Mary Ann Scriver <i>et al.</i>	Damages to an island in the Trent River, north of lot No. 7, in the 11th concession, township of Percy, county of Northumberland, Ont.	36 00
17775	April 24..	John Kerr <i>et al.</i>	Damages to lots 18 and 19, concession 3, township of South Monaghan, county of Northumberland, Ont.	1,000 00
17776	" 2..	Roland M. Waddell.....	Damages to north half lot 3, and east half lot 2, concession 3½, township of South Monaghan, county of Northumberland, Ont.	700 00
17777	May 29..	Robt. E. Sberwin <i>et ux.</i>	Damages to south east quarter lot 4, concession 2, township of Alnwick, county of Northumberland, Ont.	64 00
17782	" 31..	Jas. & Francis McCulloch..	Damages to parts lots 2 and 3, concession 9, township of Hamilton, county of Northumberland, Ont.	304 00
17797	" 8..	Alexander Thompson <i>et al.</i>	Damages to east half lots 1 and 2 in the 15th concession of the township of Harvey, county of Peterborough, Ont.	60 00
17798	June 19..	Wm. J. Laing <i>et al.</i>	Damages to east two-thirds of west half of lot 5, concession 8, township of North Monaghan, county of Peterborough, Ont.	100 00
17799	" 19..	Julia A. Kent.....	Damages to lots 32 and 33, concession 9, township of Hamilton, county of Northumberland, Ont.	240 00
17800	" 19..	John C. Lynch.....	Damages to west half of lot 3, concession 6, township of Aspodel, county of Peterborough, Ont.	40 00

1 GEORGE V., A. 1911

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—*Continued.*TRENT CANAL—*Continued.*

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts,
17803	May 19..	Garrett Galvin <i>et ux.</i>	Damages by water to lot No. 1, concession 16, township of Harvey, county of Peterborough, Ont.	400 00
17804	June 22..	Wm. J. Isaac <i>et ux.</i>	Damages by water to lot 1, concession 9, township of Hamilton, county of Northumberland, Ont.	400 00
17805	June 23..	Alexander E. Kennedy <i>et ux.</i>	Damages by water to lot No. 23 in the 15th concession of the township of Smith, county of Peterborough, Ont.	75 00
17806	" 19..	Thomas Williamson <i>et ux.</i> ..	Damages to west half of lot 11, concession 11, township of Percy, county of Northumberland, Ont.	48 00
17807	" 19..	Jno. Breckenbridge <i>et ux.</i> ..	Damages to west half of lot 5, concession 3, township 1 of Asphodel, county of Peterborough, Ont.	60 00
17808	" 23..	Charles Fox <i>et ux.</i>	Damages to west half of lot 6, concession 1, township of Asphodel county of Peterborough, Ont.	360 00
17809	" 23..	Fowlds Co., Ltd.....	Damages to portion of land lying south of Front St., east of William St. and west of New St., Hastings, county of Northumberland, Ont.	150 00
17851	May S..	William Graham <i>et al.</i>	Damages to hlock 'A', township of South Burleigh, county of Peterborough, Ont.	300 00
17852	July 17..	Wm. J. Johnston <i>et ux.</i>	Damages to lot 1 and part of north half lot 2, concession 1, township of Alnwick, county of Northumberland, Ont.	340 00
17853	" 3..	Andrew Smith.....	Damages to north half lot 7, concession 3, and to lot 8, concession 4, township of Alnwick, county of Northumberland, Ont.	600 00
17854	June 30..	Peter Nicholls <i>et al.</i>	Damages to lot 27, concession 15, township of Smith, county of Peterborough, Ont.	90 00
17855	" 26..	James A. Fife <i>et ux.</i>	Damages to lots 4 and 5, concession 5, township of Smith, county of Peterborough, Ont.	50 00
17856	" 24..	David Armstrong <i>et ux.</i>	Damages by water to north part of lot 35, concession 9, township of Hamilton, county of Northumberland, Ont.	400 00
17857	July 3..	Robert Hill <i>et al.</i>	Damages to part of lot 9, concession 9, township of Harvey, county of Peterborough, Ont.	80 00
17858	June 26..	Nixon D. Timlon <i>et al.</i>	Damages to lot 8, concession 3, township of Alnwick, county of Northumberland, Ont.	492 00
17859	" 23..	Albert A. Hollingshead <i>et al.</i>	Damages by water to part of lot No. 3, township of Smith, county of Peterborough, Ont.	65 00
17860	July 6..	John James Howden <i>et ux.</i> ..	Damages to lots 11 and 12, concession 11, township of Otonabee, county of Peterborough, Ont.	440 00
17861	June 30..	John Dowler <i>et al.</i>	Damages to south half lot 7, concession 3, township of Alnwick, county of Northumberland, Ont.	216 00
17862	May 7..	Margaret Burrison.....	Damage to south half of lot 9, concession 3, township of Alnwick, county of Northumberland, Ont.	400 00
17863	June 30..	David Conroy <i>et ux.</i>	Damages by water to north half of lot No. 10, and to west 55 acres of south half of lot No. 10, concession 16, and lot 9, concession 17, township of Harvey, county of Peterborough, Ont.	100 00
17864	May 29..	Richard Corkery <i>et al.</i>	Damages to part of lot 19, concession 4 township of South Monaghan, county of Northumberland, Ont.	150 00
*17865	Mar. 9..	Wm. Whitfield.....	Damages to parts of lots 7 and 8, concession 9, township of North Monaghan, county of Peterborough, Ont.	800 00
17866	June 12..	Louis Whitfield.....	Damages to part of lot 8, concession 8, and part of lot 10, concession 10, township of North Monaghan, county of Peterborough, Ont.	480 00
17867	" 19..	Wm. McClelland <i>et al.</i>	Damages by water to part of lot 15, concession 3, township of South Monaghan, county of Northumberland, Ont.	80 00
17879	July 27..	S. A. Northey <i>et al.</i>	Damages to lot 26, concession 14, township of Smith, county of Peterborough, Ont.	60 00
17880	May 20..	John P. Ayotte <i>et al.</i>	Damages to lots 20 and 21, concession 12, township of Smith, county of Peterborough, Ont.	250 00
17881	April 17..	J. Laura Phalen.....	Damages to lot 16 in the 8th concession of the township of Ennismore, county of Peterborough, Ont.	30 00
17882	June 26..	John Weatherup <i>et al.</i>	Damages to west half of south 100 acres of lot No. 4, part of northwest half of lot 4, concession 2 of the township of Alnwick, county of Northumberland, Ont.	120 00
17883	July 24..	F. B. Herald <i>et al.</i>	Damages to lot 16 in the broken lot of the township of South Monaghan, county of Northumberland, Ont.	200 00

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—Continued.

TRENT CANAL—Continued.

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts.
17884	July 24.	Alfred E. Saunders <i>et al.</i>	Damages to part of lot No. 11 in the 11th concession of the township of North Monaghan, county of Peterborough, Ont.	75 00
17885	June 10.	John Carleton Read <i>et al.</i>	Damages to lots Nos. 10 and 11 in the 12th concession of the township of Otonabee, in the county of Peterborough, Ont.	200 00
17886	April 17.	John Riddell <i>et al.</i>	Damages to west half of lot 13 in the 4th concession of the township of South Monaghan, in the county of Northumberland, Ont.	500 00
17887	June 26.	Albert T. Reid <i>et al.</i>	Damages to lot 3 in the 3rd concession of the township of Burleigh, in the county of Peterborough, Ont.	120 00
17888	July 24.	Alex. M. Laing	Damages to the northeast quarter of lot No. 2 in the 8th concession of the township of North Monaghan, in the county of Peterborough, Ont.	40 00
19889	May 15.	Thomas Henry Fulton <i>et ux</i>	Damages to the east half of lot 7 and 8 in the 16th concession of the township of Harvey, county of Peterborough, Ont.	50 00
17890	June 17.	John C. Taylor <i>et al.</i>	Damages to the east half of lots 7 and 8 in the 10th concession of the township of Harvey, county of Peterborough, Ont.	620 00
17891	Aug. 10.	William Lowes <i>et ux.</i>	Damages to north half of lot 17 in the 7th concession, and southeast part of lot 17 in the 8th concession of the township of Otonabee, county of Peterborough, Ont.	230 00
17892	June 30.	Alexander Nicholls <i>et al.</i>	Damages to islands 'C,' 'D' and 'E' in Buckhorn Lake, in the township of Harvey, county of Peterborough, Ont.	120 00
17893	Aug. 5.	Robert H. Johnson	Damages to the southwest quarter of lot No. 8 in the 5th concession, and the southeast quarter of lot No. 8, at West Pigeon River, in the township of Emily, county of Victoria, Ont.	120 00
17894	" 5.	Thomas H. Fee <i>et al.</i>	Damages to the northwest quarter of lot No. 12 in the 6th concession, and northeast quarter of lot No. 12 in the 6th concession, and southeast quarter of lot No. 13 in the 7th concession of the township of Emily, county of Victoria, Ont.	140 00
17895	June 25.	William O. Harvie <i>et al.</i>	Damages to lot No. 7 in the 4th concession, and part of lot No. 7 in the 3rd concession of the township of Alnwick, county of Northumberland, Ont.	240 00
17901	Aug. 7.	Peter Brady	Damages to the east half of lot No. 10 in the 11th concession of the township of Percy, county of Northumberland, Ont.	64 00
17902	" 12.	John J. Lamb	Damages to park lot No. 3, in the village of Omenee, county of Victoria, Ont.	20 00
17903	" 6.	George A. Balfour	Damages to park lot No. 2, in the village of Omenee, county of Victoria, Ont.	20 00
17904	May 4.	John S. Matchett <i>et al.</i>	Damages to the east half of lot No. 7 and part of lot No. 8 in the 8th concession of the township of North Monaghan, county of Peterborough, Ont.	2,000 00
*17905	Feb. 1.	Thomasina F. Orde <i>et al.</i>	Damages to lot No. 9 in the 11th concession of the township of Otonabee, county of Peterborough, Ont.	500 00
17906	Aug. 5.	Robert H. McQuade <i>et al.</i>	Damages to the northwest quarter of lot No. 9 in the 5th concession, and to the southeast half of lot No. 9, and northeast quarter of lot No. 9 in the northwest of Pigeon River, township of Emily, county of Victoria, Ont.	220 00
17907	" 3.	O. Stewart <i>et al.</i>	Damages to lots Nos. 12, 13, 14, 15 and 16, in the 18th concession, and lot No. 15 in the 17th concession, in the township of Otonabee, county of Peterborough, Ont.	1,200 00
17908	" 19.	John Morrissey <i>et ux.</i>	Damages to part of lot No. 16, in the 7th concession of the township of Emily, county of Victoria, Ont.	30 00
17909	Aug. 11.	John McCarrell <i>et ux.</i>	Damages to the southeast quarter of lot No. 21 in the 4th concession of the township of Emily, county of Victoria.	130 00
17910	" 6.	John Carroll <i>et al.</i>	Damages to part of lot No. 16 in the 7th concession of the township of Emily, county of Victoria.	100 00
17911	" 7.	Samuel F. Fee <i>et al.</i>	Damages to the north half of lot No. 12 in the 5th concession of the township of Emily, county of Victoria.	90 00

1 GEORGE V., A. 1911

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—*Continued.*TRENT CANAL—*Continued.*

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts.
17912	May 3..	Benjamin N. Harris <i>et al.</i> ..	Damages to lot No. 20 in the 17th concession of the township of Harvey, county of Peterborough, Ont.	60 00
17913	June 30..	James C. Dickey <i>et al.</i>	Damages to broken lot No. 6 and north part of lot No. 8 in the 11th concession of the township of Percy, county of Northumberland, Ont.	136 00
17914	July 17..	Matthew Brackenridge <i>et al.</i> ..	Damages to the west half of lots Nos. 2 and 3 in the 3rd concession of the township of Asphodel, county of Peterborough, Ont.	380 00
17930	Aug. 11..	Mosom Boyd Company....	Damages to lots Nos. 12 and 13 in the 19th concession of the township of Verulam, county of Victoria, Ont.	280 00
17939	" 21..	David F. Weir <i>et al.</i>	Damages to the south half of lot No. 18 and the north half of lot No. 19, in the 8th concession of the township of Emily, county of Victoria.	100 00
17949	" 21..	Wm. A. Nurse <i>et al.</i>	Damages to the west half of lot No. 17 in the 2nd concession of the township of South Monaghan, county of Northumberland, Ont.	150 00
17950	" 19..	James Kerr <i>et al.</i>	Damages to lot No. 1 in the 10th concession of the township of Verulam, county of Victoria Ont.	80 00
17951	" 31..	Francis McGuire <i>et ux.</i>	Damages to the east half of lot No. 11 in the 11th concession of the township of Percy, county of Northumberland, Ont.	24 00
17952	" 30..	Martha Chambers.....	Damages to the east half of lot No. 20 and southwest half of lot No. 21 in the 4th concession of the township of Emily, county of Victoria, Ont.	300 00
17974	June 23..	Joseph Harrington <i>et al.</i> ..	Damages to part of island 'A' and whole island 'B' in the township of Harvey, county of Peterborough, Ont.	500 00
17975	Sept. 2..	Andrew and Jos. McCarroll <i>et al.</i>	Damages to southeast quarter of lot No. 19, concession 4, township of Emily, county of Victoria, Ont.	40 00
17984	Aug. 16..	Mary Atwell <i>et al.</i>	Damages to south half of lot No. 11, concession 7, township of Emily, county of Victoria, Ont.	48 00
17985	" 16..	Thos. Atwell <i>et ux.</i>	Damages to southwest quarter of lot No. 12, concession 7, township of Emily, county of Victoria, Ont.	32 00
17995	Sept. 18..	Thomas Woods <i>e ux.</i>	Damages to the north part of lot No. 11 and south half of lot No. 12, in the 6th concession of the township of Emily, county of Victoria, Ont.	180 00
17996	Aug. 9..	Thomas J. Wallace <i>et al.</i> ..	Damages to southwest quarter of the east half of lot No. 10, in the 7th concession of the township of Otonabee, county of Peterborough, Ont.	70 00
17997	July 13..	Alfred Dawson <i>et ux.</i>	Damages to lot No. 31 and part of lot No. 35, in the 9th concession of the township of Hamilton, county of Northumberland, Ont.	120 00
18007	" 16..	William D. Monerief <i>et al.</i> ..	Damages to part of lots Nos. 28 and 29, in the 10th concession of the township of Hamilton, county of Northumberland, Ont.	60 00
18014	" 30..	William G. Brown <i>et al.</i>	Damages to part of lots 7 and 8 in the 8th concession of the township of Otonabee, county of Peterborough, Ont.	340 00
18015	" 31..	John E. Curtis <i>et al.</i>	Damages to lot No. 5, 3rd concession of the township of Alnwick, county of Northumberland, Ont.	376 00
18048	Oct. 23..	Wm. Wedlock <i>et al.</i>	Damages to part of lot 15 and part of lot 13 in the 6th concession of the township of Otonabee, county of Peterborough, Ont.	140 00
18066	Aug. 18..	Jno. J. Blackwell <i>et al.</i>	For damages to south quarter of lot No. 13 in the 7th concession of the township of Emily, county of Victoria, Ont.	40 00
18081	Nov. 19..	Jno. Brackenridge <i>et ux.</i> ..	Damages to lot No. 2 and west half of lot No. 3 in the 5th concession of the township of Asphodel, county of Peterborough, Ont.	110 00
18188	July 22..	Chas. McCaffrey <i>et ux.</i>	Damages to park lots 1 and 'N' in the village of Omeme, township of Emily, county of Victoria, Ont.	20 00
18189	" 22..	James Middleton.....	Damages to lot No. 21 in the 15th concession of the township of Smith, county of Peterborough, Ont.	25 00
18229	April 23..	Austin Sherwin.....	Damages to 40 acres of land: east half and east part of west half of lot No. 3 in the 2nd concession of the township of Alnwick, county of Northumberland, Ont.	40 00
18230	Nov. 15..	Chas. McIlmoyle <i>et ux.</i>	For damages to part of north half of lot No. 19 in the 16th concession of the township of Harvey, county of Peterborough, Ont.	30 00

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—Continued.

TRENT CANAL—Continued.

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts.
*18233	Feb. 16..	Jas. R. Boate <i>et al.</i>	For damages to north half of lot No. 21, in the 4th concession, and to lot No. 22 in the 5th concession of the township of Emily, county of Victoria, Ont.	300 00
18234	May 22..	Thos. G. Gihbs <i>et ux.</i>	For damages to south half of lot 18 and to north-east quarter of lot No. 17 of the 16th concession of the township of Otonabee, county of Peterborough, Ont.	400 00
18235	Aug. 18..	Sndy Matchett <i>et ux.</i>	For damages to part of lot No. 19, concession 16, of the township of Otonabee, county of Peterborough, Ont.	255 00
18236	July 23..	John McCauley <i>et al.</i>	Damages to west part of lot No. 3 in the 5th concession of the township of South Burleigh, county of Peterborough, Ont.	128 00
18237	Dec. 28..	Patrick Bolin <i>et al.</i>	Damages to lots 8, 9 and 10, in the 7th concession of the township of Otonabee, county of Peterborough, Ont.	88 00
18238	July 10..	John Riddell <i>et al.</i>	Damages to east half of lot No. 13, concession 4, and east half of lot No. 13, concession 5, of the township of South Monaghan, county of Northumberland, Ont.	200 00
18291	Dec. 4..	Matthew McIlmoyle <i>et ux.</i> ..	For damages by water to south half of lot No. 19, concession 16, of the township of Harvey, county of Peterborough, Ont., also part of west half of north half of said lot No. 19.	12 00
	1910.			
18450	Mar. 19..	Bruce Savigny <i>et ux.</i>	Damages to the east half of lot No. 15, 17th concession of the township of Otonabee, county of Peterborough, Ont.	156 00
	1909.			
18451	June 26..	Fred. W. Stockdale <i>et al.</i> ..	Damages to island 'A' in the township of Harvey, county of Peterborough, Ont.	133 00
18452	" 11..	George Brown <i>et ux.</i>	Damages to lot No. 20, in the 7th concession of the township of Alnwick, county of Northumberland, Ont.	30 00
18453	Dec. 31..	Thos. J. Cullen <i>et ux.</i>	Damages to lot No. 22 and to the north half of lot 23 in the 16th concession of the township of Smith, county of Peterborough, Ont.	100 00
18454	Sept. 23..	Wm. F. Trude <i>et al.</i>	Damages to lots Nos. 24 and 25 in the 15th concession of the township of Smith, county of Peterborough, Ont.	240 00
18455	May 3..	Thos. McCracken.....	Damages to lot No. 22 in the 7th concession of the township of Alnwick, county of Northumberland, Ont.	40 00
18456	Nov. 13..	Samuel Tate <i>et al.</i>	Damages to lots Nos. 16 and 17 in the 14th concession, and the east half of lot No. 18 in the 15th concession of the township of Harvey, county of Peterborough, Ont.	64 00
18457	June 26..	Patrick Crowley <i>et al.</i>	Damages to lot No. 3 in the 5th concession of the township of Asphodel, county of Peterborough, Ont.	320 00
18458	Aug. 7..	Patrick English.....	Damages to west half of lot No. 9 in the 11th concession of the township of Percy, county of Northumberland, Ont.	56 00
18460	April 22..	Wm. Windsor <i>et al.</i>	Damages to west quarter of lot No. 4 in the 3rd concession of the township of Burleigh, county of Peterborough, Ont.	100 00
18461	Oct. 9..	Thos. Davidson <i>et ux.</i>	Damages to lot No. 6 in the 2nd concession of the township of Asphodel, county of Peterborough, Ont.	45 00
18462	Nov. 29..	Richard Byrnell <i>et al.</i>	Damages to part of lot No. 23 in the 8th concession and part of lot No. 23 in the 9th concession of the township of Fenelon, county of Victoria, Ont.	40 00
	1910.			
18463	Jan. 10..	Elizabeth A. Fowler <i>et al.</i> ..	Damages to lots Nos. 15 and 15 in the 9th concession of the township of Smith, county of Peterborough, Ont.	16 00

* Too late for last year's report.

1 GEORGE V., A. 1911

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—*Continued.*TRENT CANAL—*Continued.*

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts.
18464	July —	David J. Ball <i>et al.</i>	Damages to west half of east half of lot No. 7 in the 10th concession of the township of Harvey, county of Peterborough, Ont.	12 00
18467	May 8	William S. Rutherford <i>et al.</i>	For damages by water to north three-quarters of lot No. 6 in the 3rd concession of the township of South Monaghan, county of Northumberland, Ont.	220 00
18470	July 17	Archibald Johnston	For damages by water to lots Nos. 1 and 2, and to lot "A," in the 14th concession of the township of Harvey, county of Peterborough, Ont.	200 00
18472	May 29	Hugh Allen <i>et ux.</i>	For damages by water to the east half of lot No. 3, in the 14th concession of the township of Harvey, county of Peterborough, Ont.	96 00
18473	July 27	Michael D. Wallace <i>et ux.</i>	For damages by water to the north half of the southwest quarter of lot No. 8; the north half of the southwest half of lot No. 9; the north half of the southeast quarter of lot No. 9, and the south half of the northwest quarter of lot No. 8, in the 7th concession of the township of Otonabee, county of Peterborough, Ont.	144 00
18471	Dec. 1	Alexander Reid <i>et al.</i>	Damages by water to part of lot No. 3, in the 4th concession of the township of South Burleigh, in the county of Peterborough, Ont.	120 00
	1910.			
18474	Feb. 26	James Gilchrist Burnham <i>et al.</i>	Damages by water to northeast quarter of lot No. 11, and to parts of lots 12, 13 and 14, concession 6, township of Otonabee, county of Peterborough, Ont.	424 00
	1909.			
*18475	Feb. 5	Darius G. Hall <i>et al.</i>	For damages by water to lot No. 2, in the 11th concession of the township of Harvey, county of Peterborough, Ont.	130 00
18476	May 15	Isabel Eastwood <i>et al.</i>	Damages by water to island No. 78, in Stoney lake, in the township of Burleigh, in the county of Peterborough, Ont.	200 00
*18477	Feb. 10	George W. Bennett <i>et al.</i>	For damages by water to island No. 56, of the township of Peterborough, Ont.	150 00
18478	April 1	John Faux <i>et al.</i>	Damages by water to parts of broken lots 12 and 13 in the 2nd concession of the township of Otonabee, county of Peterborough, Ont.	500 00
*18479	Jan. 26	William James Northey <i>et ux.</i>	Damages by water to lot No. 27, in the 14th concession of the township of Smith, in the county of Peterborough, Ont.	42 00
18480	June 21	Archibald Wilson <i>et al.</i>	For damages by water to lot No. 2, in the 16th concession of the township of Harvey, county of Peterborough, Ont.	245 00
	1910.			
18481	Feb. 8	Daniel Ward <i>et al.</i>	For damages by water to the west half of lot No. 22, in the 16th concession of the township of Harvey, county of Peterborough, Ont.	300 00
	1909.			
18482	June 24	George Walford Hatton	For damages by water to part of lot No. 3, in the 7th concession, and to the east half of lot No. 2, in the 6th concession of the township of South Burleigh, in the county of Peterborough, Ont.	192 00
	1910.			
18483	Jan. 29	Martha Perrin <i>et al.</i>	For damages by water to parts of lots Nos. 17 and 18, in the 2nd concession of the township of South Monaghan, county of Northumberland, Ont.	240 00
	1909.			
18484	June 19	Robert James Gray <i>et al.</i>	For damages by water to parts of west half of lot No. 8, and to parts of west half of lot No. 7, in 10th concession of the township of Otonabee, in the county of Peterborough, Ont.	500 00
18485	May 22	James Carlington Foley <i>et al.</i>	Damages by water to the west half of lot 11, and to the west half of lot No. 12, in the 4th concession of the township of Otonabee, county of Peterborough, Ont.	320 00

* Too late for last year's report.

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—*Continued.*TRENT CANAL—*Continued.*

No. of Release.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ ots.
18486	Dec. 16..	John Moncrief <i>et ux.</i>	Damages by water to the southwest quarter of lot No. 13, in the 1st concession of the township of South Monaghan, county of Northumberland, Ont.	40 00
	1910.			
18487	Feb. 1..	John Brandon Beatty <i>et al.</i>	For damages by water to the south half of the west half of lot No. 25, in the 16th concession of the township of Harvey, county of Peterborough, Ont.	75 00
	1909.			
18488	Aug. 14..	William Melhnoyle <i>et ux.</i> ...	Damages by water to part of lot 21, in the 15th concession of the township of Smith, county of Peterborough, Ont.	25 00
	1910.			
18489	Feb. 26..	William Beatty <i>et al.</i>	Damages by water to the south quarter of lot No. 20, concession 16, of the township of Harvey, county of Peterborough, Ont.	24 00
	1909.			
18490	Oct. 23..	William Wedlock <i>et al.</i>	Damages by water to part of lot No. 13, parts of the southwest quarter of lot No. 14, part of the east half of lot No. 14, and parts of lot 15, in the 6th concession of the township of Otonabee, county of Peterborough, Ont.	600 00
*18491	Mar. 2..	Bruce Johnston <i>et al.</i>	For damages by water to part of lot No. 10, in the 10th concession of the township of North Monaghan, county of Peterborough, Ont.	720 ⁰⁰
	1910.			
18492	Feb. 26..	Morgan Adam <i>et al.</i>	For damages by water to east half of lot No. 28, in the 14th concession of the township of Smith, county of Peterborough, Ont.	24 00
18493	" 11..	George Whittington <i>et al.</i> ..	For damages by water to lot No. 17, and part of lot No. 16, in the 3rd concession of the township of South Monaghan, county of Northumberland, Ont.	240 ⁰⁰
	1909.			
18494	Dec. 30..	David Bardow <i>et al.</i>	For damages by water to the west half of lot No. 24, in the 16th concession of the township of Harvey, in the county of Peterborough, Ont.	50 00
	1910.			
18495	Jan. 15..	Frank Howard Savigny <i>et al.</i>	Damages by water to part of the east half of lot No. 15, in the 17th concession of the township of Otonabee, county of Peterborough, Ont.	65 00
18496	" 15..	Thomas Thomson <i>et ux.</i>	For damages by water to lot No. 4, and part of lot No. 1, hlock 'A,' township of Otonabee, county of Peterborough, Ont.	60 00
	1909.			
18497	May 22..	Henry G. Nisbett.....	For damages by water to west half of lots Nos. 4 and 5, in the 16th concession of the township of Harvey, county of Peterborough, Ont.	140 00
18498	June 19..	David Hutchison <i>et ux.</i>	For damages by water to lot No. 14, in the 17th concession of the township of Otonabee, county of Peterborough, Ont.	650 00
18499	June 19..	Walter Thompson <i>et ux.</i>	Damages by water to lot No. 7, in the 9th concession of the township of Otonabee, county of Peterborough, Ont.	1,100 00
	1910.			
18500	Feb. 1..	Rupert H. Bradburn <i>et al.</i>	For damages by water to west half of lot No. 12, in the 17th concession of the township of Otonabee, county of Peterborough, Ont.	240 00

* Too late for last Year's report.

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1910—*Concluded.*

TRENT CANAL—*Concluded.*

No. of Re-lease.	Date of Signature.	Grantor.	Description.	Amount.
	1909.			\$ cts.
18501	Dec. 21.	Lewis Parker <i>et al.</i>	For damages by water to part of lot 19, in the 15th concession, east of Eel's creek, township of Harvey, county of Peterborough, Ont.	60 00
18502	Nov. 24.	Benjamin Kindred <i>et al.</i>	For damages by water to northwest quarter of lot No. 8, in the 8th concession of the township of Otonabee, county of Peterborough, Ont.	160 00
18503	Dec. 17.	Matilda Wright <i>et al.</i>	Damages by water to the south half of lot No. 4, in the 7th concession of the township of North Monaghan, in the county of Peterborough, Ont.	200 00
18504	June 23.	Ellen Cadigan <i>et al.</i>	Damages by water to part of lot 4, and to the northeast quarter of lot 5, in the 10th concession of the township of Ennismore, county of Peterborough, Ont.	225 00
*18505	Mar. 8.	Daniel Cadigan <i>et al.</i>	Damages by water to parts of lots 4 and 5, in the 10th concession of the township of Ennismore, county of Peterborough, Ont.	250 00
18506	June 12.	Eleanor A. Allen.....	For damages by water to lot No. 4, in the 14th concession of the township of Harvey, county of Peterborough, Ont.	150 00
	1910.			
18507	Mar. 1.	Nathaniel Crowe <i>et al.</i>	Damages by water to part of the west half of lot No. 18, in the 15th concession of the township of Harvey, county of Peterborough, Ont.	35 00
	1909.			
18513	May 4.	John B. McWilliams <i>et ux.</i>	Damages by water to lots Nos. 2 and 3, in the 11th concession of the township of South Burleigh, and to island No. 47, in the township of Dummer, county of Peterborough, Ont.	400 00

* Too late for last year's report.

H. F. ALWARD,
Departmental Solicitor.

PART III

REPORTS OF THE GOVERNMENT RAILWAY BOARD
AND OTHER OFFICIALS FOR THE
YEAR 1909-1910.

1. Government Railways Managing Board.
W. B. MacKenzie, Chief Engineer, I.C.R.
T. C. Burbee, Engineer of Maintenance, I.C.R.
G. R. Joughins, Superintendent of Motive Power, I.C.R.
S. L. Shannon, Comptroller, I.C.R.
2. T. C. Burbee, Engineer of Maintenance, Windsor Branch.
S. L. Shannon, Comptroller, Windsor Branch.
3. W. B. MacKenzie, Chief Engineer, P.E.I. Ry.
G. A. Sharpe, Superintendent, P.E.I. Ry.
W. S. Poole, Mechanical Superintendent, P.E.I. Ry.
W. T. Huggan, Accountant and Auditor, P.E.I. Ry.
4. Chairman and Secretary of Government Railways Provident Fund.

MONCTON, N.B., July 6, 1910.

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, 1910.

The board was constituted by an order in council, dated April 20, 1909, and the following were appointed its members, namely:—

Mr. M. J. Butler, Deputy Minister and Chief Engineer of the Department of Railways and Canals, chairman of the board.

Mr. David Pottinger, I.S.O.

Mr. E. Tiffin, general traffic manager.

Mr. F. P. Brady, general superintendent.

Subsequently on February 5, 1910, Mr. Butler having resigned, Mr. A. W. Campbell, C.E., Deputy Minister of the Department of Railways and Canals, was appointed chairman of the board, and Mr. D. Pottinger, assistant chairman, by order in council, dated February 3, 1910.

The board, therefore, from February 5 to March 31, 1910, 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.

The board held its first meeting on May 26, 1909, at Montreal.

There were twenty-three meetings in all from that date to March 31, 1910, ten of them in Montreal, eleven in Moncton and two elsewhere along the line of railway.

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.

THE INTERCOLONIAL RAILWAY.

The following reports of officials are inclosed:—

Report of the Chief Engineer on the works charged to capital account.

Report of the Engineer of Maintenance on the repair and renewal of the permanent way buildings and works.

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 averages.

Return of casualties:

9-10 EDWARD VII., A. 1910

The length of railway in operation during the year was the same as last year, 1,447.13 miles.

CAPITAL ACCOUNT.

The cost of road and equipment on March 31, 1909, was \$90,994,664.06. The additions during the year were as follows:—

Campbellton—improvements	\$ 1,988 49
Chatham—diversion of line and branch to wharf	5,228 44
Chaudiere Junction—engine house, &c.	6,834 61
Dalhousie—extension to wharf	27,500 00
Eastville—to provide a subway crossing, about one mile south of Londonderry station	68 75
Halifax—increased accommodation.	179,953 93
Indiantown and Blackville—to put line into condition for operation.	49 991 90
Loggieville—improvements	25,474 27
Moncton—locomotive and car shops with equipment and new freight yard.	399,400 49
Moncton—cut-off line at.	1,975 15
Mulgrave—improvements	18,403 15
Newcastle—improvements	2,472 16
North Sydney—improvements	5,771 37
Pictou—increased accommodation.	800 64
Point Tupper—improvements.	3,998 88
Probert's—to provide an overhead crossing, about two miles north of Londonderry station.	43 14
Riviere du Loup—engine house, machine shops, &c	156,945 33
Sackville—improvements	7,875 81
Sydney Mines to River George—diversion of line.	20,256 36
St. Cyrille and Drummondville—diversion of public road to eliminate a crossing at rail level.	1,300 00
Ste. Flavie—increased accommodation	3,754 26
Ste. Rosalie—improvements.	3,540 32
Truro—increased accommodation	17,019 51
New machinery for locomotive and car shops.	95,799 43
Construction—original.	6,644 09
Double tracking parts of line	68,977 65
Increased accommodation and facilities.	100,565 28
New turn-tables.	2,696 13
Strengthening bridges	10,272 26
Rolling stock.	10,430 54
To increase water supply.	42,432 26

\$1,278,467 60

Less:

To extension to Sydney Mines, 1908-09.	\$ 4 90
To increased accommodation at Stellarton, 1908-09.	53 25

58 15

1,278,409 45

Making the total cost on March 31, 1910. \$92,273,073 51

The explanation of the above deductions is as follows:

The \$4.90 is a refund of an amount overpaid for legal services.

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The amount of \$53.25 is composed of two sums, a cheque for \$50 was issued to pay for land, the person in whose favour the cheque was drawn refused to accept the amount offered, and the cheque was cancelled, the \$3.25 is a credit for express charges refunded.

Explanations in regard to the expenditures on capital account will be found in the report of the chief engineer, and in the report of the superintendent of motive power.

REVENUE ACCOUNT.

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

Gross earnings	\$9,268,234 99
Working expenses	8,645,070 33
	<hr/>
Net earnings	\$ 623,164 66

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

In 1909-10	\$9,268,234 99
1908-09	8,527,069 46
	<hr/>
Increase	\$ 741,165 53

The earnings from passenger traffic compare as follows:—

In 1909-10	\$2,765,884 66
1908-09	2,628,218 57
	<hr/>
Increase	\$ 137,666 09

The earnings from freight traffic compare as follows:—

In 1909-10	\$6,048,884 18
1908-09	5,502,550 58
	<hr/>
Increase	\$ 546,333 60

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

In 1909-10	\$453,466 15
1908-09	396,300 31
	<hr/>
Increase	\$ 57,165 84

The earnings by mile of railway compare as follows:—

In 1909-10	\$6,404 56
1908-09	5,892 40
	<hr/>
Increase	\$ 512 16

The earnings by train compare as follows:—

In 1909-10	\$1 39
1908-09	1 24

The number of passengers carried compares as follows:—

In 1909-10	\$3,122,324
1908-09	2,907,237
	<hr/>
Increase	\$ 215,087

There was an increase of 217,330 in the number of local passengers, and a decrease of 2,243 in the number of through passengers.

9-10 EDWARD VII., A. 1910

The weight of revenue producing freight compares as follows:—

	Tons.
In 1909-10.	3,927,240
1908-09.	3,573,972
	<hr/>
Increase	353,268

There was an increase in local freight of 216,188 tons, and also an increase in through freight of 137,080 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 of through freight carried, and the mileage.

Comparative statement of 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.

WORKING EXPENSES.

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

In 1909-10.	\$8,645,070 33
1908-09.	9,328,021 55
	<hr/>
Decrease.	\$ 682,951 22

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

Per mile run by engines—

In 1909-10.	1.0042
1908-09.	1.0129

Per mile run by trains—

In 1909-10.	1.29
1908-09.	1.35

Working expenses per mile of railway—

In 1909-10.	\$5,973 94
1908-09.	6,445 89

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

During the year 600,163 ordinary ties and 288 sets of switch ties were put in. 56.38 miles of track were rebalasted, 67,659 cubic yards of ballast being used. 3.85 miles of additional sidings were provided at various points.

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Bridges, culverts, wharfs and buildings received necessary repairs.

The fences were repaired and 47.42 miles of fences were built.

The snow sheds and snow fences were repaired.

The Superintendent of Motive Power in his report which is sent herewith states that the general condition of the rolling stock is good.

One box freight car, sixteen platform cars and one flanger car were rebuilt in the railway shops to replace an equal number taken out of service.

Thirty steel side dump coal cars were purchased to replace coal cars of an equal capacity taken out of service. Six box baggage cars were purchased to replace an equal number of cars taken out of service.

All the above were charged to working expenses.

STORES.

The value of stores purchased was	\$2,800,212 24
The value of stores used was	3,363,105 44
The value of material sold was	225,144 67
The value of stores on hand at the end of the year was:—	
Miscellaneous	\$ 511,892 90
Fuel	416,911 37
Roadway and bridge material	314,377 42
	<hr/>
Total	\$1,243,181 69

ACCOUNTS.

During the session of parliament of 1908-09, the Select Standing Committee on Public Accounts inquired into and considered the various items composing the general balance of the railway, and recommended that items amounting to \$153,731.04 which were found to be uncollectable be eliminated from the general balance. This recommendation was approved by parliament and the items were transferred to Dominion account accordingly.

GENERAL.

The winter of 1909-10 was comparatively mild and more favourable to the working of the railway than the previous year. There were several heavy snowstorms, but they caused very little delay to trains. The expenditure for clearing snow and ice was \$91,124.29. The sudden and extreme changes of temperature experienced during the winter made it very trying to the rolling stock and also to the track.

On August 3, 1909, the coal shed at Richmond was destroyed by fire, together with about 50 tons of coal. The trestle leading to the coal shed was partly burned. Thirteen light box cars, one cattle car, one gondola car, seven large coal hopper cars and two small coal hoppers were also destroyed in the same fire. The balance of the coal in the shed was saved, some of it in a damaged condition.

On November 17, 1909, the car service building at Moncton, the ground floor of which was occupied by the trainmen's rest rooms and by the express companies, and the upper floor of which contained the offices of the car service department, was considerably damaged by fire, one end of the building being destroyed with all the car service records. Temporary accomodation was provided for the occupants of the building until it was rebuilt.

Between April 15 and 23, 1909, considerable trouble was experienced on the portion of the line between Gibson and Blackville in consequence of high water. Heavy rains set in and the freshets caused several washouts and earth slides; the ice jammed in the Miramichi river and the water rose and overflowed the track to a depth of several

fect at a number of places, the track at McNamee's flats being under the water for some distance for several days. During that time the movement of freight traffic was interrupted, and passengers and mails were transported only with difficulty and some delay, a transfer having to be made by teams at places where the trains could not get through. When the water had subsided and the repairs to the roadway and track were being made it was found desirable to raise the track at McNamee's and an expenditure of \$1,000 was made on that account.

From September 27 to 30, 1909, trouble was again experienced on the same portion of the line from washouts, earth slides and overflow of water, in consequence of continual heavy rains. The movement of freight was again delayed. Passenger trains were also delayed on that account. The total cost of repairing the damage done on the above section of the road amounted to \$2,673.65.

On October 1, 1909, there were several washouts in the neighbourhood of Dorchester, caused by high tides in the Petitcodiac river, and trains, both passenger and freight, were delayed to some extent in consequence. When repairing these washouts, it was decided to raise the level of the track in certain places by filling so as to afford better protection for the future, and this was done at a cost of \$3,426.56—6,660 cubic yards of material being used for the purpose.

On October 25 and 26, 1909, a succession of heavy rain storms caused a number of washouts at different places on the line between New Glasgow and Mulgrave; the most serious ones being Sylvan Valley Mills, Pomquet, Afton and Delorey's. All traffic over that portion of the road was interrupted for twenty-four hours. The cost of repairing the damage done amounted to \$2,141.78.

WINDSOR BRANCH RAILWAY.

This 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 to the government one-third of the gross earnings.

The following statements of the accounts prepared by the comptroller are enclosed:—

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

Also the report of the Engineer of Maintenance on the work done during the year, and on the condition of the branch.

The revenue ($\frac{1}{3}$ earnings) was	\$60,653 98
The cost of maintenance was	23,549 90

Net earnings \$37,104 08

The earnings increased considerably over those of the previous year as follows:—

Earnings, 1909-10	\$60,653 98
Earnings, 1908-09	56,031 33

Increase \$ 4,622 65

The increase was in both passenger and freight traffic.

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

PRINCE EDWARD ISLAND RAILWAY.

This railway is 267.5 miles in length, and the gauge is 3 feet 6 inches.

The following reports of officials are enclosed:—

Report of the Chief Engineer on the works charged to capital account.

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, 1909,	
was	\$8,258,967 94
The expenditure during the year was.	206,396 97

Making the total cost on March 31, 1910. . . . \$8,465,364 91

The report of the superintendent and the report of the chief engineer give the details and explanations in regard to capital expenditure.

The working expenses for the year were.	\$427,283 73
The gross earnings were.	319,074 74

Deficiency. \$108,208 99

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

In 1909-10.	\$319,074 74
In 1908-09.	311,319 63

Increase. \$ 7,755 11

The increase was in both passenger and freight traffic.

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

In 1909-10.	\$427,283 73
In 1908-09.	400,330 41

Increase. \$ 16,953 32

The necessary work was done to maintain the permanent way and works, and the rolling stock, and they are in a state of efficiency.

INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS EMPLOYEES' PROVIDENT FUND.

The report of this fund which has been sent separately shows:—

Credit balance on March 31, 1909.	\$225,893 31
During the fiscal year the contributions of the employees amounted to	69,949 70
The contributions of the railways amounted to.	69,949 70
Amounts received for refunds	483 06

A total of. \$366,280 77

The total expenditure was. 117,010 01

Leaving a balance of. \$249,270 76

To which is to be added the interest. 6,314 32

Making a total amount to the credit of the fund on March 31, 1910. \$255,585 08

9-10 EDWARD VII., A. 1910

During the year one hundred and sixty-eight employees were retired and placed upon the fund and seventeen have died, leaving three hundred and fifty-three persons on the list receiving an allowance from the fund at the end of the fiscal year. This is an increase of 151 persons compared with last year.

We have the honour to be, sir,

Your obedient servants,

A. W. CAMPBELL, Chairman.

D. POTTINGER, Assistant Chairman.

E. TIFFIN, General Traffic Manager.

F. P. BRADY, General Superintendent.

Government Railways Managing Board.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE CHIEF ENGINEER.

MONCTON, N.B., June 30, 1910.

SIR,—I have the honour to submit the following report on Capital Account expenditure for the fiscal year ending March 31, 1910:—

TOWARDS DOUBLE TRACKING PARTS OF THE LINE.

The double track between Moncton and Painsec Junction was completed and put in operation on August 22, 1909.

A concrete retaining wall with iron pipe railing was constructed for the protection of the street leading from Church street to St. George street; this was necessary on account of this street having been narrowed considerably by the excavation for the second track.

Electric signal gongs were installed for protection at the following crossings:—

Irishtown Road, Sunny Brae, and at Lutes, Queen, Robinson, Victoria, St. George and Church streets in the city of Moncton.

A signal tower was built and an interlocking plant installed for the protection of trains at the point where the Moncton and Buctouche railway crosses the Intercolonial.

.419 of an acre of land required for the right of way was purchased.

IMPROVEMENTS AT MULGRAVE.

The work in connection with the extension of the water pipe line, and construction of a reservoir for additional water supply for which the contract was let in the fiscal year 1908-09 was completed.

.3061 of an acre of land required for the reservoir was purchased.

A second track was laid on the main line from Pirate Harbour to Mulgrave, a distance of 1,986 lineal feet.

A brick house with concrete foundation was erected for the hoisting engine in connection with the transfer bridge of the Strait of Canso ferry service.

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IMPROVEMENTS AT LOGGIEVILLE.

The station facilities at this point were remodelled and enlarged.

.688 of an acre of land was purchased.

A new five-stall brick engine house and annex, a standard cinder pit and ring wall for turntable were built. (The ring wall and turntable were charged to Capital Appropriation—'New Turntables.')

A steam heating apparatus was provided for the engine house.

A complete system of drainage was provided to carry drainage to the river about 900 feet distant from the engine house.

The water supply was extended from the existing tank through a line of 10-inch C. I. pipe to a stand pipe located near cinder pit, and from stand pipe to engine house and station. The tracks in yard were remodelled and lengthened by the laying of 2,805 feet of additional sidings.

The station was removed to a new location to suit the remodelled yard. It was also remodelled and extended. A new cellar and foundation was provided and new platform built. A new freight shed 20 feet by 60 feet with a freight platform was erected. On account of bad weather and early frost last fall, the work on the water service and drainage system was not completed.

The cast iron smoke jacks, water service and heating of engine house were not completed.

All the uncompleted work will be finished up early in the fiscal year of 1910-11.

All the work, excepting the freight house and platform was done by the day, as a large part of the material used was taken from other buildings that had been demolished. The freight house and platform were built under contract.

To increase accommodation at Truro—

The work in connection with the contract for the construction of a highway at the east end of the yard to take the place of Christie's lane was completed. The lane was closed by the construction of a track in the new yard.

The cribwork protection at the ends of the bridge abutments of the approaches to the new yard, was also completed.

An addition of six pockets were added to the existing coaling plant.

An office for the yardmaster was under construction by day labour, and will be completed in fiscal year 1910-11.

Some grading was done and 4,938 lineal feet of tracks laid in the new yard.

301,418 square feet of land required for yard accommodation were purchased.

To increase accommodation at Pictou.

A loading platform was provided and an addition added to the existing ice house.

Cut-off Line at Moncton.

Location surveys were made from Sunny Brae flag station to the vicinity of the new shops at Moncton, a total distance of 1.44 miles of double track.

Expropriation plans and descriptions for right of way were filed (October, 1909), and plans and specification prepared in readiness to ask tenders for construction.

Original Construction.—

Under this appropriation, the following amounts were paid: Marion S. Morrow, widow of Geoffrey Morrow; Chas. T. Mander, Deaf and Dumb Institution; and Henry N. Paint, \$5,906.25 for 118,125 square feet of land and land covered with water at Point Tupper. Imperial Oil Company, \$344 for repayment of expenses for removal of oil pipes and other property at Afrieville made necessary by the removal of the railway fence to the eastward in consequence of the double tracking of the Intercolonial railway between Richmond and Rockingham.

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R. T. MacIreith, \$219.94, for legal expenses in connection with the Imperial Oil Company's claim.

James Friel, \$10 for legal services *re* North River ballast pit.

P. S. Archibald, \$107.60, and Chief Engineer of the Intercolonial railway, \$38.15, for services and expenses in connection with case Montgomery vs. The King—Dalhousie water supply.

A. M. McLellan, \$18.15, for expenses *re* Cameron's siding, Sylvester.

Improvements at North Sydney—

An extension was built to the existing freight shed on the railway wharf.

To Strengthen bridges—

During the year bridges were erected at the following places:—

	Feet.	Inches.
St. Octave—1 beam span.	13	— 2
St. Octave—1 beam span.	14	— 0
Kempt—1 beam span.	12	— 9
Kempt—1 beam span.	14	— 9
Cedar Hall—1 beam span.	17	— 11
Cedar Hall—1 beam span.	17	— 5
Cedar Hall—1 beam span.	14	— 6
Amqui—1 beam span.	13	— 6
Amqui—1 beam span.	13	— 0
Beau Rivage—1 beam span.	17	— 6
Beau Rivage—1 deck plate girder span.	34	— 6
Trois Saumons—1 deck plate girder span.	25	— 0
Hadlow—1 deck plate girder skew span.	56	— 6
St. Romuald—1 beam span.	14	— 8
St. Romuald—1 beam span.	15	— 9
St. Romuald—1 beam span.	16	— 0
St. Romuald—1 through plate girder span.	25	— 5
St. Romuald—1 beam span.	13	— 5
St. Romuald—1 beam span.	17	— 3
St. Romuald—1 beam span.	16	— 3
St. Romuald—1 beam span.	17	— 4
St. Romuald—1 deck plate girder span.	34	— 6
St. Romuald—1 deck plate girder span.	18	— 9
St. Romuald—1 beam span.	18	— 9
St. Romuald—1 beam span.	21	— 0

The necessary alterations and painting in connection with the above bridges will be completed in fiscal year 1910-11.

The Hillside paving blocks that were delivered last year were laid on the Union street overhead bridge.

Improvements at Sackville.

The freight shed for which the contract was let last year was completed and the building wired for electric lighting. New freight scales were put in freight shed.

A cattle pen was provided. A roadway was made from the new freight shed on Intercolonial railway property to Lorne street.

The grading required around new freight house was completed and 775 lineal feet of tracks laid.

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To increase accommodation at Halifax—

The contract work in connection with the 36-stall engine house and concrete annex, power house and for the supply and installation of a fan-heating system, steam and water pipes, &c., for the engine house were completed, but the final estimates were not paid on account of the appropriation being exhausted.

The 3-280 H.P. boilers, supplied under contract by the Canada Foundry Co., were erected in place on concrete foundations in the boiler house.

The oil house was equipped with a set of tanks and pumps, supplied under contract by the S. F. Bowser & Co., Ltd.

Alterations were made to the coaling pockets to facilitate the handling of coal for the low engines.

Improvements were made to the water supply system.

The work in connection with the moving of the electric plant from North street to the Willow Park yard and wiring the new buildings and yard was carried on during the year.

The final estimate in favour of Beazley Bros., on their contract for submarine blasting and dredging at Deep Water terminus was paid.

The balance due the contractor in connection with the double tracking of the Cotton Factory branch which was completed in 1908-09, was paid.

A trackman's tool house was erected on the Cotton Factory branch.

5.215 acres of land required for right-of-way for Cotton Factory branch were purchased.

13,835 lineal feet of tracks were laid in the Willow Park yard and ballasted.

For details of machinery, see report of G. R. Joughins, superintendent of motive power and rolling stock.

Diversion of line Sydney Mines to River George—

Surveys were made for a single track diversion from near George's River station to Sydney Mines, via the shore of Little Bras d'Or lake, a distance of 9.09 miles. Plans and specifications have been prepared and tenders asked for.

Diversion of line at Chatham and branch to wharf.

Location has been made from Nelson station, easterly through the town of Chatham, thence to a point about $1\frac{1}{2}$ miles east of the town limits three miles west of Loggieville and where the new line connects with the existing one. Length of new line, 8.28 miles.

Plans and specifications were prepared and tenders asked for.

Locomotive and car shops with equipment and new freight yard at Moncton—

Some additions and extensions were made to the internal arrangements of the locomotive and passenger car repair shops, and a terrano floor was put in the power house.

Additions were made to the water and drainage pipes.

10 96-inch diameter cast iron turntables were installed.

9 96-inch diameter steel turntables for trolley tracks were installed.

A 15-inch steam header for the steam boilers was erected.

2 chain grate stokers were provided for the boilers taken from the old shops.

A large area of excavation was made by steam shovel and 28,597 lineal feet of track laid and ballasted.

For details of machinery and electrical equipment, see report of G. R. Joughins.

New turntables—

The 75-foot steel turntable that was delivered at Loggieville in year 1908-09 was erected in place on a concrete centre foundation and ring wall.

To increase water supply—

The following work was done under this appropriation during the year:—

St. Apollinaire.—The work in connection with water supply and tank at this place has been completed. A piece of land for a reservoir on the brook was taken; but the amount offered the proprietor has been refused. Three mill-owners further down the brook claim that the taking of water from the brook by the railway produces a scarcity of water for the operation of their mills, and they are claiming damages.

Cedar Hall.—A survey was made, plans and specification prepared and tenders asked, and a contract let for an extension to the existing pipe line and for the construction of a reservoir and a 50,000 gallon water tank.

North Sydney.—The existing pipe line was extended 240 lineal feet and one fire hydrant erected for fire protection.

Contract was let for 50,000 gallon water tanks at Rogersville, Beaver Brook and Windsor Junction, and the work of construction is under way.

Little Metis.—The existing pipe line was extended and a pump house, pump and boiler provided.

Sussex.—The existing pipe line was extended and pump house, pump and boiler supplied.

St. Charles Junction.—The work in connection with the water supply at this place was completed.

Reservoirs were fenced at Springhill Junction, Piedmont and Bathurst.

Sydney.—The existing pipe line was extended 240 feet and three fire hydrants erected for fire protection.

Increased accommodation and facilities along the line.

Mackenzie.—A combined passenger station and dwelling was provided.

Boiesdale.—A passenger station was provided.

St. John.—A wooden car repair shop was provided. A fire alarm system was installed throughout the yard. Some grading was done and 5,579½ feet of track laid in the yard and ballasted.

Dorchester.—Toilet accommodations were installed in the station and agent's dwelling apartments.

Petit Rocher.—An electric semaphore was erected west of the station on the spur line to the wharf, but was only in operation a short time when it was taken down and is now stored at Moncton.

New Glasgow.—The freight office was enlarged and a hot water heating system installed.

Merigomish.—An addition to the freight shed was built.

Montmagny.—A building for baggage, coal and oil was provided.

Dalhousie.—A one-stall brick engine house was built by day labour.

Hampton.—A baggage room was provided.

Carrolls.—A shelter was provided.

Marysville.—The existing freight shed was extended.

St. Paschal.—The existing freight shed was extended and room provided for baggage, coal and oil.

Little Metis.—Plans and specification were prepared for a wooden station, tenders asked and contract let, which was cancelled before any work was done.

Lac au Salmon.—The freight shed was extended.

Hurley Brook.—A shelter and platform was provided.

McLeod's.—A shelter and platform was provided.

Amqui.—A sewer was put in for drainage from station to take the place of two cess pits.

St. Pierre.—A loading platform was built.

L'Islet.—A building for baggage, coal and oil was provided.

St. Alexis.—The freight shed was extended.

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- Ivory's.—A shelter and platform was provided.
- Weaver's.—A shelter and platform was provided.
- Upper Blackville.—A building for baggage, coal and oil was provided.
- St. Philippe de Neri.—A loading platform was built.
- Aston Junction.—A building for baggage, coal and oil was provided
- Astle's Crossing.—A shelter was provided.
- Manzer's.—A shelter was provided.
- Nashwaak.—A shelter and platform was provided.
- Blissfield.—A shelter was provided.
- Cushman's.—A shelter and platform was provided.
- Clearwater.—A shelter was provided.
- Forks.—A shelter and platform was provided.
- St. Valier.—A loading platform was provided.
- Renous.—A combined station and freight shed with freight and passenger platform was provided.
- Crossing signal gongs were installed at the following places:—
- Bedford.—One at crossing east of station.
- Brookfield.—One at Dunmore road.
- Sussex.—One at crossing east and one at crossing west of station.
- Sydney.—One at King's road.
- Sydney Mines.—One at Bras d'Or road.
- Antigonish.—One at Sylvain road.
- Halifax.—One on main line at Richmond and one on Cotton Factory branch.
- Fencing.—During the year standard wire fencing was erected as follows:—

	Rods.
Drummond county division	1,365
North No. 2 division	26
North No. 1 division	119
Canada Eastern division	21,226½
Central division	192
Eastern extension division	57

- An extension was made to the east cottage at Moncton.
- St. Anaclet.—A building for baggage, coal and oil was provided.
- St. Alexander.—A building for baggage, coal and oil was provided.
- Bore holes for water.—Were bored at the following places: Leitches Creek, Scotsburn, West Bay road, Elmsdale, Shubenacadie, Boundary Creek, Salisbury, Daveluyville, Carmel, Cacouna, Tobin and East Mines.

Sidings—

- Petit Rocher—New siding, 776 feet.
- Upper Dorchester—Siding extended, 434 feet.
- Dalhousie Wharf.—New siding, 504 feet.
- Enfield.—New siding, 642 feet.
- Bathurst.—New siding, 555½ feet.
- Boiestown.—Siding extended, 1,504 feet.
- Boiestown.—Spur siding, 567 feet.
- Carrolls.—Siding extended, 687 feet.
- Amqui.—Siding extended, 336 feet.
- Tatamagouche.—Siding extended, 150 feet.
- Windsor Junction.—Siding extended, 820 feet.
- Lac au Saumon.—New siding, 428 feet.
- Gibson—New siding, 3,700 feet.
- Renous River Bridge.—New siding, 260 feet.

Improvements at Ste. Flavie—

The yard was improved by laying 3,840 additional feet of track.

Improvements at Ste. Rosalie—

A bore hole for water is being sunk. Improvements were made to the yard and 1,094 feet of track laid.

Engine house, &c., Chaudiere Junction—

Plans and specification were prepared for an addition of 6 stalls to the engine house.

The freight car repair shop for which the contract was let in 1908-09 was completed.

Improvements were made to the water service and coaling pockets.

1,116 feet of track was laid in the yard.

Engine House, machine shop, &c., Riviere du Loup—

The contract for the machine shop, boiler house and brick chimney was completed. 3—290 H.P. boilers were supplied and erected in place on concrete foundations in the boiler room.

2—60-ton 4-motor and controller electric cranes 66 foot span with 10-ton auxiliary hoist and one 10-ton 3-motor electric travelling crane, 37-foot span, 16-foot lift, alternating current, were delivered and erected in place in the machine shop.

A brick stores and office building was constructed.

Plans and specification were prepared, tenders asked and contract let for an addition of 6 stalls to the existing engine house and for an addition to the freight shed and the work of construction gone on with. A fan heating system was installed in the machine shop, erecting shop, boiler and wheel shop and blacksmith shop. The old engine house was torn down and the material used in constructing engine house at Loggieville and Dalhousie. A large amount of grading was done in the year and 10,393 lineal feet of new tracks laid. Improvements were made to the water service.

For details of power plant, electrical equipment and machinery, see report of G. R. Joughins, superintendent of motive power and rolling stock.

Improvements at Drummondville—

Nothing was done under this appropriation.

Improvements at Newcastle—

The engine house was wired for electric lighting.

Improvements at Campbellton—

The extension to the pipe line for water service for which the contract was let in 1908-09 was completed.

Improvements at Point Tupper—

A rest house for the accommodation of trainmen was provided.

The water supply was improved by raising dam at reservoir. A brick house with concrete foundation was erected for the hoisting engine in connection with the transfer bridge of the Strait of Canso ferry service.

To provide an overhead crossing at Probert's. About 2 miles north of Londonderry Station—

Nothing was done under this appropriation.

To provide a subway crossing at Eastville. About one mile south of Londonderry Station—

Nothing was done under this appropriation.

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Rolling stock—

For details of this appropriation, see report of G. R. Joughins, superintendent of motive power and rolling stock.

New machinery for locomotive and car shops—

For details of this appropriation, see report of G. R. Joughins, superintendent of motive power and rolling stock.

To put railway between Indiantown and Blackville into condition for operation—

This work was completed.

Extension to Dalhousie wharf—

The work in connection with the extension to this wharf was completed in the fiscal year 1908-09. The appropriation of 1909-10 for \$27,500 was to cover an amount held in suspense account for this work.

Diversion of road to eliminate crossing at rail level, between St. Cyrille and Drummondville—

This work was done in the fiscal year 1908-09 by the corporation of the town of Drummondville and the appropriation of \$1,300 for 1909-10 was to cover the cost which was held in suspense account.

I have the honour to be, sir,

Your obedient servant,

(Signed) WM. B. MACKENZIE,

Chief Engineer.

D. POTTINGLER, Esq., I.S.O.,

Assistant Chairman, Government Railways Managing Board,
Moncton, N.B.

INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE.

MONCTON, N.B., June 1, 1910.

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 Department for the year 1909 and 1910.

TRACK.

During the year 38.40 miles of 56, 58, 67, 80 and 110 lb. rails were taken up and replaced with 67 and 80 lb. rails.

TIES.

During the year 600, 163 ordinary ties and 288 sets of switch ties were put in the track.

1 GEORGE V., A. 1911

BALLASTING.

During the year 56.85 miles of track was ballasted, using 67,659 cubic yards of ashes and gravel.

SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following stations:—

St. Wenceslas	1
Carmel	1
Riviere du Loup	1
Trois Pistoles	1
Salisbury	1

176 new switches were installed during the year.

New telegraph signals were installed during the year at the following stations:—

Villeroy	1
Daveluyville	1
Carmel	1
Tobin	1
St. Simon	1

Necessary repairs were made to all semaphores, switches and telegraph signals throughout the line.

SIDINGS.

During the year 3.85 miles of additional siding accommodation has been provided at different points on the line for maintenance account.

FENCE BUILT BY OUR OWN MEN.

2.86 miles of woven wire fence was built at different points on the line by our own men.

Built by contract, 44.56 miles of woven wire fencing.

Necessary repairs were made to fences throughout the line.

SNOW FENCES.

There was built during the year 66.25 rods of stationary snow fence, eight feet high; 363 rods of portable snow fence.

Necessary repairs were made to snow sheds and snow fences, where required.

WHARFS AND TRESTLES.

Repairs.

St. John, long wharf.	Gibson, wharf.
St. John, ballast wharf.	Loggieville, wharf.
Halifax, pier No. 2.	Moncton, public wharf.
Halifax, pier No. 3.	Mulgrave, wharf.
Halifax, pier No. 4.	Newcastle, coal trestle.
Halifax, pier No. 5.	North Sydney, wharf.
Halifax, Cunard wharf.	Prince's Pier, wharf.
Halifax, coal trestle, D.W.T.	Point du Chêne, wharf.
Richmond, pier No. 6.	Pietou, wharf.
Richmond, pier No. 7.	Point Tupper, wharf.
Richmond, pier No. 8.	Springhill Junction, coal trestle.
Richmond, coal trestle.	Stellarton, coal trestle.

BRIDGES AND CULVERTS.

Repairs.

- Aston Jct., west of, culvert.
 Antigonish, $\frac{3}{4}$ mile west of, culvert.
 Black River, bridge.
 Bic, 2 culverts.
 Boiestown, 2 culverts.
 Blackville, 2 culverts.
 Blackville, bridge.
 Bedford, bridge.
 Bayfield, culvert.
 Carmel, east of, culverts.
 Cap St. Ignace, west of, 3 culverts.
 Chaudière Jct. & St. Romuald, bet., culvert.
 Causapsal, culvert.
 Causapsal, bridge.
 Campbellton, west of, 2 culverts.
 Campbellton, east of, 2 culverts.
 Clearwater, bridge.
 Chatham, culvert.
 Cross Creek, bridge.
 College Bridge, culvert.
 Caldwell's Brook, culvert.
 Calhoun's, aboideau.
 Delotbinière, bridge.
 Daveluyville, culverts.
 Doaktown, 4 culverts.
 Doaktown, bridge.
 Durham, bridge.
 Doyle Brook, bridge.
 Dorchester, overhead bridge.
 Debert, tunnel culvert.
 Dartmouth, culvert.
 Flatlands, culvert.
 Follieigh, culvert.
 Gibson, east of, culvert.
 Hadlow, Bennett's bridge.
 James River, culvert.
 Kent Junction, Vaughan's siding, bridge.
 Lemieux, bridge.
 L'Islet, $\frac{1}{4}$ mile east of, culvert.
 L'Islet, culvert.
 Lense A Giles, $\frac{3}{4}$ mile east of, culvert.
 Ludlow, 2 culverts.
 Lakeside, overhead bridge.
 Londonderry, west of, overhead bridge.
 Mitchell, east of, culverts.
 Montmagny, bridge.
 Montmagny, east of, 2 culverts.
 Millstream, culvert.
 Manzer's, bridge.
 Marysville, bridge.
 Moncton, Jonathan Creek, aboideau.
 McCafferty's, overhead bridge.
 McKinnon's Harbour, culvert.
 Nelson, 2 culverts.
 Nashwaak, 3 culverts.
 Norton, culvert.
 North River, bridge.
 Otty's, overhead bridge.
 Oxford Junction, culverts.
 Oulton's, culvert.
 Orangedale, east of, culvert.
 Penniac, bridge.
 Penniac, east of, 9 culverts.
 Pugwash, draw bridge.
 Pugwash Junction, east of, 2 culverts
 Piedmont, west of, culvert.
 Quispamsis, culvert.
 Quispamsis, overhead bridge.
 River Henry, bridge.
 Rimouski, culvert.
 Renous, bridge.
 Rogersville, overhead bridge.
 Rogersville, culvert.
 Rocky Lake, bridge.
 St. Cyrille, east of, culvert.
 St. Perpetue, culvert.
 St. Nicholas, culvert.
 St. Appollinaire, east of, culvert.
 St. Philippe de Néri, culvert.
 St. Philippe de Néri, one mile west of, culvert.
 St. Charles Junction, west of, culvert.
 St. Eloi, bridge.
 St. Luce, culvert.
 St. Anaclet, culvert.
 St. Simon, 2 culverts.
 St. Moïse, culvert.
 St. John, overhead bridge, Dorchester Street.
 Stewart's, bridge.
 Sackville, bridge.
 South River, east of, bridge.
 Sutherland's River, bridge.
 Sylvester, bridge.
 Trois Saumon's, $\frac{3}{4}$ mile west of, bridge.
 Taymouth, bridge.
 Truro, west of, culverts.
 Truro, bridge, Queen St.
 Tracadie, 2 culverts.
 Tatamagouche, culvert.
 Upper Cross Creek, bridge.
 Whetstone Brook, culvert.
 West River, bridge.
 Waverly, culvert.

PAINTING.

Bridges.

- Adamsville, east of bridge.
 Aulac, bridge.
 Belledune, bridge.
 Bathurst, bridge.
 Beaver Brook, bridge.
 Barnaby River, bridges Nos. 1, 2 and 3
 George's River, east of, bridge.
 Kent Junction, bridge.
 Le Plancher River, bridge.
 Linwood, west of, bridge.
 Leitches' Creek, west of, 2 bridges.
 Moffatt's, bridge.

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Barnaby River, east of, bridges.
 Blackville, bridge.
 Beaver Cove, east of, bridge.
 Boisdale, east of, bridge.
 Canaan, east of, 3 bridges.
 Coal Branch, east of, 2 bridges.
 Cushman's, bridge.
 Calhoun's, east of, bridge.
 Canso, ferry landing.
 Clark's Brook, bridge.
 Derby Junction, east of, bridge.
 Dorchester, bridge.
 East Adams, bridge.
 Folley, east of, bridge.
 Gloucester Junction, bridge.
 Greenville, east of, bridge.
 Grand Narrows, east of, bridge.

Miramichi north west, bridge.
 Miramichi, south west bridge.
 Missiquash River, bridge.
 Meadowbrook, 2 bridges.
 New Mills, bridge.
 Nashes Creek, bridge.
 Nigadoo, bridge.
 Newcastle, east of, bridge.
 Nelson, bridge.
 Nappan, bridge.
 Nepisiquit, bridge.
 North Sydney Jct., east of, bridge.
 Painsee Jct., bridge.
 Sackville, bridge.
 Shubenacadie, east of, bridge.
 Tatagouche, bridge.

PAINTING.

Buildings.

Anagance, station.
 Amherst, tank.
 Bathurst, station.
 Belledune, tank.
 Chaudière, station.
 Canaan, tank.
 Eureka, station.
 Ferrona Jct., station.
 Gloucester Jct., station.
 Harcourt, freight house.
 Londonderry, station.

Lakeside, station.
 Mitchell, agent's dwelling.
 Moncton, D. Pottinger's house.
 Newcastle, round house.
 New Glasgow, station roof.
 Petit Rocher, station.
 Red Pine, station.
 Springhill Jct., tank.
 Stellarton, tank.
 Torryburn, station.
 Trenton, station.

BUILDINGS AND PLATFORMS.

Repairs.

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

Aston Junction.
 Assametquaghan.
 Adamsville.
 Amos.
 Astles.
 Apohaqui.
 Anagance.
 Amherst.
 Aulac.
 Athol.
 Avondale.
 Antigonish.
 Anqui.
 Bagot.
 Bic.
 Beau Rivage.
 Bersford.
 Bathurst.
 Bartibogue.
 Belledune.
 Beaver Brook.
 Berry's Mills.
 Blackville.
 Boiestown.
 Brookville.
 Bloomfield.

Model Farm.
 Maccan.
 Memramcook.
 Meadow Brook.
 Milford.
 Marshy Hope.
 Monastery.
 Mulgrave.
 Merigomish.
 Meadowville.
 Malagash.
 McLeod's.
 McNamee's.
 McKinnon's Harbour.
 McCallum's.
 New Mills.
 Nash's Creek.
 Newcastle.
 Naskwaak.
 Nelson.
 Norton.
 Nauwigewauk.
 Nappan.
 New Glasgow.
 North Sydney.
 Old Lake Road.

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Belmont.
 Bedford.
 Brookfield.
 Barrachois.
 Brown's Point.
 Chaudière.
 Carmel.
 Cap St. Ignace.
 Chaudière Curve.
 Chaudière Junction.
 Cacouna.
 Campbellton.
 Causapscaal.
 Cedar Hall.
 Culligan's.
 Charlo.
 Chatham Junction.
 Conn's Mills.
 Catamount.
 Coal Branch.
 Canaan.
 Cross Creek.
 Chatham.
 Carroll's.
 Cold Brook.
 College Bridge.
 Calhoun's.
 Drummondville.
 Delotbinière.
 Dessaint.
 Dalhousie.
 Dalhousie Junction.
 Dickie's.
 Derby Junction.
 Durham.
 Doaktown.
 Dorchester.
 Derbert.
 Dewis.
 Denmark.
 Dartmouth.
 Eel River.
 East Mines.
 Evans.
 Elmsdale.
 Eureka.
 Enfield.
 Flatlands.
 Folley.
 Ferrona Junction.
 Gloucester Junction.
 Gallagher Ridge.
 Gibson.
 Greenville.
 Glengarry.
 Grand Lake.
 Graham Siding.
 George's River.
 Grand Narrows.
 Harlaka Junction.
 Hadlow.
 Hadgin's.
 Harcourt.
 Humphrey's.
 Hampton.
 Hopewell.
 Hilden.
 Isle Verte.
 Indiantown.

Oxford Junction.
 Oakfield.
 Orangedale.
 Oxford.
 Point Levis.
 Petit Rocher.
 Petitcodiac.
 Point du Chêne.
 Penobsquis.
 Painsec Junction.
 Pictou Landing.
 Piedmont.
 Point Tupper.
 Pictou.
 Pugwash.
 Pugwash Junction.
 Passekeag.
 Quebec.
 Quispamsis.
 River Ouelle.
 Rivière-du-Loup.
 Rimouski.
 Red Pine.
 Rogersville.
 Renforth.
 Rothesay.
 River Philip.
 Riversdale.
 River John.
 St. Leonard.
 St. Crville.
 St. Wenceslas.
 St. Germain.
 St. Appollinaire.
 St. Rosalie.
 St. Eugene.
 St. Nicholas.
 Ste. Louise.
 St. Michel.
 St. Jean Chrysostome.
 St. Francois.
 St. Valier.
 St. Charles Junction.
 St. Jean Port Joli.
 St. Romauld.
 St. Joseph.
 St. Pacome.
 Ste. Luce.
 Ste. Favier.
 St. Simon.
 Sacré-Cœur.
 St. Aanclet.
 St. Paschal.
 St. Phillippe.
 St. Arsene.
 St. Fabien.
 St. Alexander.
 St. Helene.
 Sayabec.
 St. Octave.
 St. Alexis.
 St. Moise.
 Sussex.
 Shediac.
 Springhill Junction.
 Sackville.
 Salt Springs.
 Stewiacke.

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Iona.	Shubenacadie.
Jacquet River.	Stellarton.
Jubilee.	South River.
James River.	Sydney Mines.
Kent Junction.	Sydney.
Lavergne.	Shenacadie.
Lemieux.	Scotsburn.
Laurier.	Sylvester.
Levis.	Trois Pistoles.
Little Métis.	Thomson.
Lac au Saumon.	Truro.
Lakeside.	Trenton.
Londonderry.	Tracadie.
Lansdowne.	Tatamagouche.
Leitches' Creek.	Upper Dorchester.
Lyons' Brook.	Union.
Mitchell.	Villeroy.
Montmagny.	Westchester.
Millstream.	Wentworth.
Matapedia.	West River.
Moffatt's.	Westville.
Millerton.	Wallace.
Marysville.	Waverley.
Manzers'	

Iron bars were placed on freight shed doors and windows where required.

The following repairs were made to buildings, &c., at St. John:—

Sheds, Nos. 2, 3, 5, 7, 8, 9 and 10.	Station
Elevator.	Train shed.
Freight shed.	Train shed platform.
Coachman's house.	I. C. R. dwelling houses.
Gateman's House.	Round House.
Yard Office.	

The following repairs were made to buildings, &c., at Halifax and Richmond:—

Sheds, Nos. 1, 2, 3, 4 and 8.	Brick freight shed.
Richmond station.	City ticket office, Hollis street.
North street station.	Coal shed, Richmond.
Houses on Cunard property.	Immigration building.
Shops at Richmond.	Watch tower, D. W. T.
Cattle shed.	Blacksmith shop, D. W. T.
North street train shed.	Switch house.
D. A. R. shed.	Loading platform, D. W. T.
Postal building.	Car cleaner's building.
Kemp road buildings.	I. C. R. dwelling house, 218 Campbell road.
Mechanical repair shop, North street.	

The following repairs were made to buildings, &c., at Moncton:—

Transfer shed.	Station.
Station platform.	Car shop platform.
Erecting shop.	Turning shop.
Cattle shed.	Car mileage office.
Loading platform.	Engine house.
Track blacksmith shop.	Freight shed.
New shops.	Cottages on Bridge and Main streets.
Freight house platform.	Yard office.
Electrician's office.	Coaling plant.
Government cottage occupied by Mr. Pottinger.	Ice House.
Government cottage occupied by Mr. Tiffin.	

The following round houses and shops were repaired:—

Chaudière Junction.	Point Tupper.
Campbellton.	Pictou.
Drummondville.	Rivière-du-Loup.

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Dalhousie.
 Dartmouth.
 Nicolet.
 Newcastle.
 North Sydney.
 Oxford Junction.
 Point du Chêne.
 Pirate Harbour.

St. Rosalie.
 Ste. Flavie.
 Sussex.
 Springhill Junction.
 Stellarton.
 Sydney.
 Truro.
 Richmond.

Station and loading platforms were repaired at the following places:—

Aston Junction.
 Assametquaghan.
 Adamsville.
 Armstrong's.
 Apohaqui.
 Amherst.
 Atkinson's siding.
 Athol.
 Alton.
 Antigonish.
 Bagot.
 Bathurst.
 Bartibogue.
 Bloomfield.
 Bishop's Siding.
 Belmont.
 Barney's River.
 Boisdale.
 Campbellton.
 Causapsal.
 Cedar Hall.
 Culligan's.
 Charlo.
 Chatham Junction.
 Coal Branch.
 Carroll's.
 College Bridge.
 Drummondville.
 Dalhousie Junction.
 Durham.
 Dorchester.
 Debert.
 Dickie's.
 Denmark.
 Eel River.
 East Mines.
 Eureka.
 Elmsdale.
 Enfield.
 Eden.
 Fredericton.
 Folleigh.
 Fairview.
 Fall River.
 Gloucester Junction.
 Green Point.
 Gibson.
 Grand Narrows.
 Hampton.
 Hopewell.
 Isle Verte.
 Jaquet River.
 Jubilee.
 Kent Junction.
 Kinsac.
 Laurier.
 Lemieux.
 Levis.

Memramcook.
 Mulgrave.
 Mines Road.
 McLeod's.
 McNamee's.
 New Mills.
 Nash's Creek.
 Newcastle.
 Nashwaak.
 Norton.
 Nauwigewauk.
 Onslow.
 Oxford Junction.
 Orangedale.
 Ottawa Brook.
 Point Levis.
 Petit Rocher.
 Penobsquis.
 Painsec Junction.
 Point Tupper.
 Pugwash.
 Pomquet.
 Quispamsis.
 Riviere-du-Loup.
 Rimouski.
 Renforth.
 River Philip.
 River John.
 St. Germain.
 St. Cyrille.
 St. Wenceslas.
 St. Eugene.
 Ste. Rosalie.
 St. Jean Chyrsostome.
 St. Francois.
 St. Charles Junction.
 St. Jean Port Joli.
 Ste. Louise.
 St. Luce.
 Ste. Flavie.
 St. Simon.
 Sacre Cœur.
 St. Analet.
 St. Paschal.
 Sayabec.
 St. Octave.
 St. Alexis.
 Sussex.
 Shediac.
 Springhill Junction.
 Sackville.
 Stewiacke.
 Stellarton.
 Sydney River.
 Shenacadie.
 Scotsburn.
 Trois Pistoles.
 Turgeon's.

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Little Metis.
 Londonderry.
 Lakeview.
 Leitches' Creek.
 Lyon's Brook.
 Mitchell.
 Montmagny.
 Millstream.
 Matapedia.
 Moffatt's.
 Millerton.
 Model Farm.

Thomson.
 Truro.
 Trenton.
 Tatamagouche.
 Upper Dorchester.
 Westchester.
 Wellington.
 West River.
 West Bay Road.
 Westville.

New buildings were erected along the line as follows:—

Cross Creek, combined station and dwelling.	St. Cyrille, freight and baggage building.
Carmel, combined station, dwelling and freight shed.	McGivney's, dwelling.
Daveluyville, combined station, dwelling and freight shed.	Moncton, car service building rebuilt.

GENERAL.

New buffers were made and set up at different points on the line.

Repairs were made to crossings on the line at various places, where required.

Gates and cattle-guards have been repaired throughout the line.

Glass was put in and glazing done where necessary.

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

Necessary repairs were made to turntables where required.

Semaphores, switches and telegraph signals have been painted throughout the line.

Necessary repairs have been made to hand cars, trollies, baggage trucks and wheel-barrow throughout the line.

Sign boards were made and put up where required.

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

Necessary repairs were made to steam shovels, steam cranes, pile drivers, &c.

The track of the Intercolonial railway, with bridges and structures, have been kept in good repair, and I can safely say that I do not think it was ever in better condition than now.

I am,

Yours faithfully,

T. C. BURPEE,

Engineer of Maintenance.

MONCTON, N.B., March 31, 1910.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF SUPERINTENDENT MOTIVE POWER AND ROLLING STOCK,

MONCTON, N.B., July 6, 1910.

SIR,—I have the honour to submit herewith the annual report of the operations of the motive power and rolling stock department for the year ending March 31, 1910.

I might add that the general condition of the rolling stock is good, with the exception of the cars and locomotives condemned as shown in the attached report. During the year we abandoned the old shops at Moncton and moved into the new ones which, of course, necessarily entailed a large amount of work and interfered

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with the regular repairs to locomotives and cars, but with the improved facilities at the new plant we have been able to overcome the decrease in the output during the transition period, and this with a considerable reduction in the staff. The locomotive repair shops at Halifax were also abandoned during the year, and the services of about 100 employees were dispensed with at this place and the repair work transferred to Moncton.

I am, sir,

Your obedient servant,

(Signed) G. R. JOUGHINS,

Superintendent of Motive Power.

D. POTTINGER, Esq., I.S.O.,

Assistant Chairman, Government Railways Managing Board,

Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL ACCOUNTANT,

MONCTON, N.B., July 5, 1910.

SIR,—I beg to submit herewith the annual report of the operations of the mechanical department for the year ended March 31, 1910, as follows:—

A.—Statement showing the number of locomotives and the different classes of the 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 locomotive and car shops at Moncton, Richmond and River du Loup.

During the year the following rolling stock was purchased on renewals account (revenue):—

30 Hart-Otis steel side dump cars (coal), 100,000 lbs. capacity.

6 Box baggage cars.

1 Yard crane.

2 Coal cranes.

The thirty Hart-Otis dump cars, which have a total capacity of 1,500 tons, replaced 153 small hoppers and 29 twenty-ton coal cars, which were condemned, and which together equalled the same capacity as the dump cars.

The following rolling stock was rebuilt in the shops at Moncton on revenue account to replace the same number condemned:—

1 Box car.

16 Platform cars.

1 Diamond flanger.

The Diamond flanger was rebuilt from a platform car.

2 Platform cars were changed to pulpwood cars.

741 Box cars were fitted with side ladders.

53 freight cars, 13 snow ploughs and 5 flangers were fitted with air brakes, and 153 freight cars were fitted with straight air.

I have the honour to be, sir,

Your obedient servant,

(Signed) J. J. WALKER.

Mechanical Accountant.

G. R. JOUGHINS, Esq.,

Superintendent of Motive Power, I.C.R.,

Moncton, N.B.

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To be replaced on Mar. 31, 1909, as above.....	5	2	6	6	1	1	41	69	7	25	3	329	1	3	329	1	1	1	1
Condemned and destroyed during the present year, 1909-10.....	6	1	2	1	1	1	34	133	7	7	1	316	2	2	316	2	2	2	2
Total condemned and destroyed, Replaced during the year 1909-1910.....	11	3	8	6	2	1	75	202	7	32	4	645	5	5	645	5	5	5	5
Replaced by 30 50-ton steel dump cars, as explained above.....							17					18			18				
To be replaced on Mar. 31, 1910	11	1	8	6	2	1	58	49	7	3	4	445	5	5	445	5	5	5	5
Add serviceable and repairing..	403	40	47	9	12	127	3,000	997	10	439	130	144	200	23	114	12,525	52	20	2
Total equipment on Mar. 31, 1910, as above.....	414	41	50	9	12	135	3,058	1,046	17	442	130	148	200	23	119	12,970	53	20	2

J. J. WALKER, Mechanical Accountant.

MONCTON, N.B., March 31, 1910.

INTERCOLONIAL RAILWAY.

STATEMENT of Mileage and Coal, Oil, Grease and Wool Waste consumed by Locomotives for year ended March 31, 1910.

MONTHS.	Locomotive Mileage.	CONSUMPTION.					AVERAGE CONSUMPTION PER 100 MILES.				
		Tons of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Grease.	Pounds of Wool Waste	Pounds Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Grease.	Pounds of Wool Waste
1909.											
April.....	729,866	42,233	10,042	20,953	2,183	549	12,962	1.38	2.87	.30	.08
May.....	665,177	35,362	8,967	19,022	2,057	973	11,910	1.35	2.86	.31	.15
June.....	666,444	32,917	8,960	19,535	2,406	697	11,064	1.34	2.93	.36	.10
July.....	738,978	36,180	9,570	20,664	2,193	757	10,967	1.30	2.80	.30	.10
August.....	688,738	32,781	9,144	19,340	2,609	580	10,661	1.33	2.81	.38	.09
September.....	698,948	35,611	9,294	19,386	1,961	533	11,413	1.33	2.77	.28	.08
October.....	726,528	39,213	9,573	20,060	2,281	1,020	12,090	1.32	2.76	.31	.14
November.....	736,994	42,829	10,047	20,075	2,160	470	13,017	1.36	2.72	.29	.06
December.....	765,676	46,849	10,512	21,401	1,984	617	13,706	1.37	2.80	.26	.08
1910.											
January.....	727,778	44,817	10,088	19,642	2,013	453	13,794	1.39	2.70	.28	.06
February.....	686,791	43,445	9,593	19,539	2,342	779	14,170	1.40	2.84	.34	.11
March.....	776,568	46,276	10,343	22,011	2,508	836	13,348	1.33	2.83	.32	.11
Totals....	8,608,486	478,513	116,133	241,628	26,697	8,264	12,451	1.35	2.81	.31	.10

J. J. WALKER,

Mechanical Accountant.

MONCTON, N.B.

March 31, 1910.

The following is a report of the work done in the locomotive department at Moncton during the year:—

Erecting shop—

- 24 locomotives were partly rebuilt.
- 59 locomotives received general repairs.
- 10 locomotives received heavy repairs.
- 121 locomotives received light repairs.
- 2 locomotives were converted from compound to simple cylinder.

Boiler shop—

- 42 side sheets were made.
- 39 tube sheets were made.
- 15 door sheets were made.
- 61 fire boxes were patched.
- 2 fire boxes were made.
- 23,899 tubes were applied.
- 2,183 new tubes were made.
- 22,777 tubes were pieced.
- 86 boilers were tested.

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- 1 water service boiler was repaired.
- 187 smoke stacks were made.
- 24 ash pans were made.
- 61 ash pans were repaired.
- 60 ash pan sides were made.
- 41 front ends were made and 13 were repaired.
- 55 Sterlingworth trucks were repaired.
- 25,090 stay bolts were applied.
- 98 tender trucks were repaired.
- 51 smoke stacks and bonnets were made.
- 24 tanks were made.
- 25 coal buckets were made.
- 10 driving wheels were rivetted.
- 500 chain links were made.
- 25 shovelling plates were made.
- 47 tender frames were repaired.
- 8 cabs were repaired.
- 1 engine cab was rebuilt.
- 4 tenders were rebuilt.
- 4 snow ploughs were ironed.
- 6 coal chutes were made.
- 4 truck bolsters were rebuilt.
- 60,405 new copper ferrules were made.

Blacksmith shop—

The following was the output of this shop:—
 1,781,788 lbs. iron forgings, including 642,933 lbs. bolts.
 630,036 lbs. steel forgings.

Brass foundry—

The following was the output of this shop:—
 350,510 lbs. bearings.
 64,610 lbs. brass casting.
 13,568 lbs. babbitt.
 32,012 lbs. antimonial lead.
 622 lbs. metallic packing.

Pattern shop—

The following patterns were made and repaired:—
 299 for cast iron.
 109 for steel and malleable.
 455 for brass castings.
 45 repaired for cast iron.
 63 repaired for steel and malleable.
 129 repaired for brass castings.
 37 altered for cast iron.
 8 altered for steel castings.
 7 altered for brass castings.

Machine shop—

163 driving tires were applied.
 19 driving axles were applied.
 7 trailing tires were turned off, and 2 applied.
 1,868 car tires were turned off, 588 bored and 419 applied.
 347 driving tires were turned off.
 287 engine truck tires were turned off and 241 bored and applied.

- 902 tender truck tires were turned off and 414 bored and applied.
- 84 tender axles were applied.
- 14 engine truck axles were applied.
- 3 driving wheels were centred and machined.
- 100 hose bag springs were made.
- 4,000 engine bolts and studs were made.
- 21,540 lbs. nuts were faced.
- 7,079 turned bolts were threaded.
- 17,000 stay bolts were threaded.
- 672,694 other bolts were threaded.
- 271,250 lbs. nuts were tapped.
- 6,800 lbs. nuts were retapped.
- 800 rings of pistons packing were made.
- 17,195 engine studs were turned.
- 15 crank pins were made.
- 6,000 patch bolts were made.
- 2 steam chests were made.
- 2 false valve faces and 6 piston rods were made.
- 7 pistons were made.
- 3 cylinder heads were made.
- 7 guide bars and blocks were made.
- 11 cylinders and half saddles were made.
- 16 smoke box doors and rings were made.
- 2 locomotive bells were made.
- 46 tender wheels and 8 engine truck wheels were applied to axles.

In addition to the above a large amount of work was done in repairing and making articles such as crossheads, smoke stacks and bases, yokes for trailer trucks, retorts, cheek plates, &c.

A large amount of work was done in connection with repairs to the motor car engines, and also to shop machinery.

Motion Shop—

- 166 knuckle joints were bored and applied.
- 612 knuckle joint nuts and washers were made and machined.
- 231 knuckle joint pins were made, and 24 pins and bushes applied.
- 490 driving boxes were bored and fitted to journals.
- 8 driving boxes were made and 450 were planed.
- 10 pump cylinders and 4 air cylinders were bored.
- 276 eccentric straps and pulleys were repaired.
- 112 link pins and bushes were renewed.
- 4 link boxes were made and applied.
- 258 eccentric rods were repaired.
- 42 slide valves were made and 34 faced.
- 164 other valves were repaired.
- 127 valve yokes were fitted and 26 were machined.
- 25 piston rods were repaired and 59 fitted to crossheads.
- 126 side rod bushes were bored.
- 273 big end bolts were applied.
- 178 small end brasses were applied.
- 149 big end brasses were made and applied.
- 108 driving box brasses were relined.
- 62 old brasses were lined.
- 235 new brasses were machined and applied.
- 52 main rod brasses were made and 19 refitted.

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- 132 main rod liners were applied and 152 bolts were made.
- 411 cheek plates were made and applied.
- 336 crank pins were repaired.
- 26 crank pin washers and 263 nuts were made.
- 46 crosshead pins were applied.
- 214 side rods were repaired.
- 526 side rod brasses were made and applied.
- 109 reverse shaft bushes were repaired and 10 fitted to journals.
- 8 throttle glands and 96 lever stems were repaired.
- 125 crossheads were rebabbited and planed.
- 60 crosshead nuts were made and 83 keys and pins applied.
- 9 rocker arms were made and 144 rebushed and applied.
- 69 rocker box bushes were made and applied.
- 36 main rods and 38 links were repaired.
- 129 eccentric straps were fitted to pulleys.
- 4 link blocks were made and 48 repaired.
- 36 reverse levers were repaired.
- 26 valve stem packing rings were made.
- 11 piston rings were bored and applied.
- 10 big end liners were planed.
- 98 main rod keys were made and applied.
- 1 crosshead was made.
- 82 main rod bolts were renewed.

Brass Turning Shop—

- 72 steam chest nipples were made.
- 150 injectors were repaired and 36 injector cheek valves were made.
- 20 air pumps were repaired.
- 24 bell ringers were made.
- 24 try cocks and 24 gauge glass cocks were made.
- 200 cylinder cocks were made.
- 72 small tender cocks and 18 blow-off cocks were made.
- 48 large tender cocks were made.
- 250 flag staff casings were made.
- 300 engine truck brasses were made.
- 150 brake cam screws and nuts were made.
- 800 piston rod oil cups were made.
- 24 steam chest release valves were made.
- 100 oil cups were made.
- 130 wheel defect gauges were made.
- 300 beading tools and 100 reamers were made.
- 550 steam gauges were repaired.
- 170 jacks were repaired.
- 300 taps were made.
- 50 sets tubes and 40 sets dies were made.
- 20 tube cutters were repaired.
- 60 electric headlights were repaired.

In addition to the above a large number of lubricators and regulators, air pumps and governors, brake and air cylinders, and boiler mountings received extensive repairs.

Tender Shop—

- 55 locomotive pilots and 5 cabs were made.
- 2,144 sledge hammer, 79 monkey wrench and 762 hammer and chisel handles were made.

1 GEORGE V., A. 1911

- 32 brakemen's seats and cushions were made.
- 3 tenders were enlarged.
- 300 pump stays were made.
- 8 tender truck frames were repaired, and 7 tender trucks repaired.
- 10 tenders received light and 85 heavy repairs.
- 36 cabs were repaired.
- 10 tender frames were repaired.
- 16 bolsters were made.
- 3 complete tenders were made.
- 4 wheelbarrows, 7 hand carts and 3 trolleys were made.
- 66 wheelbarrows, hand carts and hand trucks were repaired.
- 189 running boards were made.
- 66 buffer beams were made.
- 114 headlight stands were made.
- 12 spring boards were made and applied.
- 23 brake beams were made.
- 55 tool, 36 drivers' outfit and 20 tender outfit boxes were made.
- 66 switch lamp bottoms were made.
- 507 shipping boxes were made.
- 31 aprons were made and applied.
- 175 cab curtains were made.
- 112 cushion boxes were made and 74 repaired.

Tin and Copper shop—

- 12,556 W. A. B. hose couplings were fitted to new hose.
- 5,188 signal and steam couplings were fitted to new hose.
- 18,622 bushes were lined.
- 23 tank pipes were made and 56 repaired.
- 142 tail lamps were repaired.
- 409 switch and 87 signal lamps were repaired.
- 128 oil cans and 119 oilers were repaired.
- 11 oil tanks were repaired.
- 219 headlights were repaired.
- 1,087 feet galvanizer pipe were fitted and applied.
- 622 sets metallic packing were made.
- 8,016 steam and air brake hose and couplings were repaired.
- 300 sets valve stem packing were made.
- 1,206 tin oil cup covers were made.
- 127 water cans were made.
- 10 steam gauge and 14 water gauge lamps were repaired.
- 135 hand lamps were made.
- 40 lamp fonts were made.

Steam and Westinghouse air brake pipes were repaired on 82 locomotives.

A great deal of work was done in repairing and remodelling the plumbing work in the following buildings: Yard office, freight shed, rest room, Moncton shops, car cleaning building and outside station.

At Norton station the heating boiler was given extensive repairs and was enlarged.

Repairs were made to wash stands, taps, ventilators, water closets, brass work and piping, &c., in the passenger cars repaired in the car department during the year.

Repairing and altering copper pipes, pumps, heater and blower-pipes, copper piping on locomotives, also repairs to all iron and air pipes, &c., and lagging was taken off, repaired and replaced on 82 locomotives.

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Water service—

This service has been maintained in efficient condition over the whole line.

Car shops—

The following cars were rebuilt:—

17 platform, 1 box.

The following cars were changed:—

2 platform to pulpwood, 1 platform to flanger.

The following cars received heavy repairs:—

6 parlour, 34 sleeping, 4 dining, 2 official, 79 first-class, 56 second-class, 29 colonist, 43 baggage, 15 postal, 15 vans, 302 freight, 2 flangers, 8 snow-ploughs.

The following cars received light repairs:—

2 parlour, 18 sleeping, 6 dining, 12 official, 45 first-class, 25 second-class, 15 colonist, 34 baggage, 20 postal, 3 vans, 2 auxiliary, 10,541 freight.

The following cars were burnt off, painted and varnished:—

2 parlour, 3 sleeping, 2 dining, 28 first-class, 4 second-class, 5 colonist, 4 baggage, 4 postal.

The following cars were painted and varnished:—

2 parlour, 7 sleeping, 1 dining, 28 first-class, 33 second-class, 8 colonist, 17 baggage, 6 postal.

The following cars were cleaned and varnished:—

2 parlour, 16 sleeping, 1 official, 29 first-class, 13 second-class, 4 colonist, 12 baggage, 6 postal, 2 motor cars.

The following cars were scraped, painted and varnished:—

2 parlour, 6 sleeping, 1 dining, 7 first-class, 7 second-class, 9 colonist, 10 baggage, 3 postal.

The following cars were cleaned, touched up and varnished:—

3 sleeping, 1 official, 3 first-class, 2 second-class, 3 colonist.

The following cars were painted and lettered:—

145 box, 121 platform, 19 gondolas, 5 hoppers, 2 flangers, 2 snow ploughs.

223 cars were reweighed and lettered.

462 cars had lettering changed from I.C.R. to I.R.C.

5,376 new chilled wheels were bored and pressed on axles.

3,140 second hand chilled wheels were bored and pressed on axles.

116 new steel wheels were bored and pressed on axles.

503 second-hand steel wheels were bored and pressed on axles,

1,600 steel tires were turned.

716 new axles were turned.

3,815 second hand axles were turned.

9,700 wheels were taken off axles.

117 engines and tenders were painted, lettered and varnished.

3 tenders were painted, lettered and varnished.

153 freight cars were fitted with straight air.

71 freight cars, ploughs and flangers were fitted with air brakes.

783 car buffers were made.

973 brake beams were made.

- 3 shanty cars were fitted up and painted.
- 596 freight cars were fitted with Acme uncoupling device.
- 5 Hart convertible cars had sides and ends raised.
- 200 new wooden freight car trucks were built and applied.
- 8 locomotive pilots were made.
- 180 truck spring boards were made.
- 345 new truck bolsters were made.
- 551 new truck sides were made.
- 1,098 car draft timbers were made.
- 923 engine curtains were made.
- 24 baggage and 104 freight trucks were repaired.
- 16 footboards and 2 gangways were repaired.
- 8 train safes were repaired.

A large amount of work was done during the year repairing ticket cases, book and letter cases, desks and chairs, tool boxes, step ladders, office doors and locks, replacing broken glass, &c., &c.

In addition to the lumber prepared for repairs, &c., 2,757.174 feet were milled on store orders.

Eight hundred and seventy-six manufactures orders were completed and delivered to store.

In addition to the above numerous small articles were made and repaired for this department at Moncton, and a great deal of work was done for the maintenance and traffic departments, and also in connection with new capital work.

The following special work was done at the new shops:—

- A water crane was installed at the south end of the erecting shop.
- An air hoist was installed at the gas plant.
- A crane was installed for removing coke and ashes from the gas plant.
- An air reservoir was installed in the basement of the gas plant.
- An air pump was installed in the gas plant.
- A chain hoist for lifting coal was installed.
- A generator was installed in the power house.
- An engine was installed for the stokers.
- Two Babcock and Wilcox boilers were removed from the old shops, were given extensive repairs, and were installed in the new power house.
- All the piping in the new shops for heating purposes was completed.

In addition to the above a large amount of work was done in connection with the fitting up the new shops before and after moving into them, installing machinery, making bins, boxes, tool racks, cupboards, building iron racks, coal sheds, small offices, sidewalks, &c., &c.

The following new machines were set up in the Moncton new shops:—

Machine Shop—

- 1 car axle lathe.
- 1 wheel press for locomotive wheels.
- 1 box press.
- 2 tool grinders.
- 10 high speed lathes of various sizes.
- 1 nut facing machine.
- 2 grinder heads for general work.
- 1 stay bolt machine.
- 1 nut tapper.
- 1 drill for general use.
- 1 boring mill.

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- 3 shapers.
- 3 drill presses.
- 1 locomotive axle lathe.
- 1 sottle for general use.
- 1 car wheel press.
- 1 car wheel borer.
- 1 cylinder borer.
- 1 radial drill.
- 1 locomotive rod drilling machine.
- 1 vertical milling machine for rods.
- 1 horizontal borer.
- 1 twist drill grinder for tools.
- 1 grinder.

Erecting Shop—

- 1 pipe threader.
- 1 32-inch drill for general use.
- 1 pipe bender.
- 2 bolt lathes.
- 1 tool grinder.

Boiler Shop—

- 1 slitting shear for general shearing.
- 1 shear for light sheets.
- 1 tool grinder.
- 1 flue cleaning machine.
- 1 6-spindle drill for flue sheets and mud rings.
- 1 plate clamp.
- 1 drill press for general use.
- 1 hydraulic sectional flange press.
- 1 punch.

Motion Shop—

- 2 tool room lathes for tool grinding and repairing.
- 2 power hack saws for general use.
- 1 grinder head for general use.
- 1 high speed lathe for general use.
- 2 bolt lathes for general use.
- 2 grinders for rods.
- 2 drill press.
- 3 shapers for keys, liners, &c.
- 1 universal tool grinder.
- 1 point twist drill grinder for tools.
- 1 side carriage lathe.
- 1 link grinder.

Tin and Copper Shop—

- 1 punch.
- 1 pipe threader.
- 1 circle and slitting shear.

Blacksmith Shop—

- 1 spring bending and stripping machine.
- 1 bolt shear.
- 1 tool grinder.

- 1 line file cutter.
- 1 stripping and abrading machine.
- 1 whetting machine.
- 1 grindstone.
- 1 nut machine.
- 2 blast fans for forge fires.
- 1 smoke exhaust fan for forge fires.

Pattern Shop—

- 1 grinder head for general use.
- 1 hand plainer and joiner for patterns.
- 1 saw bench.
- 1 lathe for patterns.
- 1 motor head speed lathe.
- 1 double disc sander for patterns.
- 1 emery grinder for tools.
- 1 band saw and re-saw for pattern.
- 1 core box machine.
- 1 single surfacers.
- 1 scroll saw.

Freight Car Shop—

- 1 drill press for general use.
- 1 pipe threader.

Tender Shop—

- 1 drill press for general use.
- 1 grindstone.

Upholstering Shop—

- 1 single sweeper vacuum cleaner.

Cabinet Shop—

- 1 moulder.
- 1 lathe.
- 1 band saw.
- 1 dado and saw.
- 1 emery grinder.
- 1 grindstone frame.
- 1 hand gainer machine.
- 1 moulder for door panels, &c.
- 1 embosser for moulding.
- 1 rip saw, 20-inch, for general use.

Planing Mill—

- 1 large tenoner for general use.
- 1 medium borer for general use.
- 1 grindstone frame for tools.

The following regular work was done in the locomotive department at Richmond:—

- 7 locomotives received heavy and 175 specific repairs.
- 24 boilers were tested.
- 3 fire-boxes were patched.
- 1 set driving wheels were re-tired.
- 3 driving tires were turned off.

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18 engine truck tires were turned off.

129 tender truck and car tires were turned off.

9 new tender truck wheels were applied.

11,880 bolts were forged.

28,200 bolts were screwed.

1,285 studs were screwed.

6 engines and tenders were painted.

221 sets metallic piston rod packing were made.

224 sets metallic valve stem packing were made.

In the car repair shop a large number of cars received repairs during the year.

A lot of special work was also done in the locomotive and car shops for the maintenance and traffic departments.

The following regular work was done in the locomotive department at Rivière du Loup:—

20 locomotives received general, 6 medium and 25 specific repairs.

1 new tube sheet and 1 new side sheet were applied.

44 new tubes were applied.

4,707 tubes were pieced and applied.

7 fireboxes were patched.

71 boilers were tested.

81 driving tires were turned off.

59 engine truck tires were turned off.

160 tender truck tires were turned off.

2 new cylinders with half saddles were applied.

1 new crank pin was made and applied.

23 pilots were made and applied.

8,000 bolts were forged.

38,000 bolts were screwed.

2,400 studs were screwed.

900 lbs. nuts were tapped.

35 engines and tenders were painted.

34,000 lbs. brass casting were machined.

345 sets metallic piston rod packing were made.

333 sets metallic valve stem packing were made.

66,000 lbs. iron forgings were made.

Coal cranes, Nos. 6, 8, 9 and 10, received general repairs.

A large number of cars received light repairs during the year.

There was also a large amount of work done for the maintenance and traffic departments in the locomotive and car shops during the year.

No. 1.—INTERCOLONIAL RAILWAY.

CAPITAL ACCOUNT, year ended March 31, 1910.

1909.	Dr.	\$ cts.	\$ cts.	1909.	Cr.	\$ cts.
Mar. 31.	To cost of Intercolonial Railway to date.....	10,272 26	90,994,664 06	Mar. 31.	By Dominion of Canada.....	90,994,664 06
	Strengthen bridges.....	49,994 90				
	Put railway between Indian town and Blackville into condition for operation.....	173,953 93				
	Increase accommodation at Halifax.....	10,430 54				
	Rolling stock.....	156,945 33				
	Engine house, machine shops, &c., at Riviere du Loup.....	6,834 61				
	Enginehouse, &c., Chandiere Junction.....	1,988 49				
	Improvements at Campbellton.....	399,400 49				
	Locomotive and car shop with equipment and new freight yard at Moncton.....	68,977 65				
	Towards double tracking parts of line.....	17,019 51				
	Increase accommodation at Truro.....	2,472 16				
	Improvements at Newcastle.....	27,500 00				
	Extension to Dalhousie wharf.....	100,565 28				
	Increased accommodation and facilities along the line.....	3,998 88				
	Improvements at Point Tupper.....	20,256 36				
	Diversion of line at Sydney Mines to River George.....	5,228 44				
	Diversion of line at Chatham and branch to wharf.....	46,799 43				
	New machinery for locomotive and car shops.....	42,482 26				
	Increase water supply.....	18,403 15				
	Improvements at Mulgrave.....	800 64				
	Increase accommodation at Pictou.....	25,474 27				
	Improvements at Loggreville.....	7,875 81				
	Improvements at Sackville.....	2,686 13				
	New turntables.....	43 14				
	Provide an overhead crossing at Roberts about 2 miles north of Londonderry station.....	3,754 26				
	Increased accommodation at Ste. Flavie.....	5,771 37				
	Improvements at North Sydney.....	6,644 09				
	Original construction.....	1,975 15				
	Cut off line at Moncton.....	3,540 32				
	Improvements at Ste. Rosalie.....	1,300 00				
	Diversion of road to eliminate crossing at rail level between St. Cyrille and Drummondville.....					

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Provide a subway crossing at Eastville, about 1 mile south of Londonderry station.....	68 75		
LESS—To extension to Sydney Mines, 1908-9	1,278,467 60		
Increased accommodation at Stellarton, 1908-9.....	58 15		
		1,278,409 45	
		92,273,073 51	
			By Dominion of Canada.....
			1,278,409 45
			92,273,073 51

E. and O. E.
Moncton, N.B.

S. I. SHANNON,
Comptroller.

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No. 2.—INTERCOLONIAL RAILWAY.

REVENUE ACCOUNT, Year ended March 31, 1910.

Expenditure.	\$ cts.	Earnings.	\$ cts.
Maintenance of Way and Structure..	1,622,279 75	Passenger Earnings.....	2,765,884 66
Maintenance of Equipment	1,851,792 68	Freight Earnings.....	6,048,884 18
Traffic Expenses.....	179,882 61	Mail and Express Earnings.	408,847 66
Transportation Expenses.....	4,784,667 76	Miscellaneous Earnings.....	44,618 49
General Expenses.....	206,447 53		
	8,645,070 33		
Balance.....	623,134 66		
	9,268,234 99		9,268,234 99

S. L. SHANNON,
Comptroller.

E. & O. E.,
MONCTON, N.B.

No. 3.—INTERCOLONIAL RAILWAY.

MAINTENANCE of Way and Structures, Year ended March 31, 1910.

No.		\$ cts.
1.	Superintendence.....	49,342 18
2.	Ballast.....	23,940 44
3.	Ties.....	226,214 80
4.	Rails.....	222,626 34
5.	Other track material.....	128,667 88
6.	Roadway and track.....	533,502 52
7.	Removal of snow, sand and ice.....	91,124 39
9.	Bridges, trestles and culverts.....	66,082 76
10.	Over and under grade crossings.....	410 86
11.	Grade crossings, fences, cattle guards and signs.....	37,516 41
12.	Snow and sand fences, and snow sheds.....	9,802 55
13.	Signals and interlocking plants.....	5,252 09
14.	Telegraph and telephone lines.....	696 47
16.	Buildings, fixtures and grounds.....	140,304 89
17.	Docks and wharfs.....	21,141 98
18.	Roadway tools and supplies.....	22,810 34
22.	Injuries to persons.....	404 02
23.	Stationery and printing.....	3,666 78
25.	Other expenses.....	1,585 93
26.	Maintaining joint tracks, yards and other facilities—Dr.....	44,161 18
		1,629,254 81
27.	Maintaining joint tracks, yards and other facilities—Cr.....	6,975 06
		1,622,279 75

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No. 4.—INTERCOLONIAL RAILWAY.

MAINTENANCE of Equipment, Year ended March 31, 1910.

	\$	cts.
No. 28. Superintendence.....	54,483	94
" 29. Steam Locomotives—Repairs.....	626,048	65
" 30. Steam Locomotives—Renewals.....	133,333	32
" 35. Passenger Train Cars—Repairs.....	271,828	78
" 36. Passenger Train Cars—Renewals.....	66,666	60
" 38. Freight Train Cars—Repairs.....	483,914	60
" 39. Freight Train Cars—Renewals.....	100,000	98
" 44. Floating Equipment—Repairs.....	4,171	50
" 47. Shop Machinery and Tools.....	33,297	73
" 49. Injuries to Persons.....	451	02
" 50. Stationery and Printing.....	10,183	99
" 51. Maintaining Joint Equipment at Terminals—Dr.....	3,819	87
" 52. Other Expenses.....	30,312	76
" 53. Work Equipment—Repairs.....	27,204	93
" 54. Work Equipment—Renewals.....	6,075	00
	1,851,792	68

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No. 5.—INTERCOLONIAL RAILWAY.

TRAFFIC Expenses, Year ended March 31, 1910.

	\$	cts.
No. 57. Superintendence.....	53,801	72
" 58. Outside Agencies.....	61,587	67
" 59. Advertising.....	37,232	56
" 60. Stationery and Printing.....	24,810	53
" 61. Traffic Associations.....	2,392	10
" 62. Other Expenses.....	58	03
	179,882	61

S. L. SHANNON,

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E. & O. E.,

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No. 6.—INTERCOLONIAL RAILWAY.

TRANSPORTATION EXPENSES, year ended March 31, 1910.

	\$	cts.
No. 66 Superintendence.....	79,598	10
67 Despatching trains.....	142,103	79
68 Station employees.....	626,729	85
69 Weighing and Car Service Associations.....	1,622	69
70 Stock yards and grain elevators.....	2,319	44
72 Station supplies and expenses.....	86,785	21
73 Yardmasters and their clerks.....	33,544	40
74 Yard conductors and brakemen.....	121,899	35
75 Yard switch and signal tenders.....	12,854	37
76 Yard supplies and expenses.....	18,793	09
77 Yard enginemen.....	112,975	08
78 Enginehouse expenses—Yard.....	27,497	16
79 Fuel for yard locomotives.....	152,678	03
80 Water for yard locomotives.....	9,608	12
81 Lubricants for yard locomotives.....	3,767	49
82 Other supplies for yard locomotives.....	2,456	12
83 Operating joint yards and terminals—Dr.....	104,241	79
86 Road enginemen.....	482,068	52
87 Enginehouse expenses—Road.....	234,189	21
88 Fuel for road locomotives.....	1,490,049	28
89 Water for road locomotives.....	49,728	48
90 Lubricants for yard locomotives.....	24,063	61
91 Other supplies for road locomotives.....	13,465	61
94 Road trainmen.....	629,430	57
95 Train supplies and expenses.....	177,702	04
96 Interlockers, block and signals—Operation.....	13,250	71
97 Crossing flagmen and gatemen.....	12,717	31
98 Draw bridge operation.....	3,807	06
99 Clearing wrecks.....	16,312	51
100 Telegraph and telephone—Operation.....	10,547	33
101 Operating floating equipment.....	42,321	54
103 Stationery and printing.....	53,491	87
105 Other expenses.....	21,866	58
106 Loss and damage—Freight.....	29,606	30
107 " —Baggage.....	157	84
108 Damage to property.....	5,613	42
109 Damage to stock on right of way.....	2,290	04
110 Injuries to persons.....	7,514	36
111 Operating joint tracks—Dr.....	11,212	38
Cr.	4,870,874	65
No. 84 Operating joint yards and terminals—Cr.....	86,206	89
	4,784,667	76

E. and O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller.

No. 7.—INTERCOLONIAL RAILWAY.

GENERAL EXPENSES, year ended March 31, 1910.

	\$	cts.
No. 113 Salaries and expenses of general officers.....	19,696	93
114 Salaries and expenses of clerks and attendants.....	86,889	65
115 General office supplies and expenses.....	3,454	23
116 Law expenses.....	7,307	61
118 Relief department expenses.....	8,000	00
119 Pensions.....	63,313	85
120 Stationery and printing.....	12,214	21
121 Other expenses.....	5,571	65
	206,447	53

E. and O. E.,
MONCTON, N.B.S. L. SHANNON,
Comptroller.

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No. 8.—INTERCOLONIAL RAILWAY OF CANADA.
GENERAL STORES ACCOUNT, YEAR ENDED MARCH 31, 1910.

Dr.	\$ cts.	\$ cts.	Cr.	\$ cts.	\$ cts.
To Balance, March 31, 1909.....		1,599,094 59	By Issues during year ended March 31, 1910.....	3,363,105 44	
Purchases during year ended March 31, 1910 ..	2,800,212 24		Sales material, fuel, &c.....	35,618 31	
Charges from other Departments.....	277,057 54		Sales old material	189,526 36	
Labour.....	151,745 77				3,588,250 11
Staff pay rolls.....	3,321 66	3,232,337 21	Balance—		
			Or linary stores, including fuel.....	928,804 27	
			Roadway and bridge material.....	314,377 42	
		4,831,431 80			1,243,181 69
					4,831,431 80

(Sgd)

S. L. SHANNON,

Comptroller and Treasurer.

(Sgd)

C. F. BURNS,

Auditor of Disbursements, I.C.R.

MONCTON, N.B.

No. 9.—INTERCOLONIAL RAILWAY—STATEMENTS OF THE COMPTROLLER.

GENERAL BALANCE, YEAR ENDED MARCH 31, 1910.

DR.	\$	cts.	\$	cts.	Cr.	\$	cts.	\$	cts.
To Cash.....								1,534,146	92
General stores.....			0	02	By Dominion of Canada.....				
Station agents.....			1,243,181	69	Unclaimed freight.....			67	21
Receiver General—Provident Fund Account.....			136,204	02	Intercolonial and Prince Edward Island Railways employees' Provident Fund.....			243,673	85
Auditor's Suspense Account.....			7,743	27					
Cash in Transit Account.....			5,815	52	Suspense.....			3,513	50
Commissary Stock.....			25,757	79	Equipment Renewal Account.....			376,359	98
Expenditures for Road and Equipment Suspense.....			6,085	69	Rail Renewal Account.....			150,000	00
					Freight in Transit Account.....			6,943	01
To Individuals and Companies Ledger—									
Acadia Coal Co.....			1,213	27	By Individuals and Companies Ledger—				
Atlantic Coast Lines.....			1	95	Amherst Malleable Iron Company.....			40	42
Armour Car Lines.....			0	54	Cape Breton Ry.....			17	57
H. & A. Allan.....			13	35	Chatham Ry.....			267	50
Atlantic and Lake Superior Ry.....			1,837	39	Chappell Bros.....			0	07
Atlantic, Birmingham and Atlantic Ry.....			0	26	J. & A. Culligan.....			226	20
Atchison, Topeka and Santa Fe Ry.....			3	17	Colonial Granite Co.....			125	00
Steamship 'Amelia'.....			0	70	Cornwall and York Cotton Mills Co.....			430	18
Austin Lumber Co.....			343	10	J. E. Couture.....			346	70
Boston and Maine Ry.....			21	87	Department of Justice.....			1,000	00
Baltimore and Ohio Ry.....			294	68	Dubs & Co.....			38	63
Boston and Albany Ry.....			2	20	Dominion Express Co.....			9	50
Buffalo, Rochester and Pittsburgh Ry.....			17	73	Dominion Bridge Co.....			20	87
E. Bigny.....			30	16	G. Dumont.....			95	00
Boston Steamship Co.....			12	12	Douglas Bros.....			400	00
John Breakey.....			12	12	W. H. Duffy.....			288	85
Brown Machine Co.....			314	14	Elmsdale Co.....			1,190	18
Carquet Ry.....			14,083	69	T. E. Ferriald & Co.....			223	50
Canadian Express Co.....			4	71	Grand Lake Lumber Co.....			383	00
Canadian Pacific Ry.....			12,461	02	General Storekeeper.....			129	23
Canadian Pacific Ry. (N. B. Div.).....			11,709	11	Great North Western Telegraph Co.....			2	48
Charlottetown Steam Navigation Co.....			16	82	L. Goodspeed & Son.....			231	44
Central Vermont Ry.....			407	46	Albion Jordan.....			196	72
Cumberland Ry. & Coal Company.....			447	36	Harris Forge Co.....			391	00
Canada Iron Corporation.....			600	51	J. & D. A. Harquail.....			492	62
Canadian Northern Ry.....			130	17	Chas. & Davidson Hill.....			448	81
Cincinnati, Hamilton and Dayton Ry.....			43	46	J. A. Kirkpatrick.....			310	50
Cleveland, Cincinnati, Chicago & St. Louis Ry.....			39	68	J. Lord.....			100	00
Chicago, Milwaukee and St. Paul Ry.....			38	37	W. L. Loggie & Co.....			30	00
Chicago, St. Paul, Minneapolis and Omaha Ry.....			4	00					
Chicago and North Western Ry.....			14	66					

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S. Cynard & Co.	1 85	Jos. Leocors	502 55
T. B. Calhoun	5 00	Nap. Mezier	98 50
G. S. Campbell & Co.	43 25	W. H. Miller	19 00
Chicago and Alton Ry.	41	J. T. Munro	55 00
Cincinnati, New Orleans and Texas Pacific Ry.	17 34	W. A. McKay & Co.	138 00
Chicago, Rock Island and Gulf Ry.	1 89	McKay Mining Co.	167 66
Chicago, Burlington and Quincy	5 26	Reid McMann	2 64
Central Ry. of New Jersey	1 18	McLean Milling Co.	776 08
Chesapeake and Ohio Ry.	8 86	Nova Scotia Steel & Coal Co.	465 93
Chicago and Eastern Illinois Ry.	4 92	New Brunswick Telephone Co.	27 62
Central Ontario Ry.	1 53	Nova Scotia Construction Co.	7 50
Chicago, Indiana and Louisville Ry.	40	J. R. Porter	186 00
Chicago, Cincinnati and Louisville Ry.	7 87	N. Piche & Fils	960 94
Chicago, Indiana and Southern Ry.	5 04	Alphonse Pimeau	208 45
Colchester Coal and Railway Co.	300 35	Primrose Bros.	445 17
Chicago, Rock Island and Pacific Ry.	35 36	David Porter	2 40
Chicago Great Western Ry.	4 36	Quebec Construction Co.	51 44
Corbett & Flossch.	1,354 53	Seszenwein Bros	2 73
Copper Crown Co.	45 13	James W. Smith	111 24
Thomas Cote	5 24	Shives Lumber Co.	6 00
		Enoch Sleeves	372 25
		B. L. Tucker	210 19
		Edward Ruel	106 50
		Vanderbeek & Sons	5 00
		S. E. Vaughan & Co.	891 00
		Alexander Watson	356 00
		M. Wood & Sons	150 00
		H. W. Wentzell	160 50
		By Individuals and Companies Ledger Suspense—	
		Canadian Iron Corporation	2,242 50
		General Storekeeper	186 14
		Fraserville Foundry	169 50
		H. J. Garson & Co.	6,311 75
		J. Hillis & Son	775 91
		Northern New Brunswick and Seaboard Airline Ry.	1 80
		New Brunswick and Prince Edward Island Ry.	440 18
		Portland Rolling Mills	1,486 60
		Prince Edward Island Ry.	18 76
		John Simon & Co.	421 02
		Shives Lumber Co.	1 19
		Nova Scotia Steel and Coal Co.	10 72
		By Traffic Ledger—	
		Allan Bros. & Co.	101 70
		Archison, Topeka and Santa Fe Ry.	486 85
		Baltimore and Ohio Ry.	60 04
		Boston and Maine Ry.	3,616 62
			13,987 26
			12,066 07

Carried forward

Carried forward

No. 9.—INTERCOLONIAL RAILWAY—Continued.
GENERAL BALANCE, YEAR ENDED MARCH 31, 1910—Continued.

DR.		CR.	
\$	cts.	\$	cts.
Brought forward.....		Brought forward.....	
Dond Stock Car Co.....	9 91	Canadian Northern Ry.....	1,079 73
T. A. S. Dewolfe & Son.....	19 02	Charlottetown Steam Navigation Co.....	68 26
Emile Dubé.....	4 00	Chicago and Alton Ry.....	74 85
Daveluyville Station.....	12 80	Chicago, Burlington and Quincy Ry.....	642 22
Elgin and Havelock Ry.....	1,865 84	Chicago Great Western Ry.....	716 74
Eric Ry.....	125 31	Chicago North Western Ry.....	1,546 47
Eastern Township Co.....	16 63		
Evansville and Terre Haute Ry.....	1 44		
Empire Line.....	6 25		
Captain J. A. Farquhar.....	9 60		
Burness, Withy & Co.....	45 47		
Freight Claim Agent.....	3 68		
Fraserville Navigation Co.....	14 71		
Grand Trunk Ry.....	10,835 41		
Great Northern Ry. of Canada.....	12 91		
O. Garrett & Son.....	52 92		
Galena Signal Oil Company.....	616 00	Chicago, Milwaukee and St. Paul Ry.....	814 99
H. J. Carson & Co.....	13 84	Cleveland, Cincinnati, Chicago and St. Louis Ry.....	71 20
Graham & Co.....	58 43	Duluth, South Shore and Atlantic Ry.....	841 59
German-American Tank Line.....	10 47	Great Northern Ry. Line.....	1,303 88
Grand Trunk Ry. Suspense.....	98 75	Great Northern Ry. Line.....	16 52
Halifax and South Western Ry.....	111,096 07	Fraserville Navigation Co.....	13 80
Halifax and St. Martins Ry.....	472 16	Interprovincial Navigation Co.....	224 67
Halifax Station Labour.....	1,500 00	Inverness Ry. & Coal Co.....	1 58
J. Hillis & Sons.....	210 19	Lehigh Valley Ry.....	1 45
M. J. Haney.....	187 89	Lebmiere and Megantic Ry.....	64 14
W. Hood & Son.....	132 00	Michigan Central Ry.....	6,465 19
Humphrey's Glass Works.....	57 00	Maine Central Ry.....	1,146 70
A. J. Hart.....	78 00	Minneapolis, St. Paul and S. S. Marie Ry.....	683 90
Inverness Ry. & Coal Co.....	242 35	Northern Pacific Ry.....	19 14
Intercolonial Coal Mining Co.....	99 96	New England Navigation Co.....	121 04
Illinois Central Ry.....	18 11	New York Central and Hudson River Ry.....	549 68
Imperial Oil Co.....	22 29	New York, New Haven and Hartford Ry.....	11 29
Intercolonial and Great Northern Ry.....	11 05	Pennsylvania Ry.....	250 13
Iowa Central Ry.....	1 16	Quebec Central Ry.....	49 80
Kent Northern Ry.....	8,574 54	Southern Pacific Ry.....	99 10
Kanawha and Michigan Ry.....	2 68	Tamiscoonata Ry.....	244 34
Kennedy & McDonald.....	27 96	Teniskaming and Northern Ontario Ry.....	735 14
Lebmiere and Megantic Ry.....	3 28	Wabash Ry.....	
			22,162 75

INTERCOLONIAL RAILWAY

SESSIONAL PAPER No. 20

21,789 54	Car Service Ledger—	
184 02	Ashland Coal & Iron Co.	0 25
0 41	Banger Ry. & Electric Co.	3 60
7 24		
96 39		
96 10		
4 94		
3 25		
2 00		
482 15		
43 75		
142 91		
367 22		
1,585 83		
705 37		
45 82		
49 44		
8 35		
1,668 52		
1 00		
9 45		
26 28		
2 50		
10 65		
18 08		
4 08		
1 45		
1 00		
1 19		
189 00		
225 00		
8 46		
7 70		
101 48		
47,204 37		
440 38		
42 55		
187 98		
24 56		
63 31		
3,629 74		
2 66		
241 75		
30		
22 22		
98		
6 67		
	Londonderry Iron & Mining Company	
	Lehigh Valley Ry	
	Louisiana and Western Ry	
	Louisville and Nashville Ry	
	Lake Shore and Michigan Southern Ry	
	Lake Erie and Western Ry	
	R. S. Lowe	
	Lexington and Eastern Ry	
	Lehigh Lumber Co.	
	Levi County Electric Co.	
	Moncton & Beatonche Co.	
	Michigan Central Ry	
	Maine Central Ry	
	Montmagny Light & Pulp Co	
	T. Malcolm	
	Minudie Coal Co.	
	Missouri Pacific Ry	
	Minneapolis, St. Paul and S. S. Marie Ry	
	Missouri, Kansas and Texas Ry	
	Maritime Coal, Ry. and Power Co.	
	Minneapolis and St. Louis Ry.	
	Mont. Joli Water Co.	
	Mathie Ellis Co.	
	Mobile and Ohio Ry	
	Milwaukee Refrigerator Transit Co.	
	H. W. Monsell & Co.	
	Morrill Refrigerator Line.	
	Montreal Locomotive Works.	
	Matapedia Lumber Co.	
	Mississippi Central Ry	
	McLean, Holt & Co.	
	George McSweeney.	
	H. F. McDougall.	
	E. D. McGrath.	
	W. F. McNeil & Co.	
	New Brunswick Coal & Ry. Co.	
	New York Central and Hudson River Ry	
	National Despatch Line.	
	Newfoundland Ry.	
	New York, New Haven & Hartford Ry	
	New York, Chicago & St. Louis Ry	
	New Brunswick & Prince Edward Island Ry.	
	Northern Pacific Ry.	
	National Dispatch Great Eastern Line.	
	Northern Central Ry.	
	J. Norris & Co.	
	Norfolk & Western Ry.	
	New Orleans & North Eastern Ry	
	Car Service Ledger—	
	Ashland Coal & Iron Co.	666 60
	Banger Ry. & Electric Co.	43 00
		20
	T. B. Cochran.	01
	Town of Fraserville	1 00
	Bell Telephone Co.	3 00
	Canadian Express Co.	02
	Ry Bay of Quinte Ry.	25
	Cinehmat, Hamilton and Dayton Ry.	10 00
	Durham & Southern Ry	1 00
	Evansville and Terre Haute Ry.	18 00
	Ironton Ry.	4 20
	International Ry.	12 00
	Lotbiniere and Megantic Ry	20 40
	Moshassuck Valley Ry.	50
	McKeessport Connecting Ry.	1 50
	Natchez, Columbia and Mobile Ry.	50
	Port Huron Southern Ry.	1 15
	Pontiac, Oxford and Northern Ry	8 33
	Stewartstown Ry.	30
	Tellico Ry.	1 20
	Woodstock Ry.	60
	Rents Ledger:—	
	Canada Ry. News Co.	666 60
	Canadian Pacific Ry.	43 00
	D. S. LeBlanc.	20
	T. B. Cochran.	01
	Town of Fraserville	1 00
	Bell Telephone Co.	3 00
	Canadian Express Co.	02
	Carried forward	83 78
		713 86

NO. 9.—INTERCOLONIAL RAILWAY—Continued.
GENERAL BALANCE, YEAR ENDED MARCH 31, 1910—Continued.

Dr.	\$	cts.	\$	cts.	Crt.	\$	cts.
Brought forward.....					Brought forward.....		
To New York, Ontario & Western Ry.....		4 72					
National Labour Congress.....		446 40					
North Shore Ry Co.....		223 74					
New Canadian Co.....		283 96					
Northern New Brunswick and Seaboard Ry.....		2,234 01					
New Brunswick Cold Storage Co.....		105 00					
New Brunswick Pulp and Paper Co.....		\$1 34					
New Brunswick Dock and Terminal Co.....		70 00					
Oregon Railway and Navigation Co.....		2 55					
Ocean charges on freight at Halifax.....		3,423 63					
Post Office Department.....		32,030 15					
Prince Edward Island Ry.....		205 97					
Pictou Station labour.....		200 00					
Pullman Co.....		1 26					
Pennsylvania Ry.....		82 32					
Price Bros.....		1,336 02					
Pittsburg, Cincinnati, Chicago and St. Louis Ry.....		12 32					
Pennsylvania Co.....		73 69					
Pere Marquette Ry.....		75 65					
Pittsburg and Lake Erie Ry.....		11 15					
Philadelphia and Reading Ry.....		35 79					
Philadelphia, Baltimore and Washington Ry.....		6 83					
H. M. Price & Co.....		305 43					
Pickford & Black.....		169 87					
Pacific Fruit Express.....		13 51					
Felix Pichette.....		7 50					
Quebec Central Ry.....		30,866 00					
Quebec Southern Ry. (new account).....		397 78					
Quebec and Lake St. John Ry.....		49 42					
Quebec Southern Ry. (old account).....		25,748 14					
Rhodes, Curry & Co.....		2,907 23					
Rutland Ry.....		13 02					
Chas. D. Ruddock.....		110 00					
Ryan & MacDonnell.....		3,736 29					
William Rontledge.....		35 21					
Record Foundry Co.....		6 90					
Railway Automatic Car Co.....		61 40					
Reid Wrecking Co.....		35 00					
Swift Refrigerator Line.....		2 85					

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To Sherbrooke Tank Line.....	0 48	
Sydney Cement Co.....	526 53	
Salisbury and Harvey Ry.....	7,901 31	
Southern Ry.....	1 71	
St Lawrence & Adirondack Ry.....	19 41	
Seaboard Air Line.....	2 12	
St. Louis & San Francisco Ry.....	2 30	
St. Louis South Western Ry.....	3 59	
Silliker Car Co.....	20 36	
St. Monique Station.....	10 00	
Santa Fe Refrigerator Despatch.....	11 03	
J. B. Sangster.....	6 04	
J. Willard Smith.....	10 00	
Sussex Station.....	25 00	
Sydney & Glace Bay Ry.....	1 72	
Shaw & Mason.....	51 00	
N. C. Scott.....	29 61	
St. John Station Labour.....	1,000 00	
Santa Fe Prescott and Phoenix Ry.....	0 30	
Tennisonata Ry.....	118 60	
Texas & Pacific Ry.....	1 74	
Toronto, Hamilton & Buffalo Ry.....	30 40	
Trois Pistoles Pulp & Paper Co.....	73 82	
Transcontinental Ry. Commissioners.....	8,214 77	
William Thomson & Co.....	11 40	
D. Tremblay.....	123 29	
S. M. Tweedie.....	121 90	
Toronto Construction Co.....	1,015 44	
Vandalia Line.....	0 40	
Uncurrent & failed banknotes.....	14 00	
Union Refrigerator Transit Co.....	1 20	
Vicksburg, Shreveport and Pacific Ry.....	0 79	
Union Pacific Ry.....	2 43	
Union Line.....	1 70	
Wabash Ry.....	100 73	
Western Union Telegraph Co.....	65 36	
A. N. Whitman & Son.....	150 00	
E. A. Wallberg.....	4,839 63	
Wisconsin Central Ry.....	10 25	
Wheeling and Lake Erie Ry.....	0 30	
Western Refrigerator Despatch.....	0 93	
Washington County Ry.....	11 62	
York & Carleton Ry.....	230 56	
		432,965 04
Individuals and Companies Ledger Suspense:—		
Dominion Atlantic Ry.....	58 04	
Grand Trunk Ry.....	0 94	
Halifax and South Western Ry.....	81 01	

Carried forward..... Carried forward.....

No. 9.—INTERCOLONIAL RAILWAY—Continued.

GENERAL BALANCE, YEAR ENDED MARCH 31, 1910—Continued

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.
Brought forward.....					Brought forward.....		
Montreal Locomotive and Machine Co.....		0 83					
McLean, Holt & Co.		728 50					
New Brunswick Docks and Terminals Co		1 79					
Temiscouata Ry.....		0 62					
International Ry.....		0 38					
Pullman Car Co.		0 78					
				867 92			
To Traffic Ledger :							
H. & A. Allan.....	1,469	21					
J. & A. Allan.....		4 95					
Canadian Pacific Ry.....	7,732	92					
Dominion Steamship Line.....		44 05					
Dominion Coal Co.....		79 65					
Grand Trunk Ry.....	18,676	01					
Lakeshore and Michigan Southern Ry.....		5 25					
New York, New Haven and Hartford Ry.....	2,181	20					
Reid-Newfoundland Ry.....	8,846	13					
Salvation Army.....	2,938	12					
				41,376 89			
Car Service Ledger :							
Albany and Hudson Ry.....		4 25					
Buffalo and Susquehanna Ry.....		8 00					
Brockville, Westford and Northwestern Ry.....		3 25					
Chicago, Peoria and St. Louis Ry.....		0 50					
Chicago, Cincinnati and Louisville Ry.....	137	25					
Carolina Valley Ry.....		0 75					
Dublin and Savannah Ry.....		0 25					
Erie Ry.....		1 25					
Forth, Smith and Western Ry.....		1 00					
Genesee and Wyoming Ry.....		4 75					
Georgia and Northern Ry.....		5 00					
				53 25			
To Greenwich and Johnsonville Ry :							
Irondale, Bancroft and Ottawa Ry.....		3 75					
Mississippi Central Ry.....		9 50					
Minneapolis and St. Louis Ry.....		50 25					
Mereer Valley Ry.....		1 50					
New York and Pennsylvania Ry.....		2 00					
New York, Philadelphia and Norfolk Ry.....		6 00					
New York, New Haven and Hartford Ry.....		1,478 65					

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Norwood and Lawrence Ry.....	204 75
Quebec and Lake St. John Ry.....	5 50
Quebec Ry., Light and Power Co.....	4 00
Rariton River Ry.....	3 00
Rapid River Ry.....	1 75
Randolph and Cumberland Ry.....	25
St. Louis, Watkins and Gulf Ry.....	2 50
Toledo Terminal Ry.....	222 30
Temisaming and Northern Ontario Ry.....	29 25
White River Ry.....	49 50
2,293 95	
By Rents Ledger:—	
J. St. McLeod.....	6 00
Theo. Boucher.....	30 00
J. J. Irvine.....	32
E. D. McGrath.....	8 36
Reid Newfoundland Ry.....	466 59
W. A. Clarke.....	3 00
F. Pichette.....	105 00
Canadian Pacific Ry.....	329 14
Post Office Dept.....	43 75
Western Union Telegraph Co.....	14 40
Douglas Hannah.....	1 56
James Mulroney.....	1 05
Duncan McGee.....	2 00
E. Thompson.....	1 73
C. Villeux.....	20 00
N. Lamontagne.....	15 00
Misses Camire.....	12 00
Maurice Camire.....	11 00
Mrs. J. Atkinson.....	85 00
Mrs. L. Roberge.....	80 00
James Cloutier.....	34 00
Geo. Cloutier.....	34 00
A. Bégin.....	156 00
Jean Lamothe.....	36 00
Louis Boisvert.....	8 00
Emile St Laurent.....	173 00
Peter Bernier.....	10 00
David Rouleau.....	24 00
Dame C. W. Carrier.....	204 00
Olivier Gingras.....	51 00
Arthur Lamontagne.....	4 60
L. N. Letarte.....	0 06
J. D. Demings.....	2 00
E. J. Smith.....	1 00
J. A. R. Wier.....	7 00
Mrs. Agnes Welt.....	1 00
Thomas Sharpe.....	2 00

Carried Forward.....

Carried forward.....

No. 9.—INTERCOLONIAL RAILWAY—Continued.

GENERAL BALANCE, YEAR ENDED MARCH 31, 1910—Concluded.

DR.	\$	cts.	CR.	\$	cts.
Brought forward			Brought forward		
Mrs. D. McLean.....	4	00			
R. S. Vye.....	0	75			
A. B. Copp.....	3	00			
E. J. Smith.....	1	00			
J. McDonald.....	1	00			
John R. Stewart	0	25			
William Young.....	5	00			
Chas. Richards.....	3	00			
William Plummer.....	2	00			
D. S. Harper.....	1	00			
Patrick McCourt.....	1	00			
Adam Mahar.....	0	25			
Geo. Mann.....	0	25			
Benj. Smith.....	0	25			
Geo. Lovett.....	0	75			
Municipality of Amqui.....	9	00			
E. Hutchinson.....	10	00			
D. McEvoy.....	5	00			
B. Gladwin.....	5	00			
Atkinson & McLeod.....	2	00			
B. O. Steeves.....	2	00			
P. A. Grant.....	15	00			
M. McLean.....	15	00			
Geo. Lightle.....	1	00			
Geo. W. White.....	3	75			
A. McIsaac.....	5	00			
J. A. Kirkpatrick.....	1	00			
John C. Cass.....	30	00			
D. Gagne.....	1	00			
M. A. McLeod.....	5	00			
R. Allan.....	6	00			
Geo. Lovett.....	0	50			
Alex. McDonald.....	2	00			
W. F. Morgan.....	1	00			
H. F. McDougall.....	1	00			
Strathcona Coal Co.....	1	00			
Canadian Express Co.....	6	25			
Town of Shediac.....	1	00			
Dominion Express Co.....	6	25			

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James Skean.....	3 00
D. C. McKenzie & R. Graham.....	15 00
D. Patterson.....	4 00
M. A. McLeod.....	5 06
A. M. Rowan.....	250 00
W. R. Steeves.....	0 79
Central Telephone Co.....	19 00
Harris Abattour Co.....	5 00
City of Sydney.....	1 00
John Legrene.....	0 42
Le Credit Municipal Canadien.....	6 25
Canadian Express Co.....	2 00
Charles Love.....	1 00
James Barclay.....	5 00
Sanderson Mfg. Co.....	6 25
Canadian Express Co.....	10 00
Nova Scotia Telephone Co.....	24 00
Town of Kinouaski.....	5 00
Lieut. General Laurie.....	251 00
New Brunswick Cold Storage Co.....	5 00
Trueman Wheaton.....	5 00
John W. Logan.....	5 00
Imperial Oil Co.....	1 00
Robert Douglas.....	2 00
Antigonish and Sherbrook Telephone Co.....	1 00
E. Banville.....	1 00
A. A. O'Donnell.....	1 00
Dartmouth Ferry Commission.....	20 00
Dominion Express Co.....	1 00
Transcontinental Railway Commissioners.....	1 00
John H. Adams.....	1 00
Emile Paturel.....	1 00
Canadian Express Co.....	0 48
Geo. Cooper and J. P. Cunningham.....	12 50
B. N. S. Underhill.....	1 00
Furness, Withly & Co.....	16 67
Sackville Hay and Feed Co.....	7 50
McKay Mining Co.....	5 00
H. McC. Hart.....	30 00
Tlios. Belanger.....	1 00
Trustees of Y. M. C. A., Campbellton.....	10 00
Canadian Express Co.....	25 00
H. M. Kent.....	5 00
Samuel Melanson.....	5 00
Doucett Bros.....	1 00
City of Sydney.....	1 00
J. H. Stewart.....	2 50
Imperial Oil Co.....	90 00

3,016 57

Carried forward.....

Carried forward.....

No. 9.—INTERCOLONIAL RAILWAY—*Concluded.*
 GENERAL BALANCE, YEAR ENDING MARCH 31, 1910.

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.
Brought forward.....					Brought forward.....		
Advances—							
H. M. Stevens.....		5	06				
A. W. Belyea.....		10	00				
E. H. McAlpine.....		290	00				
A. Gallipeau.....		100	00				
T. P. Owens.....		900	00				
				1,305			
				06			
				2,364,318			
				19			
				2,364,318			
				19			

E. & O. E.,
 MONCTON, N.B.

S. L. SHANNON,
Comptroller.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT of Averages, year ending March 31, 1910.

Mileage of railway.....	1,447.13
Engine mileage.....	8,608.486
Total train mileage.....	6,682.353
Total car mileage.....	94,384.628
<hr/>	
Ratio of earnings to gross earnings—	Per cent.
Revenue from transportation.....	99.32
Revenue from operations other than transportation.....	.68
Gross earnings per mile of railway.....	Dollars 6,404.56
" engine mile.....	" 1.08
" train mile.....	" 1.39
" car mile.....	Cents 9.82
<hr/>	
Ratio of expenses to gross earnings—	Per cent.
Maintenance of way and structures.....	17.50
" equipment.....	19.98
Traffic expenses.....	1.94
Transportation expenses.....	51.62
General expenses.....	2.23
<hr/>	
Expenses per train mile—	Cents.
Maintenance of way and structures.....	24.28
" equipment.....	27.71
Traffic expenses.....	2.69
Transportation expenses.....	71.60
General expenses.....	3.09
<hr/>	
Expenses per mile of railway—	Dollars.
Maintenance of way and structures.....	1,121.03
" equipment.....	1,279.63
Traffic expenses.....	124.30
Transportation expenses.....	3,306.32
General expenses.....	142.66
<hr/>	
Locomotive and car repairs, per locomotive and car—	Dollars.
Locomotives.....	1,504.72
Passenger cars.....	604.87
Freight cars.....	33.16

(Sgd.) S. L. SHANNON,
Comptroller and Treasurer.

C. F. BURNS,
Auditor of Disbursements, I.C.R.

1 GEORGE V., A. 1911

INTERCOLONIAL RAILWAY OF CANADA.

COMPARATIVE STATEMENT of principal Revenue Producing Freight carried over the Intercolonial Railway in 1908-09 and 1909-10.

DESCRIPTION.	Year ended 31st March, 1909.	Year ended 31st March, 1910.
	Tons.	Tons.
<i>Product of Agriculture :</i>		
Grain	103,896	155,484
Flour	146,692	160,817
Potatoes	26,842	31,232
Hay	36,021	72,229
Apples, fruit and vegetables	15,648	18,855
Other mill products	34,519	31,511
Cotton	3,885	3,723
<i>Products of Animals :</i>		
Hogs and horses	8,493	8,898
Sheep and cattle	10,044	9,768
Lambs	1,532	1,967
Dressed meats	17,342	18,439
Poultry and game	242	411
Fish	26,428	27,887
Oysters	537	1,053
Wool	1,196	1,642
Hides and leather	5,742	6,667
<i>Products of Mines :</i>		
Coal and coke	1,115,937	1,233,870
Ore	2,401	5,740
Sand, stone, &c.	159,300	184,673
Salt	7,058	8,898
Slate and granite	3,280	1,548
Phosphate	11,356	15,351
<i>Products of Forests :</i>		
Lumber	352,888	416,774
Bark	14,200	15,835
Cord wood	52,817	48,751
Pulp wood	167,129	185,385
Wood pulp	19,249	39,072
Shingles	76,480	78,930
Other forest products	196,284	259,002
<i>Manufactures :</i>		
Petroleum and oils	26,466	27,537
Sugar	46,300	62,571
Iron and steel rails	101,340	88,484
Iron, pig and bloom	98,844	138,468
Wire rods	56,024	91,389
Steel billets	115,590	89,416
Other castings and machinery	64,427	75,419
Bar and sheet metals	17,218	12,659
Brick, lime and cement	90,096	107,199
Agricultural implements	6,217	7,585
Furniture	5,293	5,825
Immigrant's effects	1,350	1,821
Miscellaneous	327,369	357,963
Grand total	3,573,972	4,110,748

(Sgd.) S. L. SHANNON,
Comptroller and Treasurer.(Sgd.) W. H. ESTANO,
Traffic Auditor.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT OF RECEIPTS 1908-9 and 1909-10.

Months.	Passenger Traffic.		Freight Traffic.		Mails and Sundries.		Total.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1909—								
April	208,908	23	528,853	85	28,729	25	766,491	33
May	197,244	59	472,576	97	33,203	06	703,024	62
June	242,215	90	463,480	74	34,269	36	739,966	00
July	314,732	16	482,064	25	35,172	13	831,968	54
August	335,443	17	424,580	98	31,829	50	791,853	65
September	304,881	46	482,485	77	40,675	34	828,042	57
October	238,054	67	562,286	27	34,650	62	834,991	56
November	192,884	95	578,692	94	33,185	79	809,763	68
December	199,486	28	542,184	42	60,217	58	801,888	28
1910—								
January	169,614	98	450,978	28	33,530	24	654,123	50
February	141,588	50	466,167	89	30,129	70	637,886	09
March	220,829	77	594,531	82	52,873	58	868,235	17
1909-10	2,765,884	66	6,048,884	18	453,466	15	9,268,234	99
1908-9	2,628,218	57	5,502,550	58	396,300	31	8,527,069	46

(Sgd.) S. L. SHANNON,

(Sgd.) W. H. ESTANO,
Traffic Auditor.

Comptroller and Treasurer.

INTERCOLONIAL RAILWAY OF CANADA.

PASSENGER STATEMENT 1908-9 and 1909-10.

Months.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1909—						
April	220,449	7,341,115	19,251	4,493,912	239,700	11,835,027
May	215,388	7,653,839	17,972	2,925,795	233,360	10,579,634
June	236,794	9,757,357	21,779	3,267,586	258,573	13,024,943
July	322,238	14,117,761	25,011	4,088,943	347,249	18,206,704
August	323,036	12,202,322	32,637	6,182,175	355,673	18,384,497
September	270,422	10,978,376	27,893	5,701,955	298,315	16,680,331
October	226,473	8,096,567	21,528	3,683,460	248,001	11,780,027
November	197,433	6,428,113	17,466	3,268,710	214,899	9,696,823
December	232,523	7,993,594	17,524	3,486,280	250,047	11,479,874
1910—						
January	211,233	5,886,877	16,401	3,297,370	227,634	9,184,227
February	175,135	5,122,515	11,006	2,676,647	186,141	7,799,162
March	242,423	7,559,925	20,309	5,927,635	262,732	13,487,560
1909-10	2,873,547	103,138,341	248,777	49,000,468	3,122,324	152,138,809
1908-9	2,656,217	96,462,819	251,020	43,213,293	2,907,237	139,676,112

(Sgd.) S. L. SHANNON,

(Sgd.) W. H. ESTANO,
Traffic Auditor.

Comptroller and Treasurer.

INTERCOLONIAL RAILWAY OF CANADA.

FREIGHT STATEMENT 1908-9 and 1909-10.

Months.	Local.		Through.		Total.	
	Tons.	Mileage.	Tons.	Mileage.	Tons.	Mileage.
1909—						
April	236,873	53,975,253	90,450	43,892,383	327,323	97,867,636
May	239,633	37,200,818	66,053	30,867,706	305,686	68,068,524
June	246,753	40,736,345	63,050	30,762,591	309,803	71,498,936
July	280,402	46,540,842	62,830	29,904,627	343,232	76,445,469
August	214,405	35,339,615	59,315	29,405,056	273,720	64,744,671
September	243,051	40,027,779	67,301	35,293,235	310,352	75,321,014
October	272,107	49,099,724	85,243	45,233,632	357,350	94,333,356
November	268,595	45,239,989	107,894	59,171,190	376,489	104,411,179
December	234,713	45,100,837	113,976	65,560,902	348,689	110,661,739
1910—						
January	224,072	48,575,194	85,787	46,120,534	309,859	94,695,728
February	225,099	52,442,741	76,754	41,485,502	301,853	93,928,243
March	272,939	67,289,927	89,945	47,727,335	362,884	115,017,262
1909-10	2,958,642	561,569,064	968,598	505,424,693	3,927,240	1,066,993,757
1908-09	2,742,454	525,514,718	831,518	435,775,383	3,573,972	961,290,101

(Sgd.) S. L. SHANNON,
Comptroller and Treasurer.

(Sgd.) W. H. ESTANO,
Traffic Auditor.

INTERCOLONIAL RAILWAY OF CANADA.

DESCRIPTIVE STATEMENT of Freight transported during the year ended March 31, 1910.

	Number.	Tons.
Barrels flour	1,608,170	160,817
Bushels grain	7,074,042	155,484
Live stock	106,712	20,633
Sup. feet lumber	677,805,611	940,091
Coal and other fuel		1,282,621
Manufactured goods		1,026,307
All other articles		524,795
Total		4,110,748

(Sgd.) S. L. SHANNON,
Comptroller and Treasurer.

(Sgd.) W. H. ESTANO,
Traffic Auditor.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT of Coal transported during fiscal year ended March 31, 1910.

From	FOR THE WEST.			For Local Stations.	Total.
	Via St. John.	Via St. Rosalie.	Via Montreal.		
	Tons.	Tons.	Tons.	Tons.	Tons.
Stellarton.....	166	42	60	393,280	393,548
Westville.....				30,421	30,421
New Glasgow.....	1,286		830	102,305	104,421
North Sydney.....				43,166	43,166
Sydney.....				7,413	7,413
Point Tupper.....				97,421	97,421
Maccan.....				239,813	239,813
Norton.....				31,302	31,302
Coal Branch.....				165	165
Harcourt.....				6,142	6,142
Springhill.....				51,692	51,692
	1,452	42	890	1,003,120	1,005,504

(Sgd.) S. L. SHANNON,
Comptroller and Treasurer.

(Sgd.) W. H. ESTANO,
Traffic Auditor.

INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT showing quantity of the under-mentioned articles carried during fiscal year ended March 31, 1910.

Articles.	Via Montreal.	Via St. Rosalie.	Via St. John.	For Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
Raw sugar, west bound.....	2,000	309		12,203	14,512
Refined sugar, west bound.....	9,217	6,402	1,051	23,224	39,894
European freight, west bound.....	6,656	1,651	9	43,249	51,565
" east bound.....	14,408	716	5,809	88,024	*108,957
Grain for shipment.....	Bush. 328,957				Bush. 328,957
Fresh fish.....	Tons. 3,965	Tons. 547	Tons. 2,616	Tons. 6,525	Tons. 13,653
Salt fish.....	3,759	697	806	9,606	14,868
Coal.....	890	42	1,452	1,003,120	1,005,504

* Includes 64,728 tons deals.

(Sgd.) S. L. SHANNON,
Comptroller and Treasurer.

(Sgd.) W. H. ESTANO,
Traffic Auditor.

1 GEORGE V., A. 1911

STATEMENT of Ocean Borne Passenger business done at the Port of Halifax during
the fiscal year ending March 31, 1910.

Name of Steamer.	NUMBER OF PASSENGERS.			
	1st	2nd	Steerage.	Total.
C. P. R. SS. Line—				
Empress of Ireland.....	70	27	38	135
Empress of Britain.....	118	68	63	249
North West Transport Line—				
Vulturno.....	1	55	1,615	1,671
Uranium.....	5	52	1,456	1,513
Raglan Castle.....		16	410	426
Napolitan Prince.....		24	699	723
Sicilian Prince.....		5	375	380
Campania.....		1	462	463
Allan Line—				
Corsican.....	71	720	1,885	2,676
Grampian.....	56	639	2,337	3,032
Virginian.....	141	800	2,168	3,109
Tunisian.....	153	930	3,082	4,165
Hesperian.....	94	534	1,791	2,419
Victorian.....	167	751	2,217	3,135
Carthaginian.....	61	184	826	1,071
Siberian.....	19	89	212	320
Mongolian.....	60	119	289	468
Pretorian.....		141	239	380
Corinthian.....		21	48	69
Numidian.....		125	295	420
Sardinian.....		17	54	71
Ionian.....	59	410	667	1,136
Pomeranian.....		16	17	33
Sicilian.....	3	14	205	222
Parisian.....		190	379	569
Dominion Line—				
Dominion.....		275	585	860
Canada.....		174	795	969
Southwark.....		17	88	105
Total.....	1,078	6,414	23,297	30,789

(Sgd.) E. TIFFIN,
General Traffic Manager.

MONCTON, N.B.
July 5, 1910.

SESSIONAL PAPER No. 20

STATEMENT of Ocean Borne Passenger business done at the Port of St. John during the fiscal year ending March 31, 1910.

Name of Steamer.	NUMBER OF PASSENGERS.		
	1st	Immigrants.	Total.
<i>WIM</i>			
C. P. R. Line—			
Lake Michigan		24	24
Lake Manitoba		15	15
Montezuma		30	30
Lake Erie		17	17
Montrose		4	4
Lake Champlain		1	1
Mount Temple		17	17
Empress of Britain		3	3
Empress of Ireland		4	4
Montreal		10	10
Canada Line—			
Prince Oscar		2	2
Donaldson Line—			
Athena	16	175	191
Cassandra	8	55	63
Salacia		5	5
Kastalia		3	3
Allan Line—			
Corsican	2	14	16
Tunisian		24	24
Victorian		15	15
Virginian		3	3
Grampian	1	6	7
Hesperian		46	46
Sardinian		27	27
Pomeranian		6	6
Total	27	506	533

(Sgd.) E. TIFFIN,
General Traffic Manager.

MONCTON, N.B.,
July 5, 1910.

1 GEORGE V., A. 1911

STATEMENT of Ocean Borne Passenger business done at the Port of Quebec during the year ending March 31, 1910.

Name of Steamer.	NUMBER OF PASSENGERS.		
	1st.	2nd.	Total.
Athenian.....	1	32	33
Corinthian.....	1	13	14
Corsican.....	9	35	44
Canada.....	4	10	14
Empress of Ireland.....	2	69	71
Sicilian.....	3	14	17
Ionian.....	3	30	33
Pomeranian.....	4	2	6
Montreal.....		25	25
Virginian.....	17	27	44
Dominion.....	8	3	11
Grampian.....	3	28	31
Cassandria.....	6	32	38
Mount Temple.....		20	20
Montrose.....		6	6
Empress of Britain.....	1	40	41
Prince Adolbert.....	1	18	19
Laurentic.....	3	18	21
Victorian.....	5	32	37
Tunisian.....	10	26	36
Lake Manitoba.....	1	10	11
Hesperian.....		31	31
Mount Royal.....	9	9	18
Parthenian.....		4	4
Prince Oscar.....		6	6
Lake Megantic.....		13	13
Lake Erie.....		3	3
Montezuma.....		21	21
Pretorian.....		40	40
Sardinian.....		5	5
White Star.....	1		1
Canadian.....		3	3
Montford.....		14	14
Lake Champlain.....		1	1
Lake Michigan.....		3	3
Donaldson.....		5	5
Megantic.....	3	7	10
Ottawa.....	8	5	13
Lakonia.....		1	1
	103	661	764

(Sgd.) E. TIFFIN,
General Traffic Manager.MONCTON, N.B.,
July 5, 1910.

SESSIONAL PAPER No. 20

STATEMENT of Ocean Borne Freight traffic via Halifax for the year ending March 31, 1910.

Line of Steamers.	Import.	Export.
	Tons.	Tons.
Allan Line.....	16,877	5,448
C. P. R.....	99	158
Elder Dempster.....	1,468	2,190
Furness.....	14,732	56,122
Manchester.....	973	5,845
N. W. Transport Co.....	911	.....
Plant Line.....	1,328	619
Pickford & Black.....	16,848	24,087
Red Cross Line.....	304	1,017
Donaldson.....	.....	1,030
Tramps—various steamers.....	11,087	24,405
	64,627	120,921

(Sgd.) E. TIFFIN,
General Traffic Manager.

MONCTON, N.B.,
July 5, 1910.

STATEMENT of Ocean Borne Freight traffic via St. John, for the year ending March 31, 1910.

Line of Steamers.	Import.	Export.
	Tons.	Tons.
Allan Line.....	2,850	5,270
Donaldson.....	5,522	2,846
Havana & Mexican Line.....	.....	1,273
Manchester Line.....	2,308	3,343
South African Line.....	.....	2,355½
C. P. R. Line.....	3,111	6,608
Head Line.....	.....	836
Furness Line.....	615	1,382
Elder Dempster Line.....	210	.....
Pickford & Black Line.....	296	.....
Teodore de Laringa (steamer).....	6,562	.....
	21,474	23,913½

(Sgd.) E. TIFFIN,
General Traffic Manager.

MONCTON, N.B.,
July 5, 1910.

1 GEORGE V., A. 1911

INTERCOLONIAL

STATEMENT of Casualties for the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	
1909.								
April 1	20	KS	Special.	H. Pelletier.	J. Dean.	361	Drummondville ...	
" 1	21	K	"	Freight.	P. H. Sirois.	307	St. Appollinaire. ...	
" 6							1½ miles east Trois Saumons.	
" 10	17.20	Mixed.	Freight.	F. A. Davidson. ...	Judson Wall.	341	1 mile north Princess Lodge.	
" 15	6.30	24	Way Frt.	J. L. Barnhill. ...	A. Robbins.	281	1 mile east Painsec Jct.	
" 16	2.55	34	Express	A. Begin.	E. B. Price.	411	¾ mile west Causpascal.	
" 18	23.50	Special.	Freight.	A. Delaney.	M. J. Taylor.	315	Adamsville.	
" 22	11	K	Lig't Engine	W. A. Fitch.	A. McLean.	179	3 miles east Leitches Creek.	
" 22	9.50	Pilot.		Wm. Tees.	J. Martin.	91	St. Hyacinthe.	
" 23	12.20	Shunter ...		C. Poirier.	C. A. Killam. ...	374	Ritchie's Siding. ...	
" 24	7.40	37	Freight.	W. E. Fergusson. .	W. E. Hunter. ...	211	Birch Ridge.	
" 24	23	25	69	Suburban. ...	C. D. Phillips. ...	J. Stockall.	141	Fairview.
" 28		Special.		V. R. Blanchard. .	F. Goddard.	359	3 miles west St. Appollinaire.	
" 30	21.30						Truro.	
" 30	15	45					Chaudiere Jct.	
May 4	11.30	Shunter.			G. Spear.	77	St. John Yard.	
" 5	16.30	153	Express	J. Guay.	E. Onellett.	408	Chabot's Crossing .	
" 19	20.30	Shunter.					Campbellton Yd ..	
" 22	20.30	176	Fast Frt.	Jas. McDonald. .	A. Stevens.	23	Stellarton.	
" 26	8	40	25	Express	T. Guinan.	B. Cooke.	234	½ mile east Windsor Jct.
June 1	19.50	Sub.		P. Tardif.	Oct. Halle.	90	Pt. Levis Yard. ...	
" 29							Kenpt Road, Halifax.	
July 7	14	55	64	Suburban. ...	L. G. Kennedy. ...	C. Coleman.	227	Burton's, Halifax. .
" 8	10	14	Sub.		Geo. C. Johnston. .	Geo. Roberge. ...	173	Point Levis.
" 16	13.25	Special.	Passenger. ...	Jos. Baxter.	Jno. H. Campbell. .	66	½ mile east of Trenton.	
" 19	22	01	200	Express	J. Rioux.	W. J. Atkinson. ...	343	Between Villeroi & de Lotbinière.
" 30	22	06	75	Freight.	C. Couchy.	J. Collet and E. Huott.	308	1 mile west of Laurier.

SESSIONAL PAPER No. 20
RAILWAY OF CANADA.

year ended March 31, 1910.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
W. Lemieux.....	Brakeman.....	Hand caught between draw bar and dead wood block.	Hand injured.....	
J. A. Pickard.....	".....	While shunting.....	Right leg slightly bruised.	
D. Cloutier.....	Caretaker.....	Found on track.....	Fatal.....	Accidental.
Daniel McNevin....	Passenger.....	Fell off train.....	Head injured.....	
Jno. Camp.....	Neither.....	Found alongside of track by crew of 24 train.	Fatal.....	No blame attached to railway.
Chas. Audet.....	Mail Clerk.....	Eight cars of train left track.	Cut on face.....	
W. Morrison.....	Express Messenger..	Mail car rolled down bank....	Heavy blow across face.....	
J. Little.....	Brakeman.....	While shunting.....	Side injured.....	
W. A. Fitch.....	Acting as conductor.	Tender of engine left track and upset.	Ankle sprained....	
Sylva Catudal.....	Neither.....	Attempting to cross track between cars.	Left arm and foot crushed; died.	No blame attached to railway or employees.
N. Desrosiers.....	Brakeman.....	While shunting.....	Foot badly hurt.	
C. Leahy.....	".....	While unloading piece of machinery.	Finger crushed...	
Wm. Gorman.....	Passenger.....	Attempting to get off car before it stopped, tripped and fell.	Right hand scratched.	
Louis Jacques.....	Sectionman.....	Struck by train.....	Head injured.....	
A. Griffin.....	Frt. porter.....	While handling freight truck slipped and he fell backwards.	Foot badly injured.	
Alfred Couture.....	Car repairer.....	While coupling hose between cars.	Injured about stomach.	
A. Mowery.....	Shunter.....	Being caught while uncoupling cars.	Back injured.....	
Jos. Therien.....	Neither.....	Struck by train while walking on track.	Slightly injured...	
Chas. Cormier.....	Brakeman.....	While shunting.....	Ankle sprained....	
A. M. Fraser.....	Fireman.....	While getting off engine fell and was caught by oil box and dragged some distance.	Badly injured....	
Sydney Shaffleburg.	Sectionman.....	While standing on track was struck by train.	Fatal.....	Accidental.
Jos Anctil.....	Brakeman (not on duty.)	While attempting to get on foot board of tender fell and wheels of tender passed over his body.	".....	"
Wm. Ingram.....	Neither.....	Fell while playing on wall at new round house.	".....	"
Murphy boy, 8 or 9 yrs. old.	".....	Run over by train.....	Badly cut about head, right leg almost severed above ankle.	
A. Simard.....	".....	Struck by train while walking on track.	Back hip and left leg injured.	
Fred Donlan, Miss Sadie Murray, Mrs. Gordon.	Passengers.....	Car left track.....	Fracture of skull. Arm bruised. Shoulder slightly bruised.	
Jos. Ginoie.....	Fireman.....	While shaking grates shaker gear broke injuring hand.	Finger of left hand injured.	
Peter Ryan, Jno. Doran, Pat. Cronin, Wm. Fairbrother.	Neither.....	Were stealing ride in box car when a wheel of car containing billets broke derailing car.	Badly injured.....	

1 GEORGE V., A. 1911

INTERCOLONIAL

STATEMENT of Casualties for the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1909.							
Aug. 7	24.20	301	Express	A. E. Logan	Wm. Matthews	109	Loggieville
" 10	18.10	Spcl.		J. B. LeBel	A. Cheuard	212	Riv. du Loup Yard.
" 12	12 K	5	Freight	J. S. Nickerson	R. Linden	290	Sussex
" 14	10.07	83	Express	J. Coffey	R. Bulwer	155 $\frac{3}{4}$	mile east Buc-touche Crossing.
" 19	12.45	Pilot	Freight	A. St. Pierre	N. Houston	35	miles west St. Leonard Jct.
" 20	1.50	Spcl.		W. Brownrigg	J. Shaw	366	Truro
" 27	20.15						"
" 28	17.49	34	Express	O. Desjardins	E. Parsons	407	St. Alexandre
" 30	17.55	200	"	Geo. Nixon	J. Donald	338	Thomson
Sept. 7							1 mile west Sackville
" 7	5.10	Freight	Special	A. Laliberte	D. Cote	392	St. Lambert
" 13	22.30	Excur. Pass.		Jno. McLeod	Jno. McEachern	395	Auherst
" 20							Near St. Joseph sta.
" 21	21.50	Special		H. Pelletier	H. Gingras	307	Ste. Rosalie
" 23	17.40	Special		J. F. Kelly	A. Probert	21	Hopewell
Oct. 6	2.38	Special Exp.	Freight Pass	J. H. Thomson	R. J. Whalen	88	300 yards West Nashes Creek Stn.
" 6	2.38	"	"	A. McLellan	John Morton	333	"
" 6	2.38	"	"	"	"	333	"
" 6	2.38	"	"	"	"	333	"
" 6	2.38	"	"	"	"	333	"
" 6	2.38	"	"	"	"	333	"
" 6	2.38	"	"	"	"	333	"
" 6	2.38	"	"	"	"	333	"
" 6	2.38	"	"	"	"	333	"
" 6	16.40	Special		A. Gauvreau	E. Roy		Drummondville
" 8	21.20	Shunter			F. McBeath	52	Moncton Yd.
" 12		26	Express	W. McClafferty	W. J. Hunter	341	2 miles North Truro
" 15	1.00	Special		F. A. Fowlie	J. Gozley	275	Windsor Jct.
" 20	6.20	33	Express	E. Cauiere	A. Matthews	411	Skin Cnt Snow Shed
" 21	13.00	Shunter		Nap. Levesque	Geo. Lutes	369	Cedar Hall
" 30	23.00						Pt. du Chene
Nov. 1	22.30	Shunter			W. McDonald	349	Sydney Yd.

SESSIONAL PAPER No. 20
RAILWAY OF CANADA.

year ended March 31, 1910—Continued.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Jno. Sims	Baggagemaster	His jumper caught on bolt while coupling cars.	Badly injured	
Sam Boucher	Brakeman	Struck by engine	Slightly injured	
Roy L. Welling	"	While unloading freight truck fell on his foot.	Foot slightly injured.	
Alex. H. Steeves	Neither	Walking on track struck by train.	Died in the hospital, Moncton.	
Antoine Martin	"	Walking on track struck by train.	Died from injuries received.	Accidental.
Chas. True	Employee of Norris & Rowe's Circus.	He was sleeping in car which went off track.	Shoulder dislocated.	
G. L. Miller	Frt. porter	Struck his head against car door while unloading mails.	Cut above and below eye.	
Jos. Dufour	Neither	Attempting to board train while under influence of liquor.	One leg cut off	
Mrs. E. Mattison	"	While standing on crossing struck by train.	Fatal	"
Abel Carter	Neither	Found dead on track, supposed to have been struck by some train during night.	Fatal	Accidental.
Rosario Legare	Brakeman	Foot caught between rail and car coupling cars.	Right foot badly crushed.	
George Ayer	Passenger	Fell or jumped from train	Head and Face injured.	
Victor Chatignay	Fireman	Found dead alongside of track	Fatal	No blame attached
O. Sirois	Brakeman	Foot caught between guard rail and switch while getting off train.	Injured	Ry. or Emp
Arthur Murray	"	While coupling cars	Thumb badly smashed.	
R. J. Whalen	Engineman	Thompson's special collided with No. 33 Express train.	Fatal	Fault of Con. Thompson and Driver Whalen.
J. Morton	"	" "	"	
W. S. Morrison	Exp. Messenger	" "	"	
Wm. Cook	Fireman	" "	Badly injured	
A. J. Jessulate	Brakeman	" "	Right leg badly injured.	
J. A. Murray	"	" "	Shoulder dislocated.	
D. O'Sullivan	Mail Clerk	" "	Left arm broken	
W. P. Starratt	"	" "	Slightly injured	
Thos. Keith	"	" "	"	
J. H. Thompson	Conductor	" "	"	
Wilfrid Blais	Neither	While walking on track struck by train.	"	
A. A. Embree	Brakeman	Attempting to shove coupler with his foot.	Foot badly jammed.	
Jas. A. McCuish	Passenger	Jumped through window 2nd class car.	Slightly injured	
Henry Gratta	Em. on Steam shovel	Found body on track cut in two	Fatal	Accidental.
M. D. Mullins	Waiter	No. 33 run into No. 75 Mullins knocked down by jar.	Rib broken	
Aug. Gagnon	Brakeman	Foot caught in hole of flat car.	Foot slightly injured.	
Wm. McGrath	Cleaner	Caught foot in turntable while turning engine.	Foot smashed	
Jno. McPhee	Brakeman	Squeezed between platform and car.	Bruised about body.	

1 GEORGE V., A. 1911

INTERCOLONIAL

STATEMENT of Casualties for the

Date.	Time of Day.	No. of Train	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1909.							
Nov. 4	19.00	84	Express	J. Coffey	R. Bulwer		Halls Creek Bridge near Moncton.
" 4	.....	Special	.....	O'Brien	R. D. McDonald	229	Woodburn
" 6	5.15	133	Express	J. B. Crockett	Geo. Storey	99	Pt. du Chene
" 10	5.25	33	"	A. Begin	W. Duncan	406	¼ mile East Parades Siding.
" 12	18.35	Shunter	.....	.....	H. Maisey	350	Campbellton
" 20	.....	.....	.....	.....	.....	.....	Nicolet
Dec. 1	10.25	145	Express	J. Dowden	R. Jameson	2	Guy St., Montreal.
" 5	16.30	Special	Freight	S. G. Nickerson	W. Ingram	103	Cannan
" 13	22.45	26	Express	A. E. Brown	J. Ross		Short distance west of North St. stn.
" 17	16.20	23	Freight	I. L. Barnhill	L. King	277	Amherest
" 17	24.00	Shunter	.....	J. Jackson	P. McLimes	405	D. W. T. Halifax
" 18	16.50	37	Freight	W. F. Fergusson	F. Henry	395	Beaver Brook near St. Francois stn.
" 26	10.20	Special	.....	H. LeBel	Geo. Cote	320	St. Anne
1910.							
Jan. 4	12.20	42	Freight	A. Gamache	D. C. Gallan	351	Cedar Hall
" 7	16.00	41	"	.....	R. Baird	264	Ste. Flavie Yard
" 10	17.30	Shunter	.....	.....	R. H. Fillimore	287	Stellarton Yard
" 17	.....	.....	.....	.....	.....	.....	.....
" 19	6.40	.....	.....	.....	A. Probert	199	Near Lourdes
" 22	4.50	148	Express	A. Freshetto	Geo. Cloutier	74	St. Lambert
" 27	10.00	.....	.....	.....	.....	.....	Truro
" 29	15.05	23	Freight	J. W. Coles	W. Gross	279	Amherst
Feb. 8	20 25	151	Express	A. Legace	G. Findlay	102 2½	miles west St. Eugene.
" 19	19.30	Special	.....	J. Cremer	J. Martin	7	Chatham
" 21	14K	Shunter	.....	.....	Ed. Kean	403	Ste. Flavie Yard
" 28	1.40	Special	Freight	H. A. Baker	D. McLeod	309	Hill Siding near Folleigh.
Mar. 5	16.35	Shunter	.....	.....	G. Roberge	197	Levis Yard

SESSIONAL PAPER No. 20
RAILWAY OF CANADA.

year ended March 31, 1910—Continued.

Name of Person Injured.	Whether Passenger or Employees.	Particulars of Accident.	Extent of Injury.	Verdict.
Ed. Donaghau	Neither	Struck by train while walking on track.	Died in Moncton Hospital.	No Inquest.
A. B. Gray	Trackmaster	Fell from car of ties.	Four ribs broken.	
Geo. Mills	Brakeman	Caught between switch stand and cars while shunting.	Right arm and side badly injured.	
Miss N. Kinnear	Passenger	Train left track.	Ear slightly injured.	
C. B. Jones	Porter	"	Head slightly injured.	
Henry Gunter	Neither	Struck by train while crossing track.	Fatal	"
Fillion	Fireman	Slipped on ice and fell off turn-table.	Two ribs forced out of place.	
Amedee Cherrier	G.T.R. Sectionman.	While standing on platform of car train collided with car on main line.	Badly injured.	
S. G. Nickerson	Conductor	When train parted car stopped quickly throwing him against end of car.	Badly injured.	
Mrs. K. Carroll	Passenger	Found on track	One leg below knee and foot cut off died in Hospital Halifax.	"
Lula Barrett	Neither	Crossing track beneath cars.	Fatal	Accidental.
W. Fabie	Brakeman	While coupling cars.	Badly injured.	
W. F. Fergusson	Conductor	Hand caught in door.	One finger smashed	
Elz. Villeaux	Neither	Found dead on track.	Fatal	Accidental.
H. M. Canfield	Passenger	No. 33 train collided with Special.	Slightly injured.	
Miss A. Poirier	"	"	"	
Jos. Williams	"	"	"	
Mrs. J. Shute	"	"	"	
David Tokes	"	"	"	
Chas. Soloman	"	"	"	
I. Bircovitch	News Agent	"	"	
E. Patson	Second Cook	"	"	
D. C. Gallan	Engineer	While cleaning fire.	First finger of left hand badly smashed.	
A. Rioux	Yardman	While coupling cars.	Fatally injured, died next morning.	Accidental.
John W. McIntosh	Brakeman	While standing on foot board of Engine 287 which collided with Engine 85.	Fatal	"
Aug. Pouliot	Engineman	Struck by shunting engine.	Slightly injured.	
Jos. Campbell	Sectionman	Walking on track.	Badly injured.	
Jos. Frechette	Brakeman	While shunting slipped and fell.	Three fingers of left hand smashed.	
Geo. Laird	Car Inspector	While uncoupling air brakes head caught between cars.	Badly injured.	
J. A. Stronach	Brakeman	Fell from ladder of box car.	Arm broken	
M. Lachapelle	Neither	While driving on track struck by train.	Slightly injured.	
W. Whalen	Brakeman	While coupling cars.	Thumb jammed.	
Dumas Cloveau	Sectionman	Struck by engine while walking track.	Slightly injured.	
D. McLeod	Engineman	Engine and six cars went over bank.	Fatal	Breaking of tire of right hand driving wheel.
John McIsaac	Fireman	"	"	
J. O. Davidson	Brakeman	"	"	
A. Martin	Yardman	While coupling cars.	Badly injured.	

SESSIONAL PAPER No. 20
RAILWAY OF CANADA.

year ended March 31, 1910—Continued.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Trains.
A. Dumont.....	Yardman.....	While shunting	Second finger of right hand jammed.	
W. Burdon.....	Brakeman	Fell from train wheels passing over right hand.	Hand badly crushed.	
Robert Geedart....	"	Engine parted from train and Geedart trying to couple same got caught between couplers at hips.	Seriously injured, died later in Moncton Hospital.	Accidental.
O. Dion.....	"	While unloading freight..	Thumb crushed...	

WINDSOR BRANCH RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE.

To the 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 for the year ending March 31, 1910.

TRACK.

During the year 43,320 feet of 4-inch and 4½-inch rails were taken out of the track and the same quantity of 4½-inch rails relaid.

TIES.

Ten thousand five hundred and forty-four ordinary ties and 1 set of switch ties were renewed during the year.

BALLASTING.

During the year 140 cubic yards of ashes were put under the track.

SWITCHES AND SEMAPHORES.

Necessary repairs were made to all switches and semaphores.

FENCING.

During the year 2,000 rods of wire fence was built by contract.
Necessary repairs were made to existing fences throughout the branch.

WHARFS AND TRESTLES.

Repairs.

Necessary repairs were made to wharfs and trestles throughout the line.

BRIDGES AND CULVERTS.

Repairs.

Beaver Bank, bridge; Ellershouse, bridge; Ellershouse, culvert; Fletcher's, bridge; Pidgeon's, bridge; Three-Mile Plains, bridge.

BUILDINGS AND PLATFORMS.

Repairs.

Beaver Bank, station; Beaver Bank, platform; Ellershouse, station; Hartville, platform; Mount Uniacke, station; Mount Uniacke, freight shed; Newport, station; South Uniacke, platform; Windsor, station; Windsor, platform; Windsor, engine house; Windsor, tool house; Windsor, freight shed.

SESSIONAL PAPER No. 20

GENERAL.

Necessary repairs were made to cattle-guards, road crossings and gates throughout the line, where required.

Glazing was done and glass put in where required.

Outhouses and approaches to public road crossings were whitewashed.

Semaphores, switches and signals were painted when required.

Necessary repairs were made to trollies, hand cars, wheel-barrows, &c., throughout the line, when required.

The track on the Windsor Branch, with the bridges and structures, have been kept in good repair and I think were never in better condition.

I am, yours faithfully,

(Sgd.) T. C. BURPEE,

MONCTON, N.B.,

March 31, 1910.

WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT year ended March 31, 1910.

Expenditure.	\$ cts.	Earnings.	\$ cts.
Maintenance of way and structures.	23,549 90	Passenger earnings.	15,696 16
Balance.	37,104 08	Freight earnings.	43,805 98
		Mail earnings.	1,151 84
	60,653 98		60,653 98

E. & O. E.,
MONCTON, N.B.

(Sgd.) S. L. SHANNON,
Comptroller.

1 GEORGE V., A. 1911

WINDSOR BRANCH RAILWAY.

MAINTENANCE of Way and Structures, year ended March 31, 1910.

	\$	cts.
Superintendence.....	2,094	79
Ballast.....	66	50
Ties.....	3,859	02
Rails.....	2,748	42
Other track material.....	1,500	17
Roadway and track.....	9,395	12
Removal of snow, sand and ice.....	427	14
Bridges, trestles and culverts.....	643	97
Grade crossings, fences, cattle guards and signs.....	1,899	10
Signals and interlocking plants.....	7	88
Buildings, fixtures and grounds.....	594	95
Docks and wharfs.....	12	75
Roadway tools and supplies.....	135	31
Stationery and printing.....	40	27
Other expenses.....	124	51
	23,549	90

E. & O. E.,
MONCTON, N.B.

(Sgd.) S. L. SHANNON,
Comptroller.

WINDSOR BRANCH RAILWAY.

GENERAL BALANCE, year ended March 31, 1910.

Dr.	\$	cts.	Cr.	\$	cts.
To Stores Department.....	4,311	35	By Dominion account.....	4,311	35

E. & O. E.,
MONCTON, N.B.

(Sgd.) S. L. SHANNON,
Comptroller.

SESSIONAL PAPER No. 20

WINDSOR BRANCH RAILWAY.

STATEMENT of Monthly Receipts—One-third Earnings.

Month.	Passenger Earnings		Freight Earnings.		Mail Earnings.		Totals.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1909.								
April.....	960	47	3,244	39	95	68	4,300	54
May.....	932	36	2,674	21	95	68	3,702	25
June.....	1,392	07	2,228	76	95	68	3,716	51
July.....	1,777	56	2,263	53	95	68	4,136	77
August.....	1,992	13	1,624	46	96	91	3,713	50
September.....	2,605	57	4,579	91	98	13	7,283	61
October.....	1,581	29	5,546	10	96	90	7,224	29
November.....	981	01	6,104	65	96	91	7,182	57
December.....	1,161	21	3,989	98	96	91	5,248	10
1910.								
January.....	663	44	4,473	17	94	46	5,231	07
February.....	701	40	3,388	79	94	45	4,181	64
March.....	947	65	3,691	63	94	45	4,733	13
	\$15,696	16	\$43,805	98	1,151	84	\$60,653	98

E. & O. E.,

MONCTON, N.B.

(Sgd.)

S. L. SHANNON,

Comptroller.

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,

CHARLOTTETOWN, P.E.I., May 31, 1910.

SIR,—I have the honour to submit the following report of the working of the Prince Edward Island Railway, for the fiscal year ended March 31, 1910.

I also inclose 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.

1 GEORGE V., A. 1911

- 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 during the year was the same as last year, 267.5 miles.

CAPITAL ACCOUNT.

The expenditure to March 31, 1909, was.	\$8,258,967 94
The additions during the year were as follows:—	
To increase accommodation at Charlottetown.	\$156,531 57
Branch line, Harmony to Elmira.	49,829 25
Montague Branch.	36 15
	206,396 97
Making the total on March 31, 1910.	\$8,465,364 91

The above expenditures under the head of capital account, for the current year, will be fully explained by the chief engineer.

REVENUE ACCOUNT.

There has been a very substantial increase in revenue during the year. The crops were exceptionally good, and prices ranged high, and the province has experienced a continuance of prosperity.

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

Gross earnings.	\$ 319,074 74
Working expenses.	427,283 73
Difference.	\$ 108,208 99

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

In 1908-9.	\$ 311,319 63
1909-10.	319,074 74
Increase.	\$ 7,755 11

The earnings from passenger traffic compare, as follows:—

In 1908-9.	\$ 136,534 04
1909-10.	140,076 83
Increase.	\$ 3,542 79

The earnings from freight traffic compare, as follows:—

In 1908-9.	\$ 149,150 61
1909-10.	153,373 11
Increase.	\$ 4,222 50

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The earnings from mails and sundries compare as follows:—

In 1908-9.	\$ 25,634 98
1909-10.	25,624 80
	<hr/>
Decrease.	10 18
	<hr/> <hr/>

The numbers of passengers carried compare as follows:—

	Number.
In 1908-9.	332,758
1909-10.	351,038
	<hr/>
Increase.	18,280
	<hr/> <hr/>

The weight of freight compares as follows:—

	Tons.
In 1908-9.	106,090
1909-10.	105,741
	<hr/>
Decrease.	349
	<hr/> <hr/>

WORKING EXPENSES.

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

In 1908-9.	400,330 41
1909-10.	427,283 73
	<hr/>
Increase.	\$ 16,953 32
	<hr/> <hr/>

The averages compare with the previous year, as follows:—

Per Mile Run by Locomotive.

In 1908-9.	\$ 88 46
1909-10.	96 05

Per Mile Run by Trains.

In 1908-9.	119 51
1909-10.	132 07

Expenditure per Mile of Railway.

In 1908-9.	1,499 36
1909-10.	1,600 31

TRACK.

Twenty-seven thousand five hundred and eighty-one track ties, 18 sets switch ties, and 26 head-blocks and frames were renewed.

Four Burpee switch-stands were placed in Charlottetown yard, and 3 on main line.

Fifty pound steel rails were laid as follows to replace iron rails:—2,115 feet in Tignish yard, 1,176 feet on Alberton wharf track, 3,360 feet in Georgetown yard, and 1,672 feet in Souris yard. In Charlottetown yard 4,900 feet track was laid with 56-lb.

1 GEORGE V., A. 1911

steel rails to replace iron rails, and on the main line of the Vernon River loop 2,750 feet 50-lb. rails were laid to replace 56-lb. steel rails, which were in bad order. On the main line between Royalty Junction and Kensington 1,100 tons of 58-lb. steel rails, with bolts and fastenings, were laid, replacing 50-lb. steel rails. Twelve new steel frogs were used on the road to replace worn out and lighter ones, which were taken out.

A new track scale with concrete foundation was placed in Charlottetown yard, and a second-hand track scale with timber foundation in Georgetown yard.

A new Ellis bumping post was placed on end of track on Souris wharf, and two on end of tracks on Charlottetown wharf.

Twelve hand cars were repaired. Seven new track levels and 4 lifting boards were made.

SIDINGS.

At Tignish a new siding, 396 feet in length, was laid with 50-lb. steel rails, for a plough and flanger.

At St. Louis 950 feet of 50-lb. steel rails were laid on siding to replace iron rails, and siding was extended 100 feet.

At Alberton 1,000 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At O'Leary 1,032 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Portage 1,540 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Ellerslide 508 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Northam 800 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Richmond 750 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Kensington 2,928 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Kelvin 384 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Emerald 400 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Kinkora 800 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Albany 750 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Bradalbane 1,790 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Elliott's 1,251 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Hunter River 1,250 feet of 50-lb. steel rails were laid on siding to replace iron rails. The through siding was extended 180 feet, and Full's siding 70 feet, and both relaid with 50-lb. steel rails.

At North Wiltshire 600 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Milton 500 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Winsloe 300 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At York 1,600 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Bedford 1,296 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Mt. Stewart 1,455 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Morell 1,200 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Marie the siding was extended 400 feet. In replacing iron rails taken out, and extending siding, 1,152 feet of 50-lb. steel rails were used.

At St. Peter's 642 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Selkirk 800 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Bear River 984 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Peake's 450 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At St. Teresa 500 feet of 50-lb. steel rails were laid on siding to replace iron rails.

At Kitchen's Siding 264 feet of 50-lb. steel rails were used in extending it.

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FENCING.

Thirty-one thousand one hundred and seventy feet wire fence were rebuilt with new cedar posts and Page wire. Seven thousand two hundred and eighty-eight feet new stationary snow fence was built. Two thousand one hundred and seventy-five feet stationary snow fence and 575 feet barbed wire fence were rebuilt. Three hundred and ninety-four panels of portable snow fence were built by road carpenters, and placed where most needed. A large quantity of temporary snow fence was erected with brush and wire.

Fifty farm gates were renewed.

All fences requiring repairs were attended to.

BALLASTING.

Seven hundred and eighty-three cars of ballast were distributed where most needed. Three hundred and fifty-seven cars of clay were used to grade station grounds and widen embankments. Forty-two cars ashes were distributed in wet and soft places in the track.

BRIDGES.

At West Devon, Ellerslide and St. Nicholas bridges received new coverings of hard pine ties.

At Mt. Stewart iron work of bridge was painted.

At Morell repairs were made to rest pier of swing span of the bridge.

At Marie stonework of bridge was pointed and ironwork painted.

At Midgell stonework of bridge was pointed and iron and woodwork painted.

At Pine Brook stonework of bridge was pointed.

CULVERTS.

At Bloomfield a new timber culvert was built to change the water course at this place.

At O'Leary a concrete pipe culvert, 40 feet long, 18 inches in diameter, was put in to replace a wooden one.

At Coleman a concrete pipe culvert, 20 feet long, 15 inches in diameter, was put in to replace a wooden one.

At Northam a concrete pipe culvert, 35 feet long, 18 inches in diameter, was put in to replace a wooden one.

At Richmond a concrete pipe culvert, 40 feet long, 18 inches in diameter, was put in to replace a wooden one.

At Summerside a concrete pipe culvert, 28 feet long, 18 inches in diameter, was put in to replace a wooden one.

At Mt. Stewart a concrete pipe culvert, 16 feet long, 15 inches in diameter, and an iron culvert, 36 feet long, 12 inches in diameter, was put in to replace wooden culverts.

At St. Peter's an iron pipe culvert, 48 feet long, 12 inches in diameter, and a concrete pipe culvert, 25 feet long, 18 inches in diameter, were put in to replace wooden culverts.

At Georgetown a concrete pipe culvert, 18 feet long 30 inches in diameter, was put in to replace a wooden culvert, and two concrete culverts, 30 feet long, 18 inches in diameter, were constructed to replace two wooden culverts.

At St. Teresa two concrete pipe culverts, 17½ feet long, 18 inches in diameter, were put in to replace two wooden ones.

Twenty-eight wooden culverts were rebuilt with hemlock and other timber, and stone culverts repaired where necessary.

Eighty-five cattle-guards were renewed with hemlock ties, hard pine and hemlock timber.

WHARFS AND BREASTWORKS.

At Summerside the following material was used in repairing wharf: 50,000 feet hemlock timber, 3,000 feet hemlock plank and 300 drift bolts. In repairing breast-work, 30,000 feet hemlock timber and 200 drift bolts were used.

At Souris, in building a slip, 2,000 feet hemlock plank and 100 drift bolts were used.

At Georgetown the following material was used in building a slip for the *Earl Grey*: 5,000 feet hemlock timber, 2,000 feet spruce plank, 2,000 feet hemlock plank and 300 drift bolts.

At Marie, 50 feet of breastwork was built with old ties and timber.

BUILDINGS AND PLATFORMS.

Tignish.—Engine-house, freight-house and flues in agent's dwelling were repaired. Four coal boxes were rebuilt.

DeBlois.—Station was repaired.

St. Louis.—Station was repaired and a new ticket office built. A new cattle pen was erected.

Alberton.—Agent's dwelling was raised and a new foundation placed under it, and repairs made to the interior, which was also papered and painted. Roof of dwelling was shingled.

Howlan.—A new station platform was made.

O'Leary.—Station platform and section tool-house were rebuilt. Agent's dwelling was papered and painted inside.

West Devon.—The door and windows of station were repaired.

Portage.—The station windows were repaired.

McNeill's.—The station windows were repaired.

Ellerslie.—Section tool-house was rebuilt.

St. Nicholas.—Station doors and windows were repaired.

Piusville.—Windows of station were repaired.

Summerside.—Station was repaired and baggage-room received a new gravel roof. Freight-house on wharf was raised and repaired.

Freetown.—Three new storm windows were made for station.

Emerald.—The station platform was renewed.

Cape Traverse.—Station platform was repaired. Kitchen of agent's dwelling and one room were sheathed.

Bradalbane.—Station roof was repaired with gravel and pitch. Agent's dwelling was papered and painted inside.

Clyde.—Exterior of station was painted.

Hunter River.—Station platform was repaired. Station received a new gutter and was repaired.

North Wiltshire.—Station platform and doors and windows of station were repaired.

Colville.—Station received new doors and windows.

Milton.—New doors and windows were provided for station.

Royalty Junction.—Two small houses were converted into one building for agent's dwelling, which necessitated considerable labour, as one building was moved and a new foundation placed under both. Dwelling was also papered, and both the interior and exterior painted.

SESSIONAL PAPER No. 20

Bedford.—Four new storm windows were provided for station, and necessary repairs made to station. A new floor was laid in the office.

York.—Station windows and doors were repaired.

Mt. Stewart.—The interior of agent's dwelling was papered and painted. Station platform was repaired.

Lot 40.—The station was painted outside.

Morell.—Station and platform were repaired. The interior of agent's dwelling was painted and papered.

Union.—Station platform was renewed.

St. Peter's.—A new section tool-house was built, and station platform repaired.

Selkirk.—Section-house roof was shingled.

Bear River.—Agent's dwelling was painted and the ceilings whitened. Station platform was renewed.

Souris.—Station received repairs and a new crown moulding, and the exterior was painted. A new gravel roof was placed on baggage-room. Station roof was shingled. A new well-house was provided for the agent. Agent's dwelling was papered and painted inside. A new set of scales was placed in freight-house.

Peakes.—A new door was provided for freight-house, and repairs made to doors and windows of station.

48 Road.—Station roof was shingled.

Cardigan.—Station was repaired.

Georgetown.—Engine-house was repaired, and the roof shingled. Warehouse on wharf was raised and placed on a new foundation.

Murray Harbour.—Doors and windows of engine-house were repaired. All other buildings requiring repairs were attended to.

STORES.

The value of stores purchased was..	\$150,719 57
The value of stores used was..	181,020 08
The value of material sold was..	2,623 82
The value of stores on hand at the end of the year was:—	
Miscellaneous..	\$ 31,948 74
Fuel..	12,155 77
Roadway and bridge material..	15,201 67
	\$59,306 18

GENERAL.

The rolling stock, roadbed and buildings have all received generous attention, and are in a state of efficiency.

I inclose a return of casualties which occurred during the year.

I have the honour to be, sir,

Your obedient servant,

(Sgd.) G. A. SHARP,

Superintendent.

D. POTTINGER, Esq., I.S.O.,

Assistant Chairman, Govt. Railways Managing Board,
Moncton, N.B.

No. 1.—PRINCE EDWARD ISLAND RAILWAY,
CAPITAL ACCOUNT.—12 MONTHS ENDED MARCH 31, 1910.

1909.	Dr.	1909.	Cr.	\$	cts.
March 31.	To cost of P. E. I. Railway to date.....	March 31.	By Dominion of Canada	8,258,967	94
1910.		1910.			
March 31.	To increase accommodation at Charlottetown, \$ 156,531 57 Branch line—Harmony to Elmira..... 49,829 25 Montague Branch..... 36 15	March 31.	By Dominion of Canada.....	206,396	97
				8,465,364	91
				8,465,364	91

E. & O. E.,
CHARLOTTETOWN, P. E. I.

W. T. HUGGAN,
Accountant and Auditor.

SESSIONAL PAPER No. 20

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

REVENUE ACCOUNT—TWELVE MONTHS ENDED MARCH 31, 1910.

EXPENDITURE.	\$	cts.	EARNING.	\$	cts.
Maintenance of way and structures . . .	121,046	70	Passenger earnings	140,076	83
Maintenance of equipment.	79,258	26	Freight earnings	153,373	11
Traffic expenses	968	97	Mails and express earnings	23,935	58
Transportation expenses	211,004	76	Miscellaneous earnings	1,689	22
General expenses	15,005	01			
	427,283	73		319,074	74
			Balance.	108,208	99
	427,283	73		427,283	73

E. & O. E.,
CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF WAY AND STRUCTURES—TWELVE MONTHS ENDED MARCH 31, 1910.

No.	Description	\$	cts.
1.	Superintendence	2,768	70
2.	Ballast	1,598	56
3.	Ties	10,232	32
4.	Rails	11,008	03
5.	Other track material	5,890	44
6.	Roadway and track	60,149	62
7.	Removal of snow, sand and ice	11,930	76
9.	Bridges, trestles and culverts	1,564	53
11.	Grade crossings, fences, cattle guards and signs	4,851	21
12.	Snow and sand fences and snow sheds	411	48
13.	Signals and interlocking plants	14	15
14.	Telegraph and telephone lines	2	96
16.	Buildings, fixtures and grounds	6,916	88
17.	Docks and wharfs	2,109	48
18.	Roadway, tools and supplies	1,401	77
23.	Stationery and printing	187	84
25.	Other expenses	8	00
		121,046	70

E. & O. E.,
CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

1 GEORGE V., A. 1911

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF EQUIPMENT—TWELVE MONTHS ENDED MARCH 31, 1910.

	\$	cts.
No. 28. Superintendence.....	6,798	15
29. Steam locomotives—repairs.....	27,005	00
35. Passenger train cars—repairs.....	14,485	79
36. Passenger train cars—renewals.....	4,398	84
38. Freight train cars—repairs.....	11,471	06
39. Freight train cars—renewals.....	4,130	85
47. Shop machinery and tools.....	3,124	19
50. Stationery and printing.....	272	09
52. Other expenses.....	6,860	66
56. Work equipment—repairs.....	711	63
	79,258	26

E. & O. E.,
CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

TRAFFIC EXPENSES—TWELVE MONTHS ENDED MARCH 31, 1910.

	\$	cts.
No. 57. Superintendence.....	17	00
59. Advertising.....	894	09
60. Stationery and printing.....	57	88
	968	97

E. & O. E.,
CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

SESSIONAL PAPER No. 20

No. 6.—PRINCE EDWARD ISLAND RAILWAY.

TRANSPORTATION EXPENSES—TWELVE MONTHS ENDED MARCH 31, 1910.

	\$	cts.
No. 66. Superintendence.....	6,344	07
67. Despatching trains.....	2,595	51
68. Station employees.....	45,038	14
72. Station supplies and expenses.....	6,849	12
73. Yardmasters and their clerks.....	2,000	83
74. Yard conductors and brakemen.....	1,935	25
76. Yard supplies and expenses.....	26	78
77. Yard enginemen.....	4,226	05
78. Enginehouse expenses—yard.....	1,905	77
79. Fuel for yard locomotives.....	3,674	49
80. Water for yard locomotives.....	80	00
81. Lubricants for yard locomotives.....	128	52
82. Other supplies for yard locomotives.....	98	85
86. Road enginemen.....	23,425	86
87. Enginehouse expenses—road.....	10,837	48
88. Fuel for road locomotives.....	46,682	45
89. Water for road locomotives.....	2,064	38
90. Lubricants for road locomotives.....	898	58
91. Other supplies for road locomotives.....	962	71
94. Road trainmen.....	31,955	39
95. Train supplies and expenses.....	7,071	15
98. Drawbridge operation.....	670	28
99. Clearing wrecks.....	46	60
100. Telegraph and telephone—operation.....	7,013	08
101. Operation floating equipment.....	222	40
103. Stationery and printing.....	5,787	17
105. Other expenses.....	4	54
106. Loss and damage—freight.....	278	13
108. Damage to property.....	56	68
109. Damage to stock on right of way.....	24	50
	211,004	76

E. & O. E., (Sgd.) W. T. HUGGAN,
 CHARLOTTETOWN, P.E.I. *Accountant and Auditor.*

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL EXPENSES—TWELVE MONTHS ENDED MARCH 31, 1910.

	\$	cts.
No. 113. Salaries and expenses of general officers.....	1,659	66
114. Salaries and expenses of clerks and attendants.....	5,619	07
115. General office supplies and expenses.....	294	24
116. Law expenses.....	73	35
118. Relief department expenses.....	6,142	67
119. Pensions.....	5	54
120. Stationery and printing.....	1,148	87
121. Other expenses.....	72	72
	15,005	04

E. & O. E., (Sgd.) W. T. HUGGAN,
 CHARLOTTETOWN, P.E.I. *Accountant and Auditor.*

1 GEORGE V., A. 1911

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL STORES ACCOUNT—12 MONTHS ENDED MARCH 31, 1910.

1909.	DR.	\$ cts.	\$ cts.	\$ cts.
March 31.	To balance brought forward			77,442 27
1910.				
March 31..	To Purchases during the year		150,719 57	
	Charges from other departments		5,128 01	
	Labour, &c.		4,919 73	
	Pay rolls		4,740 50	
				165,507 81
	CR.			242,950 08
March 31..	By issues during the year			183,643 90
	Balance ..	{ Ordinary stores, including stationery....	31,948 74	} 59,306 18
		{ Fuel.....	12,155 77	
		{ Roadway and bridge material.....	15,201 67	

E. and O. E.
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,
Accountant and Auditor.

No 9.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL BALANCE—12 MONTHS ENDED MARCH 31, 1910.

DR.	\$ cts.	CR.	\$ cts.
General stores	59,306 18	Dominion account	72,401 20
Post Office Department	7,263 64	Rhodes, Curry & Co.	390 00
Station agents	2,112 01	John Simon	200 00
Cash	2,074 63	Unclaimed wages	198 65
Road and equipment—Suspense	1,812 93		
Department of Marine and Fisheries	296 16		
Canadian Express Company	120 26		
Intercolonial Railway	67 28		
Rents account	48 87		
Suspense account	47 28		
Judge Weatherbie	30 00		
Charlottetown Steam Navigation Co.	8 76		
Militia Department	0 95		
Local government of P. E. I.	0 75		
Toronto, Hamilton and Buffalo Ry	0 15		
	73,189 85		73,189 85

E. & O. E.,
CHARLOTTETOWN, P. E. I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

SESSIONAL PAPER No. 20

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF AVERAGES—YEAR ENDED MARCH 31, 1910.

Mileage of railway.....		267
Engine mileage.....		444,837
Total train mileage.....		322,522
Total car mileage.....		2,051,034
Ratio of earnings to gross earning.—		
Passenger.....	Per cent.	43·90
Freight.....	"	48·07
Mails and express.....	"	8·03
Gross earnings per mile of railway.....	Dollars.	1,195·03
" engine mile.....	Cents.	71·73
" train mile.....	"	98·63
" car mile.....	"	15·56
Ratio of expenses to gross earnings—		
Maintenance of way and structures.....	Per cent.	37·94
Maintenance of equipment.....	"	24·84
Traffic expenses.....	"	0·30
Transportation expenses.....	"	66·13
General expenses.....	"	4·70
Expenses per train mile—		
Maintenance of way and structures.....	Cents.	37·41
Maintenance of equipment.....	"	24·50
Traffic expenses.....	"	0·30
Transportation expenses.....	"	65·22
General expenses.....	"	4·64
Expenses per mile of railway—		
Maintenance of way and structures.....	Dollars.	453·36
Maintenance of equipment.....	"	296·84
Traffic expenses.....	"	3·63
Transportation expenses.....	"	790·28
General expenses.....	"	56·20
Locomotive and car repairs, per locomotive and car—		
Locomotives.....	Dollars	884·03
Passenger cars.....	"	309·58
Freight cars.....	"	30·83

E. and O. E.,

CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,

Accountant and Auditor.

1 GEORGE V., A. 1911

PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF RECEIPTS.

Months.	Passenger Traffic.	Freight Traffic.	Mails and Sundries.	Total.
	\$ cts.	\$ cts.	\$ cts	\$ cts.
1909—				
April.....	9,566 64	12,881 58	2,140 96	24,589 18
May.....	8,545 99	18,444 70	1,842 39	28,833 08
June.....	10,014 70	15,026 55	1,772 14	26,813 39
July.....	19,131 91	12,714 55	2,906 69	34,753 15
August.....	18,499 20	10,691 42	2,044 78	31,235 40
September.....	17,399 46	12,191 13	1,990 44	31,581 03
October.....	11,616 31	15,286 95	1,871 50	28,774 76
November.....	11,030 94	18,647 30	1,916 65	31,594 89
December.....	9,979 55	12,081 57	1,989 40	24,050 52
1910—				
January.....	7,445 08	6,796 55	2,014 83	16,256 46
February.....	7,185 95	7,804 22	3,006 93	17,997 10
March.....	9,661 10	10,806 59	2,128 09	22,595 78
1909-10.....	140,076 83	153,373 11	25,624 80	319,074 74
1908-09.....	136,534 04	149,150 61	25,634 98	311,319 63

E. and O. E.,
CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

PRINCE EDWARD ISLAND RAILWAY.

PASSENGER STATEMENT.

Months.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1909—						
April.....	28,193	519,133	189	8,813	28,382	527,946
May.....	23,665	443,035	633	29,378	24,298	472,413
June.....	22,307	465,324	1,197	65,503	23,504	530,827
July.....	43,106	1,017,302	2,711	124,733	45,817	1,142,035
August.....	35,472	790,051	5,044	221,495	40,516	1,011,546
September.....	33,489	873,302	4,113	194,651	37,602	1,067,953
October.....	24,851	506,980	2,381	117,896	27,232	624,876
November.....	28,352	525,617	1,589	75,111	29,941	600,728
December.....	27,675	535,172	1,099	50,392	28,774	585,564
1910—						
January.....	19,146	397,686	280	13,587	19,426	411,273
February.....	18,711	409,117	96	4,772	18,807	413,889
March.....	26,649	564,032	90	4,281	26,739	568,313
1909-10.....	331,616	7,046,751	19,422	910,612	351,038	7,957,363
1908-09.....	314,401	6,679,808	18,357	896,259	332,758	7,576,067

E. & O. E.,
CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

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PRINCE EDWARD ISLAND RAILWAY.

FREIGHT STATEMENT.

Months.	1909-10.		1908-09.	
	Tons	Mileage.	Tons.	Mileage.
April.....	7,989	267,012	5,365	203,425
May.....	13,147	433,732	10,422	360,583
June.....	10,756	386,067	10,755	428,751
July.....	8,385	276,330	7,892	317,451
August.....	6,766	253,094	7,783	265,283
September.....	7,711	271,779	8,443	303,592
October.....	10,433	363,784	12,244	398,716
November.....	13,277	433,042	12,904	452,504
December.....	7,682	253,313	8,432	283,614
January.....	3,956	162,758	6,097	234,501
February.....	6,634	210,302	6,723	240,474
March.....	9,005	252,645	9,030	310,124
	105,741	3,573,858	106,090	3,799,008

E. & O. E.,
 CHARLOTTETOWN, P.E.I.

(Sgd.) W. T. HUGGAN,
 Accountant and Auditor.

1 GEORGE V., A. 1911

PRINCE EDWARD ISLAND RAILWAY.

DESCRIPTIVE STATEMENT OF FREIGHT TRANSPORTED—TWELVE MONTHS ENDED MARCH
31, 1910.

Products of.	Commodity.	Tons.
Agriculture	Grain	12,918
	Flour	4,374
	Other mill products	1,468
	Hay	2,912
	Tobacco	166
	Cotton	43
	Fruit and vegetables	7,886
Animals	Live stock	3,562
	Dressed meats	2,307
	Other packing house products	2,676
	Poultry, game and fish	3,030
	Wool	48
	Hides and leather	421
Mines	Anthracite coal	313
	Bituminous coal	7,523
	Stone, sand, and other like articles	2,959
Forest	Lumber	13,358
Manufactures	Petroleum and other oils	811
	Sugar	907
	Naval stores	48
	Iron, pig and bloom	439
	Iron and steel rails	598
	Other castings and machinery	564
	Bar and sheet metal	145
	Cement, brick and lime	1,334
	Agricultural implements	711
	Wagons, carriages, tools, &c.	287
	Wines, liquors and beers	238
	Household goods and furniture	481
Miscellaneous	Other commodities, not mentioned above	33,164
	Total weight	105,741

E. & O. E.,
CHARLOTTETOWN, P.E.I.(Sgd.) W. T. HUGGAN,
Accountant and Auditor.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE CHIEF ENGINEER,

MONCTON, N.B., June 29, 1910.

SIR,—I have the honour to submit the following report on capital account expenditure for the fiscal year ending March 31, 1910:—

TO INCREASE ACCOMMODATION AT CHARLOTTETOWN.

A 20-stall brick and concrete engine-house was provided. The turn-table that was used in the old engine-house was temporarily installed in the new engine-house.

A new 55-foot steel turn-table was purchased; but on account of the closing of navigation it could not be transported to Charlottetown last fall. It will be delivered and erected in place at an early date.

The old engine-house was torn down.

A wood-shed was provided at the new engine-house.

A concrete and brick ash pit was built.

A coal shed was provided at the power-house.

A lumber and hardware storehouse was built.

Part of the old machine shop was torn down, and the remaining part converted into a brass and copper shop.

A shed for storing sand was built, and a sand drying apparatus installed.

A railway wharf and freight shed on it were completed.

A coal shed was built on the railway wharf.

A new 80-ton track scale was provided and placed opposite the new freight shed, on a concrete foundation.

Additional yard accommodation was provided by the removal of old and obsolete buildings, and laying 4,900 feet of new tracks.

The following new machinery was provided and installed on concrete foundations in the new shops:—

- 1 72-inch wheel lathe.
- 1 72-inch tire turning and boring mill.
- 1 48-inch x 12-foot iron planer.
- 1 300-ton wheel press.
- 1 24-inch engine lathe.
- 1 36-inch engine lathe.
- 1 18-inch engine lathe.
- 1 16-inch engine lathe.
- 1 16-inch slotting machine.
- 1 Brown & Sharpe milling machine.
- 1 Brown & Sharpe reamer and grinder.
- 2 centering machines.
- 1 Acme bolt tapper.
- 1 Acme 3-headed bolt cutter.
- 1 surface grinder.
- 1 emery stone sand.
- 1 hand press for driving boxes.
- 1 set punch and shears.
- 1 set 6-inch rolls.

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- 1 set 12-inch boiler plate rolls.
- 1 tube rumbler.
- 1 tube welder and furnaee.
- 1 1,200-lb. steam hammer.
- 1 Beaudry hammer.
- 1 Spring furnaee.
- 1 strap furnaee.
- 2 band saws.
- 1 rip saw.
- 1 cutting off saw with motor drive.
- 1 variety wood worker.
- 1 Daniel planer.
- 2 50 h.p. motors.
- 1 pipe bending maechine.
- 1 small hollow chisel mortiser.
- 1 75 h.p. engine and generator.
- 2 feed pumps.
- 1 super heater.
- 3 250 h.p. Canada Foundry boilers.

Steam heating was installed in the paint, upholstering and copper shops.
The new shops were wired for eleetrie lighting.

Branch Line, Harmony to Elmira.

A contraet was let for the grading, masonry, &c., for a branch line from Harmony to Elmira, a distance of 9.9 miles. About 75 per cent of the clearing was completed. The eonerete culverts were built and some grading done. The right of way was settled for with the exception of a few lots, which will be dealt with during fiseal year 1910-11.

Plans and specifications were prepared and tenders asked for the following build-ings in connection with this branch line:—

Elmira.—Two-stall wooden engine house, booking station and platform, eoal shed, freight shed and platform.

Baltic Road.—Way station and platform.

Harmony.—Way station and platform.

New Harmony Road.—Shelter and platform.

Munn's Road.—Shelter and platform.

To be located.—Two tool houses.

Montague Branch.

An award of the Exchequer Court of \$36.15 was paid by the Department of Rail-ways and Canals for land taken for the right of way. There was no capital appropria-tion provided for this, but being an Exchequer Court award, the amount is charge-able against any moneys voted by parliament.

I have the honour to be, sir,

Your obedient servant,

(Sgd.) WM. B. MACKENZIE,

Chief Engineer.

D. POTTINGER, Esq., I.S.O.,

Asst. Chairman, Govt. Rys. Managing Board,
Moncton, N.B.

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE MECHANICAL SUPERINTENDENT,

CHARLOTTETOWN, P.E.I., April 15, 1910.

SIR,—I beg to submit for your information the following statement of the operation of the mechanical department for the year ended March 31, 1910.

The following is a summary of the principal work performed:—

LOCOMOTIVES.

Ten locomotives received heavy repairs. Seven received new side and main rod brasses, all the motion and running gear thoroughly repaired, stay-bolts in boilers thoroughly examined, and six hundred new stay-bolts put in boilers.

Ten locomotives received specific repairs.

Four locomotives received new pistons and piston rods. Four new engine pilots and four new cross-heads were made, and twenty-eight lined with tin and planed, two new whistles, two new pop valves, four new boiler checks, four hundred and eleven sets metallic packing, four new sets valve stems, six new driving boxes, twelve sets engine truck boxes, six sets dead eyes for side rods, twenty sets new rod brasses, two piston rod cups, eight piston rod slushers, twenty-eight driving box brasses, one grease press for pressing grease for driving boxes, twenty-eight grease cups, twenty-seven cylinder cocks, four air cocks, one relief valve, twelve locomotive smokestacks, thirty smokejacks for round houses on road, and twelve driving springs were made.

Four pop valves, six tender tanks, two hundred and sixty-three driving springs and fourteen cabs were repaired, and four were largely rebuilt. Two engine frames were broken and repaired. Twelve sets valve stems, thirty-one sets driving wheels, twenty sets engine truck wheels, one hundred and sixty-three pairs of steel tired wheels, and one hundred and twelve new axles were turned. Two hundred and twenty-nine wheels were bored out and pressed on axles, eight hundred tubes pieced and put in locomotives and five hundred and fifteen truck straps bored. Eighty-eight thousand and two hundred and six pounds of iron, and 2,553 pounds of steel were forged; 5,139 pounds of nuts were tapped, and a great deal of running repairs done.

CAR DEPARTMENT.

One first-class car was rebuilt and ten flat cars were rebuilt and charged to renewals.

The following received heavy repairs:—

Ten first-class cars and one was upholstered, two second-class cars, three second-class and baggage, one second-class and smoking, three postal and baggage, five postal and smoking, five baggage, one coach, sixty-eight box cars, one coal car, five hand cars, one sheep car, eight snow ploughs and six flangers.

The following received light repairs:—

Fourteen first-class cars, fourteen second-class cars, two second-class and baggage, two baggage, one official car, twenty-four box cars, one postal and smoking, five old cars, one van, eight flat cars, four stock cars and eight snow ploughs.

Four cars were seated for excursions, two first-class cars and six box cars had cotton duck roofs put on, and five box cars had new trucks. Two hundred and eight sets car oil boxes were fitted up.

1 GEORGE V., A. 1911

BRASS FOUNDRY.

The following was the output of this foundry:—

Thirteen thousand, one hundred and forty-eight pounds of brass castings, ninety-six pounds of bronze castings and eighteen pounds of solder for Charlottetown station.

COPPER SHOP.

Twenty-seven headlights, one headlight case, two discharge pipes, three oil pipes, one sand pipe, one elevator and feed pipe, two slides for reversing levers, two sprinklers, one elevator pipe, and lagging were repaired.

Thirteen wire joints for steam chests, three piston rods, one valve stem rod, five wire joints for valve stem and piston packing, two perforated hard grease strainers, two water glass protections, and one overflow pipe were made.

Three truck brasses, one rod brass, seven driving boxes, six truck boxes and four crossheads were babbitted. Four crossheads and one main rod brass were tinned. We have also done numerous repairs to feed pipes too numerous to mention.

PAINT SHOP.

Ten locomotives were painted, one varnished, and five cleaned and touched up.

Four first-class cars were painted, and six cleaned and varnished; six second-class cars were painted; and five cleaned and varnished; five baggage and postal cars were painted and eight cleaned and varnished, and one had roof painted. Seventy-two box cars, one hundred and twenty-eight box car roofs, eleven flat cars, two snow ploughs, three flangers, seven hand cars, and ten car roofs were painted. One hundred and twenty-two box cars were lettered, and fifty had capacity changed. Ten freight trucks, and thirty switch targets were painted, forty-eight sashes were painted and glazed, fourteen sign boards lettered, and two desks filled and varnished.

A great deal of work has been done by our shop painters for the road department on stations, agents' dwellings, switch frames, &c.

ROAD AND TRAFFIC DEPARTMENT.

Sixteen loading platforms, eighteen freight trucks, six cattle stages, two hand cars, twenty-three sectionmen's hand cars, two ash cars, one grindstone stand, twenty-four switch targets, twelve signal targets, forty-two sign boards, three boards to fasten outside lamps to, seven wheelbarrows, three chairs, four step boxes, ten coal boxes, one tool box, four ice boxes, five boxes for freight house, four letter boxes for offices, eight outside sashes, five door sills, six camp stools, one office stool, four ladders, one stand and box for grease compressor, two screens, one cash drawer, two desks, four work benches, one cupboard, seven water closets, one case, one desk and two boxes for time clock, one ash table for rest room, one pulley, one rail bender, twenty-two sets connecting rods, twelve sets headers, fifty-six knees for bridges on road, one hundred and twelve clasps for bridge, four lorries, two track jacks, eleven sets switch gear complete, twenty-six sets switch rods, four sets switch rods and headers, and two switches were made.

Three hand cars were repaired, and three rebuilt; eight freight trucks, one baggage truck, one trunk truck, nine coal boxes, eight track jacks, five frogs, and ten switch rods were repaired.

Twenty-four squares of shingling were laid, and one shop and one coal house fitted up. Four hand-car cranks made and fitted on lorries.

We were put to a great inconvenience on account of the round-house being torn down, but it is now replaced by a new and up to date twenty stall round-house which

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gives us all the facilities we require. Our rolling stock has been kept in a high state of efficiency; and we have all the machinery installed in our shops, which, I consider, are modern and up to date in every respect.

I have the honour to be, sir,

Your obedient servant,

W. L. POOLE.

Mechanical Superintendent.

G. A. SHARP, Esq.,

Superintendent, P.E.I. Railway.

PRINCE EDWARD ISLAND RAILWAY.
STATEMENT showing the number of Locomotives and the various classes of Cars and other Rolling Stock on March 31, 1910.

	Locomotives.	CLASSIFICATION OF CARS.													Total.	Flangers.	Snow Ploughs.	Total.
		1st Class.	2nd Class.	Combined 2nd and Baggage.	Postal and Smoking.	Combined Postal and Baggage.	Baggage.	Pay Car.	Vans.	Box Freight.	Refrigerator Cars.	Stock.	Coal.	Platform.				
On hand, serviceable, March 31, 1909	31	23	12	5	4	3	4	1	3	313	3	21	22	138	552	9	9	18
Condemned, April 1, 1909				2		1			1					9	15	1		1
Total equipment, April 1, 1909	31	23	12	7	4	4	6	1	4	313	3	21	22	147	567	10	9	19
Condemned, April 1, 1909		1	3	2		1	2		1					9	15	1		1
Condemned during the year														2	6			
Total condemned		1	3	2		1	2		1					11	21	1		1
Less rebuilt during the year		1												10	11			
To be rebuilt			3	2		1	2		1					1	10	1		1
Add serviceable and repairing	31	23	9	5	4	3	4	1	3	313	3	21	22	146	557	9	9	18
Total equipment, March 31, 1910	31	23	12	7	4	4	6	1	4	313	3	21	22	147	567	10	9	19

Signed, S. F. HODGSON,

Mechanical Accountant.

PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of Mileage and Coal, Oil and Waste Consumed by Locomotives for the year ended March 31, 1910.

	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.	
1909.										
April.....	34,032	846	444	1,024	534	5,558	1.34	3.01	1.57	
May.....	40,866	1,011	420	1,160	672	5,541	1.02	2.83	1.64	
June.....	40,411	942	476	1,192	656	5,221	1.17	2.95	1.62	
July.....	46,366	1,099	620	1,420	642	5,369	1.34	3.06	1.38	
August.....	42,173	995	564	1,260	637	5,285	1.33	2.99	1.51	
September.....	41,363	1,068	500	1,112	642	5,785	1.21	2.69	1.55	
October.....	37,354	1,005	444	932	576	5,994	1.18	2.48	1.53	
November.....	40,977	1,177	508	940	620	6,434	1.24	2.29	1.31	
December.....	39,403	1,144	600	1,136	663	6,563	1.52	2.88	1.68	
January.....	36,559	987	580	1,224	631	6,047	1.58	3.34	1.72	
February.....	30,533	856	400	848	522	6,279	1.31	2.77	1.71	
March.....	31,960	853	278	740	502	5,978	0.87	2.31	1.57	
Totals.....	462,187	11,977	5,834	12,988	7,297	5,804	1.26	2.81	1.58	

Signed, S. F. HODGSON,

Mechanical Accountant.

PRINCE EDWARD ISLAND RAILWAY.
 DETAILS of Accidents for the Period ending March 31, 1910.

Date.	Name, Address and Occupation of Persons.	Place of Accident.	Cause.	Nature and Extent of Injury.
1909.				
April 7.	Charles Bradley, Grand View, section foreman.	Grand View	Slipped into cuttl- guard.	Spained ankle.
" 19.	William Hechenidge, Charlottetown, section labourer.	Charlottetown	Slipped while lining track	Back sprained.
" 24.	James Mullins, Charlottetown, labourer.	"	Unloading car wheels.	Spained ankle.
May 4.	Hector McLeod, Charlottetown, fitter's helper.	"	Struck by bar iron	Toe bruised.
" 6.	Bert Newsome, Charlottetown, machinist.	"	Casting fell on foot.	"
" 17.	Alphens Arsenault, Summerside, coal handler.	Summerside	Coal tub fell on foot.	Foot bruised.
" 21.	James H. Partridge, Mt. Stewart, section foreman.	Mt. Stewart	Struck with lever of track jack	Rib fractured.
June 17.	Jas. Herrell, Charlottetown, improver.	Charlottetown	Foot caught between engine and turntable.	Foot injured.
" 26.	John O'Neill, Charlottetown, labourer	"	Lump of coal fell on leg.	Leg injured.
July 7.	Hector McDonald, Charlottetown, carpenter.	"	Board fell on head.	Head injured.
" 30.	David Gammum, Charlottetown, labourer.	"	Slipped and hurt knee.	Knee injured.
Aug. 1.	Martin Mahar, Charlottetown, blacksmith's helper	"	Made a miss blow while striking.	Dislocated kidney.
" 5.	John Currie, blacksmith, Charlottetown.	"	Moving wheel	Hand sprained.
" 12.	John Harrell, Charlottetown, labourer.	"	Moving heavy casting	Spained muscles of side.
" 19.	Peter Flynn, Charlottetown, car cleaner	"	Slipped off car steps	Ribs fractured.
" 21.	H. J. Love, Charlottetown, locomotive driver	Montague	Replacing engine on track	Arm injured.
" 25.	James Revell, Charlottetown, locomotive fireman	Summerside	Fixing brake shoes	Hand cut.
Sept. 6.	Harry Nelson, Charlottetown, labourer	Milton	Rail fell on leg.	Leg fractured.
" 22.	Joseph O'Reilly, Charlottetown, brakeman	Murray Harbour	Stumbled over hand car.	Rib fractured.
Oct. 14.	Joseph J. Grahain, Bradabona, carpenter.	O'Leary	Struck with plank.	Testicle injured.
Nov. 1.	Urban M. Gaudet, Tignish, section foreman.	Tignish	Unloading rails	Spained back.
" 1.	John Howatt, Cape Traverse, section labourer.	Kimkora.	Loading rails.	Thumbs crushed.
" 11.	John McIherson, Charlottetown, fitter.	Charlottetown	Wedge fell on foot.	Foot injured.
" 23.	Charles Bradley, Cardigan, section labourer	Cardigan	Lifting hand car.	Hip strained.
" 27.	Samuel E. Graham, O'Leary, section labourer	O'Leary	Laying rails	Finger broken.
Dec. 24.	Joseph O'Reilly, Charlottetown, brakeman	Uggs	Slipped while closing car door	Spained foot.
" 30.	Frank Gillis, Cape Traverse, cleaner	Cape Traverse	Slipped off steps of engine.	Legs injured.
1910.				
Jan. 6.	Fenton Higgins, Charlottetown, fireman.	Charlottetown	Shalter bar of engine slipped and cut thumb.	Thumb cut.
" 29.	William Gillis, Summerside, section foreman.	Summerside	Fell while repairing scaphoire	Spained ankle.
Feb. 4.	Owen McQuaid, Charlottetown, fireman.	Charlottetown	Finger hurt in stoker.	Finger injured.
" 14	James Keough, Charlottetown, apprentice.	"	At work in shop.	Spained neck.

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PRINCE EDWARD ISLAND RAILWAY.

ACCIDENTS during period ended March 31, 1910.

Cause of Accident.	PASSENGERS.		EMPLOYEES.		OTHERS.		TOTAL	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1. Fell from cars or engine				2				2
2. Jumping on or off trains while in motion								
3. At work on or near the track making up trains								
4. Putting arms or heads out windows								
5. Coupling cars								
6. Collisions, or by trains thrown from track								
7. Struck by engines or cars on highway crossings								
8. Walking, standing, lying, sitting, or being on track				8				8
9. Explosions								
10. Striking bridges				21				21
11. Other causes								
Total				31				31

CHARLOTTETOWN, P.E.I.,

May 31, 1910.

INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS
EMPLOYEES' PROVIDENT FUND.

THIRD ANNUAL REPORT.

MONCTON, N.B., May 21, 1910.

To the Honourable GEORGE P. GRAHAM,
Minister of Railways and Canals, Ottawa.

By instructions 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, 1910.

The personnel of the Provident Fund Board for that year, was as follows:—

- D. POTTINGER, Assistant Chairman, Government Railways Managing Board,
Chairman, Moncton.
- W. A. DUBÉ, Superintendent, I.C.R., Levis. } Appointed
- T. C. BURPEE, Engineer of Maintenance, I.C.R., Moncton. } by the Minister.
- JAMES W. NAIRN, Engineman, I.C.R., Truro. } Elected by the
- W. MILLEDGE THOMPSON, Conductor, I.C.R., Moncton. } Employees.

Four regular meetings, and one special meeting were held by the board during the year.

The following is a statement of the receipts and expenditures during the year ended March 31, 1910:—

1 GEORGE V., A. 1911

Balance at the credit of the fund on March 31, 1909.		\$225,898 31
The contributions made by employees during the year were. \$ 69,949 70		
The contributions made by the railways during the same period were.	69,949 70	
Amount received for refunds, &c.	483 06	
Interest on monthly balances.	6,314 32	
		<u>*146,696 78</u>
		<u>\$372,595 09</u>

*NOTE.—Amount credited by railways to the Provident Fund during the year. . . . \$134,785 55

Amount accrued in March, 1910, but not credited until May, 1910. 11,911 23

\$146,696 78

The expenditures were:—

For retiring allowances.	\$103,628 20
Contributions refunded in the cases of deceased employees.	300 65
Contributions refunded, which were deducted in error.	5,120 22
Contributions refunded to discharged employees	123 75
Medical examinations—	
Probationers entering service.	1,662 00
Employees retiring from service.	67 00
Election expenses.	462 56
Salaries and travelling expenses, secretary's office.	4,474 20
Board members.	77 99
Stationery, printing, &c.	1,093 44
	<u>117,010 01</u>
	<u>\$255,585 08</u>

The following statement will show 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 retiring allowances, in each year. The average amount of the retiring allowance paid in the month of March, 1910, is also shown:—

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 Allowance Paid in March, 1910.
	\$ cts.	\$ cts.			\$ cts.	\$ cts.
1907-08	82,707 74	82,707 74	142	11	23,913 04	
1908-09	75,306 41	75,306 41	88	17	64,067 63	
1909-10	69,949 70	69,949 70	168	17	103,628 20	26 30

It will be seen that the amount paid for retiring allowances during this year, is very much larger than the amount which was paid last year on the same account. A reference to last year's report will show that this increase was expected.

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The Act provides that two members of the Provident Fund Board, shall be elected annually, and it was therefore necessary in January, 1910, to arrange for the election of these two members, to serve during the year ending March 31, 1911.

Notices calling for the nomination of candidates, was accordingly posted, as required by the rule, and the election was held in February, 1910.

The two members elected were:—

W. MILLEDGE THOMPSON, Conductor, I.C.R., Moncton.
WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Truro.

The personnel of the board as at present constituted, is as follows:—

D. POTTINGER, Assistant Chairman, Government Railways Managing Board, Chairman, Moncton.	
W. A. DUBÉ, Superintendent, I.C.R., Lévis.	} Appointed by the Minister. Elected by the employees.
T. C. BURPEE, Engineer of Maintenance, I.C.R., Moncton.	
W. MILLEDGE THOMPSON, Conductor, I.C.R., Moncton.	
WILLIARD P. HUTCHINSON, Train Despatcher, I.C.R., Truro.	

D. POTTINGER,
Assistant Chairman,
Government Railways Managing Board, Chairman.

W. C. PAVER,
Secretary.

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, May 2, 1910.

The Honourable GEORGE P. GRAHAM,
Minister of Railways and Canals,
Ottawa, Ontario.

SIR,—I have the honour to submit my annual report on the condition of the western division of the National Transcontinental Railway for the fiscal year ended March 31, 1910, covering also the period between that and the present date.

The total length of this division is about 1,751 miles, divided into two sections, viz.:—The 'Prairie Section' which extends from the west bank of the Assiniboine river, in the city of Winnipeg, to the east bank of Wolf creek, a distance of 915 miles, and the 'Mountain Section,' extending from the east bank of Wolf creek to the western end of the city of Prince Rupert, the Pacific coast terminus, a distance of about 836 miles.

PRAIRIE SECTION.

The entire section is graded and the structures are built. The main line track is laid and sidings have been constructed at 138 stations, aggregating 140½ miles in length.

Four hundred and seventy-four miles of main line are fully ballasted; 350 miles have a first lift of ballast of about five inches in depth, and there remain 35 miles of skeleton track between Eutwhistle and Wolf creek. The embankments on this 35 miles are largely composed of muskeg, so soft that the track had to be laid on the winter season when the ground was frozen solid. The work of covering these soft muskeg embankments with several feet of sand is now in progress; this will not only do good service in holding the embankments in shape when the frost is coming out of the ground, but also in preventing the muskeg from taking fire.

The fencing of the line is well advanced, there having been 732 miles of double fence erected.

A telegraph line has been built over the entire 'Prairie Section' of 915 miles, of which 793 miles is a four-wire line and 122 miles a two-wire line.

Eleven interlocking plants have been established at rail level crossing of other railways.

Water services have been introduced at 49 stations. Some of these have, however, proved unsatisfactory, both as regards the quality and quantity of water, and will probably have to be abandoned and other means of procuring water resorted to.

Six round houses have been built, viz.:—At Rivers, 18 stalls; Melville, 12 stalls; Watrous, 12 stalls; Biggar, 12 stalls; Waiuwright, 12 stalls; Edmonton, 18 stalls; and two small engine houses have also been erected—one of two stalls at Portage la Prairie and one of two stalls at South Saskatoon.

Machine shops have been built at Rivers, Melville and Edmonton, three divisional stations.

The round house at Rivers was damaged by fire on the 8th of December, 1909, and the blacksmith shop at the same place was destroyed by fire on the 14th November, 1909.

Five divisional station houses, 26 way station houses, 54 section houses, 66 tool houses, 79 bunk houses, 5 coaling plants, 80 permanent and 22 temporary loading platforms, 18 stock yards and 115 grain elevators have been erected.

The grain elevators were built at the stations along the line by private enterprise.

The station house at Rivers was damaged by fire on December 8, 1909, and the way station houses at Uno and Bradwell were destroyed by fire on August 16, 1909, and February 14, 1910, respectively.

The portion of the road between Winnipeg and Edmonton—795 miles—has been regularly operated for public traffic since September 13, 1909, under authority of the Board of Railway Commissioners. On the 120 miles west of Edmonton, though there is no regular operation, there has been attached to the construction trains since February 1, 1910, a combination passenger and freight car for the convenience of those concerned; this course being adopted in view of representation made in the matter in order to meet the demands for this accommodation pending the completion of the section. The main object of running the trains over this 120 miles was to carry to the front the large quantities of plant and supplies required for distribution along the works on the 'Mountain Section,' preparatory to commencing construction operations upon the opening of the working season, and the object has been satisfactorily attained.

MOUNTAIN SECTION.

Location plans and profiles have been approved by the government and the Board of Railway Commissioners from Wolf creek westward for a distance of 289 miles, and from Prince Rupert easterly for 409 miles, leaving a gap of 138 miles, the location plans and profiles of which have not yet been submitted by the Grand Trunk Pacific Railway Company for approval.

Of the 289 miles from Wolf creek westerly, only 179 miles have, as yet, been put under contract, for this Messrs. Foley, Welch and Stewart are the contractors.

As the contracts were only awarded late last autumn very little work has been done beyond the first mile west of Wolf creek. The work on this mile is very heavy, there being two large steel bridges to be erected and a cutting of over 130,000 cubic yards to be taken out. The first structure will be 622 feet in length and 130 feet high, crossing Wolf creek. The second structure is to span the McLeod river; it will be 1,052 feet long and 125 feet high. The concrete piers, pedestals and abutments of these two bridges are completed in readiness to receive the superstructure. The large cutting containing over 130,000 cubic yards, lying between these two bridges is sufficiently advanced towards completion to admit of the track being laid through it. The false work over the Wolf creek is completed, and tracklaying will at once be carried forward to the McLeod river in order that the steel superstructure of this bridge may be transported by train.

The work of excavation in the 'big cutting' between Wolf creek and the McLeod river is being treated by me at the contract prices per cubic yard according to classification.

The erection of the superstructure of these two bridges will be carried on simultaneously, so as to have them completed at the earliest possible date in order that the tracklaying may be proceeded with during the ensuing summer season, so that the cost of transportation of supplies and plant for the sections of road not yet under contract may be greatly reduced, thus affecting favourably the tenders for the work.

The work executed westward from the McLeod river is inconsiderable, being chiefly composed of about 1,640 acres of clearing, the moving of about 240,000 cubic yards of excavation, the delivery and driving of piles for a number of pile bridges, as well as the delivery of a quantity of timber for same. However, the line is well provided with the requisites in the form of supplies and plant for energetic prosecution of

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the work, and I learn that the force is already being considerably increased, so that by the time the frost is out of the ground, which will probably be about the middle of May, it is expected a large body of labourers will be employed.

During the winter season over 3,600 car loads of plant and supplies reached Wolf creek, and were at once forwarded and distributed by teams along the line of work.

Of the 409 miles from Prince Rupert easterly, the location of which is approved, 240 miles only are under contract. Messrs. Foley, Welch and Stewart are the contractors.

Of the first 100 miles out of Prince Rupert easterly the grading and culvert structures are far advanced towards completion, and a few pile bridges have been built, leaving a number yet to be constructed. Of the six steel bridges to be built, beyond the delivery at Prince Rupert of one cargo of steelwork and the manufacture of the balance of the steel superstructures, which I understand are ready for shipment to Prince Rupert, very little has been done. The only steel bridge concrete sub-structure that has so far been commenced is that of the bridge over the Zanardi rapids, of which the two abutments and one pier are nearly completed for it and the building of the caissons for the remaining four piers is well advanced. However, the delay in the building of these permanent structures will not prevent the tracklaying being proceeded with. So soon as the steel superstructure of this Zanardi rapids bridge is erected, the temporary pile structures to be used as false work for the erection of the remaining steel superstructures being constructed of sufficient strength to carry the tracklaying trains will be finished.

About seven miles of track have been laid easterly from Prince Rupert, and sufficient rails and fastenings have been delivered to cover 200 miles, together with enough ties for 100 miles.

A wharf has been built at Prince Rupert and is in general use.

On the 140 miles east of the first 100 miles very little work has been accomplished during the past winter season. A few rock cuts have been opened and a tunnel is being driven; nothing much can, however, be done until the opening of navigation on the Skeena river, when, no doubt, the supplies and plant now lying at Prince Rupert will be rapidly brought up in the contractors' steamers.

The Skeena river, it appears, was last year frozen over a month earlier than in former seasons, thus preventing the contractors from supplying the works for this 140 miles with the necessary outfit.

No station or other buildings have up to the present date been erected on this 240 miles, excepting the warehouse on the wharf at Prince Rupert.

It is a matter of much gratification to bear testimony to the faithful and satisfactory manner in which the several government inspecting engineers have discharged their duties, and to find that the division engineers of the Grand Trunk Pacific Railway Company have always given a ready ear and fair consideration to any complaints or suggestions they may have made, either as to the location of the line or as to the works of construction. I may say that the chief engineer of the company has frequently expressed to me his view that as the inspecting engineers have such great opportunities of observation in their personal examination of the works, it would be an assistance to his staff to have their attention so drawn to any matter which appeared to need consideration.

I have the honour to be, sir,

Your obedient servant,

(Sgd.) COLLINGWOOD SCHREIBER,
*Chief Engineer of the Western Division of
the National Transcontinental Railway.*

PART V

PROGRESS REPORT

ON

HUDSON BAY RAILWAY SURVEYS

BY

MR. JOHN ARMSTRONG

Chief Engineer of Survey

OCTOBER 30, 1909.

Hon. GEORGE P. GRAHAM,
Minister of Railways and Canals,
Ottawa, Ont.

SIR,—I have the honour to report upon the Hudson Bay Railway project, as follows:—

Mr. John Armstrong, B.A., B.A.Sc., M. Can. Soc. C.E., was appointed Chief Engineer in the fall of 1908. He promptly organized four parties and carried on his work in a most satisfactory manner, and to him and his assistants credit is due for an efficient piece of work. Lines were run to Fort Churchill and Port Nelson from The Pas Mission, and contours were taken closely enough to enable a projected location to be made that reasonably assures accurate quantities; and detailed surveys were made of the harbour of Fort Churchill and Port Nelson—and an important river crossing.

The basis of Mr. Armstrong's estimate is given in full detail. He has estimated for 60 pound rails; I have increased his estimate to provide for 80 pound rails and fastenings; and as he has not estimated for round houses, shops, buildings, elevators and yard facilities at terminals, or harbour works, I have accordingly estimated for these items.

I find considerable difficulty in deciding upon what basis to provide accommodation for a railway that, in the nature of things, cannot be operated to its capacity for more than two months in the year—to a lessened extent for a possible three months, and for the remainder of the year still less. I have, however, provided facilities on a scale that will admit of the maximum capacity for a single track; passing tracks and telegraph stations every five miles, water stations every fifteen miles, and round house and shop accommodation sufficient to care for thirty-two (32) freight trains and one (1) express train per day of twenty-four (24) hours.

Mr. Armstrong has discussed the merits of the harbours at Churchill and Nelson; and as he has furnished plans with soundings, I have plotted the piers and terminals required.

From the information, there is no room for doubt that Nelson is much the better harbour. The line is also shorter by 67 miles, the country through which it runs is better, and the possibility of local business altogether with the Nelson route. There is also a probability that a fair proportion of the route is available for settlement; whereas on the Churchill route, there is no such probability beyond Split lake, where the lines separate.

It is of the utmost importance that a hydrographic survey should be made of the Hudson strait and bay, so that the position and cost of the necessary lighthouses may be ascertained. This work properly belongs to the Marine Department, and is important enough to demand the personal attention of its most capable officer; and while in progress, complete observations should be taken by reliable men stationed at Cape Chidley and Resolution island, at the mouth of Hudson strait, at Salisbury

island near the junction of the Fox channel, and at Mansfield island, as well as at the mouth of the Nelson itself. The course from Mansfield island to Nelson requires to be accurately chartered, and the exact positions of the lighthouses necessary at the mouth of the channel should be fixed. It would be well to also secure information as to the harbours on the Labrador coast, and the special feature of Davis strait. A good sea-going boat is required at Nelson for a year or two, to study the bay itself, its tides, currents, &c. Particular study should be made of the mouth of Ungava bay; and also, as to all harbours of refuge along the route and the best way to approach them, where safe anchorage may be had, &c. A lighthouse will be required at the most southerly end of Greenland.

The route will pass to the north of Ireland, and the distance from Liverpool to Port Nelson as measured on a mercator projection map, is 3,200 miles—against 3,007 from Montreal to Liverpool.

The crux of the matter is—what business can be handled by such a railway, and of what value it is likely to be to the country tributary to it? The general map of the Northwest, which accompanies the report, shows, by concentric circles, the areas tributary to Pas Mission (the starting point of our line) and Winnipeg. For all practical purposes the city of Winnipeg is as close to Fort William as The Pas is to Hudson bay at Port Nelson, hence they may be compared as radiating points.

A line drawn from Dauphin, Man., in a southwesterly direction passing through Weyburn, Sas., separates the tributary territory. Practically the whole of the province of Manitoba, and about 11,000 square miles of the southeasterly corner of Saskatchewan, is tributary to Winnipeg; the whole of the remaining area of Saskatchewan and Alberta belonging to The Pas. This immense district is equal in area to the states of North and South Dakota, Minnesota, Wisconsin, Nebraska and Iowa, where there is a population of about 10,000,000, and a railway mileage of about 50,000. I think that, square mile to square mile, the fertility of the northwest is at least equal to the states named.

Assuming that the line is to be worked for all that is possible to be done. The grades are 0.4 or 21 feet to the mile. All trains are fully loaded and composed of 40 ton pay load cars; and locomotives of the Mallet articulated compound type are to be used with a hauling power of at least 4,000 tons of pay load. Thirty-two (32) trains per day is about the capacity of a single track—better than this has been done, but it is enough.

Sixteen (16) trains loaded=64,000 tons per day—making allowance for accidents and delays—say for 30 working days we get 1,920,000 tons, or 64,000,000 bushels of wheat.

I assume that ships can be secured wherever there is sufficient business offered. It is apparent that at least nine per day would need to be loaded, or say 135 to 140, to do the business—allowing 2 trips to each ship. Any additional business taken to the bay would have to be stored until the following August—nine months.

Other sources of traffic possible to the line are: the exportation of cattle; the usual package freight to and from Europe; and the possibility of developing a reasonably large import coal trade. I believe it is practicable to lay down coal at Port Nelson from Nova Scotia at a cost not exceeding \$3.75 per ton. The rail haul say to Sas-

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katoon—as an average point of distribution—need not exceed \$4 per ton, making the cost of the coal \$7.75. At present, I believe, it costs quite \$9 in the same territory.

Equipment for thirty-two (32) trains per day of the character outlined will cost about \$9,000,000; and means the providing of 108 train crews, 150 telegraph operators, 54 gangs of section men, shopmen, round house men, superintendents, train and yard masters—the greater number of whom are not likely to be required once the rush of the season is over. It appears, therefore, to be a difficult proposition for independent operation, and would seem to require to be worked by one of the large corporations, so that the men and rolling stock could be utilized the whole year. There is in Canada only one locomotive of the type described, and by using the largest freight engines now operated on western roads the train load would be reduced one-half—and the capacity of the road in like measure.

It is apparent, however, that under any circumstances grain may be placed at the Hudson bay on board ship as cheaply as at Fort William, hence the saving possible is 5 cents per bushel, assuming that insurance and freight rates are equal at Montreal and Port Nelson. Captain Bernier is of the opinion that it is unsafe to be caught in the vicinity of the Fox channel with a steamship of ordinary construction any later than October 15.

Mr. Armstrong's report will be found attached hereto.

I have the honour to be, sir,

Yours faithfully,

M. J. BUTLER,

Deputy Minister and Chief Engineer.

Mr M. J. BUTLER,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa.

DEAR SIR,—I herewith beg to submit a general report on the results of the preliminary surveys in connection with the proposed railway to Hudson bay, and undertaken in accordance with your letter of instructions, dated July 10, 1908.

ORGANIZATION.

Four parties were organized and started to work at various points between The Pas and Fort Churchill, dividing the territory to be covered into sections of approximately 120 miles each. Another small party, No. 5, was organized for the purpose of exploratory work whereby much general information was obtained, and the running of much unnecessary lines by the regular parties avoided.

During the progress of the work more information about the Nelson river was obtained, and seemed to justify an examination of that route, as well as the route to Churchill. On the completion of their exploratory work, Party No. 5 was re-organized and allotted to this work, and to a preliminary survey of the harbour at the mouth of the Nelson river. In order that no hitch might occur in the transportation and supply arrangements, Mr. E. H. Drury was established at Split lake as divisional engineer, supervising the work of Parties 3, 4 and 5.

Parties 1 and 2 were despatched from Winnipeg on August 30, to The Pas, going by rail to Prince Albert and thence by Hudson Bay Company's steamers down the Saskatchewan river to their destination. Party No. 1 commenced work on September 14, about 40 miles north of The Pas. Party No. 2, owing to the long and difficult route adopted, did not arrive on their work until November 7, the last of the five parties to commence work. Since then we have discovered a much easier and quicker route to the work, and could do the same work now in less than half the time and for half the expense.

Parties 3, 4 and 5 left Winnipeg on September 19, going by way of Lake Winnipeg and the Nelson river to their destination. Party No. 5 commenced work on October 5, No. 3 on October 24, and No. 4 on October 29.

Parties 1 and 2 completed their work and were disbanded on March 11 and 24, respectively. Party No. 3 and the Split Lake Division office was disbanded on April 6.

Parties No. 4 and 5 completed their work on the railway lines about April 1, and were thereafter engaged on the harbour surveys, No. 5 completing their work and disbanding on July 6, and No. 4 on August 13.

The health of the parties throughout the work was uniformly good; not a single serious accident or case of sickness being recorded on all the work.

COST.

The total cost of the work, including all returns to date of September 30, with outstanding accounts yet to be settled, totals \$130,716.09. A few of the outstanding accounts are in process of adjustment, but the final result will not differ materially from this total.

Since commencing location, supplies and equipment to the extent of \$5,952.34 have been taken over for location work, leaving \$124,763.75 to charge against preliminary work, and distributed as follows: Survey of railway routes, \$101,123.75; survey of harbours, \$23,640. This cost is largely due to the extra expense of transportation through such a country, a considerable portion being due to the fact that the work on the Nelson route was not taken up until well on in February, thus obliging us to pay winter rates for the transport of provisions along this route. The experience of the Canadian Northern and Grand Trunk Pacific seems to indicate that it usually costs from \$300 to \$500 per mile to secure a final location in such country as this. During the progress of our work much information has been gained relative to transportation routes, which will enable us to greatly reduce the cost of supplies in future, and although the preliminary work has seemed costly I do not expect that the cost of the final location will be greater than that usually obtained in such countries.

During the time when all parties were at work there was an average of about 110 on the pay-rolls.

METHODS USED.

The surveys were made in the usual way with transit level and chain. Contour topography was taken over the greater portion of the line, as well as all lakes, swamps and other points of interest in the vicinity of the line. In order to illustrate more fully the class of information obtained by the engineers in the field a plan and profile of a representative portion of the line are being forwarded to you. This will probably show more clearly than any description could do, the character of the information upon which the estimate of the cost of construction has been based. This plan is exactly as turned in by the engineer in the field.

In making up the estimate different methods of dealing with stream crossings were frequently adopted, this plan only being intended to illustrate the information obtained.

NATURAL RESOURCES.

The timber along the proposed route to Churchill has been described in the preliminary report of February 15, 1909. The work on the Nelson route since then has, however, developed the probability that the timber which may be available by the opening of that route is of much greater value than usually supposed. The whole country is full of lakes and streams, and different parties passing through by different routes have found most of the lakes and streams bordered by areas of timber of commercial value. These areas vary in size from a few acres to some as large as forty or fifty square miles, and in the aggregate totaling several thousand square miles. We have no means of making an approximate estimate of the quantities, as large areas though tributary to the railway route lie far to one side or other of any probable location of the line, and consequently were not visited by the engineers. However, the information obtained is of such a nature as to warrant the recommendation that a thorough examination be made of the timber resources of this territory by competent timber cruisers.

AGRICULTURAL LANDS AND MINERALS.

No further information can be added to that already given in the report of February 15. It will be remembered that the greater portion of this work was completed during the winter months when the ground was frozen and covered with snow, rendering it impossible to obtain much information on these subjects.

It may be remarked here, however, that although these lands may require more or less improvement in the way of clearing and drainage, the fact that they are situated

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within a few hours' run of an ocean port may give to these lands a value not hitherto thought of, and may cause a more rapid settlement than expected. At the inland Hudson bay posts all kinds of grain and vegetables have been grown successfully for years. A study of the records of the Meteorological Office indicates that the climate is quite favourable for farming operations as that of Prince Albert. Our own records extending only from November to March simply corroborate the general impression that it is very cold during the winter months, but furnish no information as to the conditions during the summer, or growing season.

Our definite knowledge of minerals is limited to limestone and marble. The limestone occurs in the southern portion of the line a short distance from The Pas, in unlimited quantities favourable for quarrying, and will probably prove the future source of supply for the greater part of the province of Saskatchewan and Manitoba.

Marble of a very high grade occurs on Marble island in Hudson bay, and is also found of a fair quality at Fort Churchill.

Iron ores, gold, silver, galena, mica and other minerals have been discovered by the Geological Survey at various localities on the bay, all of which are fully described in the reports of that department.

Various specimens of the precious metals have been shown to our engineers, but their origin was preserved in so much mystery that they could not be treated as evidence of the existence of the metal in that territory and might have been used with equal effect to demonstrate the richness of a deposit in Colorado or Johannesburg.

FISH.

All the evidence obtainable points to the existence of various varieties of fish of good quality in Hudson bay in large quantities. This should be of great value to the west, as fresh fish can be laid down in twenty-four hours at all the main centres in Manitoba and Saskatchewan. This will largely be an express traffic, and according to recent investigations of the Railway Commission this seems to be a remunerative business, and should prove a source of great profit to the Hudson Bay railway.

STREAMS AND WATERWAYS.

The principal waterways of the country traversed by the surveys were described in the report of February 15. Since then a general map has been prepared showing, in addition to the streams described, the extension of these waterways throughout the west, together with the railway system as it exists at present. The map shows the principal waterways which are susceptible of development for purposes of navigation, and shows the extent to which they may become feeders of the Hudson Bay railway. These waterways have all been recently navigated by vessels of considerable size. During the summer of 1908 the steamer *Alberta* made the trip from Edmonton to Winnipeg where she is now engaged in the excursion business. During the past summer a good sized steamer made a return trip on the South Saskatchewan between Medicine Hat and Saskatoon, and in the month of June a number of business men from Grand Forks, North Dakota, made a successful excursion trip from Grand Forks to Winnipeg and return via the Red river.

An approximate estimate of the discharge of the Nelson river gave results as follows:—No. 1, 156,869 cu. ft. per second; No. 2, 149,693 cu. ft. per second.

In the first measurement the velocity was obtained by means of floats, and in the second by means of a current meter borrowed from the Department of Public Works.

Below this, several large streams enter, and many small ones, so that the discharge at Port Nelson is probably not far from 200,000 cu. ft. per second. The dis-

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charge of the Churchill river has been roughly estimated as 40,000 cu. ft. per second at low water.

On the general map is also shown a proposed extension of the railway line southerly to connect with the existing railways.

One projection is shown along the Carrot river from The Pas to Saskatoon. At Saskatoon connection is made with lines leading to most of the principal centres of trade in the provinces of Saskatchewan and Alberta.

This line will also open up a very fertile country along the Carrot river and give an outlet for valuable timber areas along the northern slope of the Pasquia Hills. This line will be through open prairie country and a first-class road can be built for \$20,000 per mile.

Another suggested extension is from the southern terminus of the Canadian Northern Railway's Pas branch to Yorkton, giving communication with Regina and other centres in eastern Saskatchewan and western Manitoba. This line will also be prairie work and should not exceed \$20,000 per mile for a good road.

THE CHURCHILL ROUTE.

The first section of approximately 120 miles is through a comparatively level or smooth country, affording easy grades and cheap construction. The territory is underlaid with limestone in horizontal or flat beds, rarely rising above the general level to any extent, and when it does so it is in a way as to be easily avoided by the railway line. Owing to this condition the rock cutting on this section will be practically nil.

The balance of the grading on this section will largely be in clay loam material, probably 70 per cent, the remainder being of sand, gravel and swamp or muskeg. It may be remarked here that what is called muskeg in this country is not a true muskeg, but would be more properly defined as swamp. Good bottom is usually obtained at a depth of three or four feet, and very seldom exceeds 7 or 8 feet.

The stream crossings will be light, with the exception of the Saskatchewan river crossing. Frog river, the connection between Moose lake and Cormorant lake, is a navigable stream for small boats, and as we cross it very low down it will probably be necessary to provide a swing span of some kind. As a fifty or sixty foot opening will do, the sum required will not be large.

Since taking up the location work it has been found possible to practically eliminate the hump shown at mile 25 on the condensed profile, and with good prospects of materially improving the hump at mile 55.

The second section of 120 miles is through granite country, and although the same general characteristics are preserved the granite ridges are more abrupt, and will force us to take some rock cuttings, although fortunately most of them will be small. All the streams and lakes throughout these two sections possess more or less valuable timber of which the accompanying photograph is an illustration.

From the 240th mile to the 360th mile we have the roughest country encountered, and considerable exploratory and extra preliminary work has failed to find any better route than that adopted. In this territory is included the rise between the basin of the Nelson river and that of the Churchill. The actual height of the summit between the two rivers is not very great, but both approaching and leaving this summit a heavily rolling or undulating country is encountered, and requires the development of a considerable length of line, and the introduction of much curvature to secure the grades adopted, at a reasonable cost. On the Nelson river side of this ridge a considerable amount of heavy work will be necessary, but on the Churchill slope although the yardage to be moved will be heavy it is not anticipated that much rock will be encountered.

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The fourth section, extending from the 36th mile to Fort Churchill, will require the moving of only a light yardage, but the northern 70 miles being over the tundra, or barren lands, may prove to be a more expensive piece of work than the profile would indicate. Mr. W. J. Clifford made a trip through this section in the month of June for the purpose of examining it after the snow had disappeared. He does not anticipate any serious difficulty or danger in constructing this section, the chief drawback being from the fact that although the material is such as would usually be classified as common excavation, so much frost will be encountered that probably a considerably greater price will have to be paid for its handling than for common excavation.

The timber over sections 3 and 4 is not of very much value. A few ties and some timber for temporary work may be obtained, but only in small quantities.

The bridging on the whole will average light, the only two bridges of great importance being the Saskatchewan crossing and the Deer river crossing about mile 350.

As intimated in the notes on the estimates, a considerable number of small pile structures have been designed for the purpose of furnishing ample waterway until a sufficient observation of the stream will better enable us to specify a suitable permanent structure.

The curvature as estimated from the projected location averages $9^{\circ} 55'$ per mile.

The grades adopted, viz.: $-.4$ northbound and $-.6$ southbound, have been obtained without great effort and although some development was required on section 3, the ease with which they were obtained on the remaining sections seems to justify their use all through for the sake of uniform grades on all engine divisions.

THE NELSON ROUTE.

The route selected towards Port Nelson follows the Churchill route for some 150 miles or thereabouts, the description of which has been given. Unlike the Churchill route, the Nelson route does not resolve itself into natural divisions each presenting different characteristics peculiar to itself, but throughout maintains a generally uniform appearance, so that the description given for the first division of the Churchill route may be applied in a general way to the whole of the Nelson route. It is not expected that the rock work will amount to very much, the major portion of the grading being in clay loam with smaller percentages of sand, gravel and swamp. The tundra is not encountered on this route, the whole line being through timber not appreciably different from that described on the first 200 miles of the Churchill route. It may be mentioned here that sand and gravel has been found sufficiently often to justify our belief that ballast may be had without unduly long hauls, except on the northern 70 or 80 miles of the Churchill route. It may be found there, but as yet we have not noted it. The curvature has been estimated to average about $5^{\circ} 30'$ per mile over this route.

A grade of $-.4$ both ways may be had on this route.

The adoption of $-.6$ against southbound traffic would not help alignment nor save grading.

There are three important bridges on the Nelson route, viz.: the Saskatchewan, the crossing of the Nelson at Manitou rapids, and the second or lower crossing of the Nelson. The Manitou crossing of the Nelson is a particularly favourable crossing, the river here being confined in one channel of less than 350 feet in width, the banks being of merely perpendicular granite rock and so situated as to make it possible to choose almost any desired elevation between fifty and one hundred feet above the water. Water here is of course very deep, and has a current of from six to eight miles per hour, making it necessary to cross with either a single span or an arch. The lower crossing will be much longer, probably 3,000 feet, from grade to grade, with a waterway of 1,500 feet with the grade line approximately 80 feet above the water. The

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balance of the bridging will be light, trestles being sufficient in all cases with the exception of Frog river.

HARBOUR WORK.

The plans and reports of the terminal work having already been sent you, it will only be necessary to treat briefly of the object with which this work was undertaken.

It has been endeavoured to treat the subject not as a problem by itself, relating only to the sheltering of ships, but to treat it as one feature only of the problem of the Hudson bay route as a whole. To this end it was necessary to consider and obtain all possible information relating to roadsteads, entrance channels, harbourage, docks, facilities for providing railway terminals and other works necessary for the transshipment of goods, length of season open to navigation, ice condition, and possible future inland communication by improvements to existing waterways, and to the feasibility of approach by the proposed railway. It was realized that the importance of the port and the Hudson bay route as a whole depended in no small degree on the efficiency of the rail communication inland.

In accordance with the above, surveys were made of the harbours at the mouths of both the Churchill and Nelson rivers, the results of which have been sent forward to you.

The results at Nelson seem to justify the recommendation that a further appropriation for an accurate survey of that port be made before it is rejected as a terminus for the Hudson Bay railway.

(Sgd.) JOHN ARMSTRONG,
Chief Engineer, Hudson Bay Ry. Surveys

THE ESTIMATE.

CLEARING.

The estimate is based on right of way 150 feet wide with the necessary allowances added for sidings and terminals. A few miles of heavy clearing will be encountered, but the average over the whole line will be comparatively light. The first 200 miles will be through spruce and jack pine with a small proportion of poplar and tamarack. The northern 100 miles of the Churchill route will have practically no clearing. The northern 200 miles of the Nelson route will be through spruce with a small proportion of jack pine and tamarack and will probably have from 12 to 15 acres per mile to clear. A large portion of the clearing on both routes could probably be done for \$25 or \$30 per acre, but owing to the heavier clearing encountered at intervals an average price of \$40 per acre has been decided upon. This should be ample to cover whatever close cutting is required as well.

GRUBBING.

This item is somewhat difficult to estimate without an actual location profile. One and a half acres per mile has been used for 400 miles of both lines, using the price \$100 per acre which seems to be the price bid by contractors almost universally. The work will class as light, a large portion of it being such as can be done with heavy grading or breaking ploughs.

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GRADING.

This being the chief item in the estimate, considerable care has been taken with it. The quantities submitted are taken from the projected profiles, and the greater portion of these being very close to the preliminary lines, should be as accurate as is possible without cross sections. Engineers in the field were instructed to take out these quantities liberally, and the estimates submitted by them are probably at least 10 per cent in excess of what the profile actually shows.

In addition to this, 25 per cent has been added to all quantities by this office, to cover drainage, settlement, &c., so that the quantities here reported are approximately 35 per cent in excess of what the profile actually shows. This should provide for all possible contingencies, especially as one of the main causes of swelling of estimates, viz.: road and farm crossings is not met with here. In addition, 1,100,000 cubic yards are added to Churchill route and 900,000 cubic yards added to Nelson route for sidings and terminals. At the present time not one single road or farm crossing exists between The Pas and Hudson bay. The prices adopted, \$1.80 for solid rock, 65 cents for loose rock and 30 cents for earth, approximate closely to the prices obtained on the Transcontinental railway in what may be termed similar country, viz.: districts C. D. and E. The price, 30 cents for earth, is perhaps somewhat lower than Transcontinental Railway prices, but I am confident that the contractor who bids over 30 cents on this work will have no chance to get the contract. The portion from The Pas to Hudson Bay Junction of the Canadian Northern railway, a much worse proposition than any we have encountered, was done at a profit, for 25 cents during the high wage period of 1906 and 1907.

These prices quoted are of course the average. In making up the estimate the prices used on the northern portion were, for solid rock \$2, loose rock 75 cents and common excavation and borrow 50 cents. The summation of the quantities and cost on the different sections resulted in the above quoted averages of prices which have been used in this estimate. On sections 1 and 2 the engineers did not estimate any loose rock. For this reason the 25 per cent added to their common excavation has been classified as loose rock. The classification made has been based on the Transcontinental Railway specification. The accessibility of the work will not be so difficult as supposed. The first section has rail communication to The Pas with a fairly good steamboat connection already established to Moose lake, 50 miles along the route. The construction of wagon or sleigh roads from this point on will be easy. The second section, with communication from Winnipeg via Lake Winnipeg and the Nelson river, can be made quite adequate for the comparatively small sum of fifteen or twenty thousand dollars. In case the Churchill route is selected this will be more expensive. The third section may be supplied from Churchill or Nelson if so desired. In the case of Nelson good water connection being possible for 60 or 70 miles inland. In case the Churchill route is selected probably steam shovels will be required on a section of about 35 miles near Split lake. These water routes suggested are not recommended for the transport of such plant as this, but will be useful for all lighter supplies and materials. On the Nelson route no steam shovel work is anticipated, except blasting—the plant for which will follow along behind the track.

TIMBER.

On the Churchill route a sufficient amount of timber for ties, piles, and temporary work may be had convenient to the line on the southern portion as far as the 240th mile, but beyond this point none can be had. For this reason piling has been quoted as 50 cents per foot on the Churchill route, as against 40 cents on the Nelson route, where timber may be had all the way to the bay. The quantities estimated for piling do not look very large, but it is to be remembered that all our stream crossings are very

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low, thus cutting down the length of the piles and also reducing the length of bridgiug or number of bents required. With the exception of the Saskatchewan river crossing and the crossing of the Deer river on the Churchill route all waterways have been estimated for, as temporary wooden structures.

On the Nelson route the Saskatchewan crossing and the two crossings of the Nelson are to be steel and coucrete, all others wood. Our expedition is practically the first which has obtained definite and specific iuformation of the country through which it is proposed to run, but inasmuch as practically all the work was done in the winter months with everything frozen solid and under three or four feet of snow it is perhaps too much to expect that a proper estimate of water openings could be made. For this reason temporary wooden structures of such a nature as will suffice for a period of from 7 to 10 years has been estimated for.

During this period close observation of the waterways will enable us to specify with more certainty the style and size of opening required. With this closer knowledge of what is required, and with the increased facilities for handling cement and other materials for permanent structures, the final cost will probably be less than if an attempt were made to construct them now.

Cedar timber for culverts may be had f.o.b. cars in Winnipeg for \$18 and \$20 per thousand, and with freight added is worth \$22 to \$25 at The Pas. The price of \$40 thus leaving from \$15 to \$18 for framing and contingencies, and it is probably high enough to cover the cost of what little excavation may be needed. If timber native to the country can be used, such as spruce and tamarack, a considerable saving may be effected. My own experience has been that such timber is quite good for seven years, and I know of some spruce culverts built twelve years ago and still good.

The timber for trusses and stringers being imported from British Columbia will be more expensive, but will be approximately the same for both lines.

IRON.

An average of 5 cents per pound has been adopted, based on Winnipeg prices, plus freight to The Pas.

TRACK MATERIAL.

Steel rails of 60 pounds per yard are proposed. Much of the material of which the roadbed will be composed is of a peaty nature and some settlement may be expected.

Under such circumstances it is probable that a better track can be maintained with the 60 pound rail than with the 80 pound rail. Prices are based on Fort William prices plus freight to The Pas, wheelage charges, &c., and an allowance of about \$3 per ton for contingencies.

TIES.

Estimated at 3,000 per mile for all tracks. Being obtainable at all points on the Nelson route 40 cents each has been adopted, but none being obtainable beyond Split lake on the Churchill route, 50 cents has been used for that estimate.

SWITCHES.

In the estimate for switches is included split switch points, spring frogs, switch stands, lamps, and an allowauce of \$15 to cover the difference between common ties and switch ties at each switch.

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TRACK LAYING.

The prices on the Transcontinental railway vary from \$400 per mile to \$600 for laying the 80 pound rail there used, so that \$500 per mile should be ample price for laying the lighter 60 pound rail proposed for this line.

BALLASTING.

Indications are that we will not find it necessary to exceed a maximum haul of 25 miles except in the northern 100 miles of the Churchill route, where a 50 mile haul may be encountered. However, as ballast may be found closer, \$1,000 has been estimated for both routes and includes side tracks and terminals as well as main tracks.

WATER TANKS.

This question has been fully looked into, and it is found, from the Great Northern Railway experience, that \$5,000 should build a tank of 50,000 gallons capacity, of the most approved pattern and as nearly frost proof as has yet been devised; including machinery and heating apparatus inside the tank. As water is very plentiful in our country the intake and piping will not be expensive.

In addition to the above items discussed here there is left for you to estimate upon, station houses and terminal structures; shops, docks and elevators.

In the estimate a side track of 5,000 feet was assumed every eight miles, with a station house, water tank, and accommodation for two section crews at every alternate one. This leaves each section crew the somewhat lengthy section of 8 miles and also situated at one end of the section. It has, however, the advantage of always having the section crew where the superintendent or road-master can always communicate quickly by telegraph or telephone.

Passenger traffic, express traffic and small package freight for a number of years at any rate cannot be very large, so that the accommodation in the station may be cut to a minimum. Out-going local freight will consist largely of timber which requires no shelter, and incoming local freight will be mostly for lumber camps, the most bulky articles of which, such as hay, oats, flour, pork, &c., if necessary can be better accommodated in a separate warehouse of much cheaper construction. Thus the accommodation of our stations will be principally limited to the requirements of the railway agent. A few years after the opening of the railway the principal centres of development will have become apparent, and more suitable station and freight sheds erected as required.

TERMINALS.

The Churchill route, 477 miles approximately, is too long for three engine divisions in this hard winter climate. The Nelson route, 410 miles, can probably be handled by three train divisions, as owing to the better grades the 135 mile Nelson division will not be a harder task for the engine than the 120 mile in Churchill division. On the Nelson route this will mean four sets of buildings, and on the Churchill route five sets.

CHURCHILL ROUTE.

	Unit.	Quantity.	Rate.	Amount.
			\$ cts.	\$ cts.
Clearing	Acre	7,000	40 00	280,000 00
Grubbing	Acre	600	100 00	60,000 00
Grading	C. yd.	9,740,000	0 50	4,870,000 00
Piling	L. ft.	180,000	0 50	90,000 00
Timber in culverts	B. M.	3,250,000	40 00	130,000 00
Timber in bridges and trestles	B. M.	4,000,000	55 00	220,000 00
Iron in bridges and culverts	Lb.	2,600,000	0 05	130,000 00
Steel rails	Ton.	54,000	40 00	2,160,000 00
		18,000		720,000 00
Angle bars	Ton.	2,680	50 00	134,000 00
		900		45,000 00
Bolts and nuts	Ton.	454	80 00	36,320 00
Spikes	Ton.	2,040	65 00	132,600 00
Ties	Each	1,700,000	0 50	850,000 00
Track-laying	Mile.	567	500 00	283,500 00
Switches (complete)	Set	300	250 00	75,000 00
Water tanks	Each	30	5,000 00	150,000 00
Steel bridges, steel	Lb.	3,700,000	0 05	185,000 00
" concrete	C. yd.	6,000	15 00	90,000 00
Ballasting	Mile.	567	1,000 00	567,000 00
Telegraph line	Mile.	477	300 00	143,100 00
Total				10,586,520 00
Increase due to 80 lb. rail				765,000 00
				11,351,520 00

Station buildings, telegraph stations, section houses, round houses, locomotive and car repair shops, power plant, tools, warehouse at port, coal unloading plant \$1,700,000 00
 Two 4,000,000 bush. cap. fire proof elevators 4,000,000 00
 Yard facility at terminals 320,000 00
 Engineering, law costs and contingencies, 10% 1,737,152 00

\$7,757,152 00

Harbour work, piers, dredging, exclusive of lighthouse and buoys

\$6,675,000 00

\$19,108,672 00

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NELSON ROUTE.

	Rate.	Quantity.	Amount.
	¢ cts.		\$
Clearing.....	Acres. 40 00	7,000	280,000
Grubbing.....	" 100 00	600	60,000
Grading.....	Cu. ft. 0 40	7,500,000	3,000,000
Piling.....	L. ft. 0 40	200,000	80,000
Timber in culverts.....	M. ft., B. M. 40 00	2,800,000	112,000
Timber in bridges and trestles.....	" 55 00	3,200,000	176,000
Iron in bridges and culverts.....	Lb. 0 05	2,100,000	105,000
Steel rails.....	Ton. 40 00	45,500	1,820,000
Angle bars.....	" 50 00	15,000 2,280 800	608,000 114,000 40,000
Bolts and nuts.....	" 80 00	390	31,200
Spikes.....	" 65 00	1,740	113,100
Ties.....	Each. 0 40	1,450,000	580,000
Switches.....	Set. 250 00	240	60,000
Track-laying.....	Mile. 500 00	483	241,500
Water tanks.....	Each. 5,000 00	25	125,000
Telegraph lines.....	Mile. 300 00	410	123,000
Bridges, steel.....	Lb. 0 05	9,400,000	650,000
" concrete.....	Cu. yds. 15 00	12,000	180,000
Ballasting.....	Mile. 1,000 00	483	483,000
Total.....			8,333,800
Increase due to 80 lb. rails.....			648,000
			8,981,800

Station, buildings, telegraph cabins, section houses, round houses, repair shops locomotive and car, tools, power plant, warehouse at port, coaling plant.....	\$ 1,647,600
Two 4,000,000 bush. fire proof elevators.....	4,000,000
Yard facility at terminals.....	320,000
Law costs and contingencies. Engineering, 10 per cent.....	1,476,940

7,444,540

Harbour work, piers and dredging, exclusive of lighthouse and buoys.....	\$ 5,065,000
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\$61,426,340

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FORT CHURCHILL.

THE CHART.

Two charts, or maps, are being furnished with this report. One on a scale of 4,000 feet to 1 inch for purposes of comparison with Port Nelson, and a large one on a scale of 1,000 feet to 1 inch, as a working map. On this larger map are shown also 10 feet contours and other notes in more detail than was possible on the smaller scale. The soundings are reduced to low water level.

GENERAL DESCRIPTION.

Fort Churchill is at the mouth of the Churchill river where the river passes through a large tidal flat or lagoon mostly dry at low tide except near the outlet to the sea. The lagoon is surrounded by hills consisting of rock at the sea outlet and of sand and gravel further up the river. The only available situation for docks at present is out near Cape Merry, with the railway terminals from two to three miles up stream, and the townsite from three to five miles up stream. Another townsite is available on the west side, but it would be somewhat difficult to get railway and dock sites.

There is no possibility of improving the Churchill river so as to give inland communication by water owing to its shallowness over its many wide and frequent rapids. The neighbourhood of Fort Churchill is practically destitute of all forest growth for miles in all directions, the vegetation being restricted to mosses and patches of coarse grasses along the edges of the water areas.

The main fresh water supply is obtained from the numerous small lakes in the neighbourhood, and is of excellent quality. The tidal flats are thickly strewn with boulders, some so large as to be visible above high water.

TIDES AND CURRENTS.

The main current in the harbour is along the indicated channel of the Churchill river, being approximately down the centre of the lagoon, but striking more against the eastern side towards the harbour mouth. With the ebb tide the current attains a velocity of from six to eight miles per hour, creating a somewhat difficult entrance for low-powered ships. The local pilots prefer to bring in their ships with the incoming tides.

It is quite useless for anything but a steam vessel to attempt the entrance at any other time. The current with the incoming tide is much less, probably not exceeding 4 miles per hour. The highest tide observed was 13½ feet, and the lowest 8 feet, both probably being subject to modification with a longer series of observations. The water is always more or less salt near the entrance. At low tide fresh water may be obtained in the Churchill channel opposite the Hudson Bay Company's post, but when the tide is in this cannot be done.

ICE CONDITIONS.

The harbour usually freezes over about November 15. The open sea also freezes over during the winter four or five miles out from Churchill. The usual date for the opening of the harbour is about June 19. This last spring the harbour opened on June 7, or about 10 days earlier than usual. The ice lay off the coast and harbour this year, preventing the return of the survey party until July 13, when a start was made for York.

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Five days more were lost by the ice pack off Cape Churchill extending about thirty miles out to sea, the boat crew declining to venture outside of this. The boat in use was only a small sailing coast boat not well adapted to ice work. Probably no serious difficulty would have been experienced by a steamer making Churchill within a few days of the opening up of the harbour on June 7. At intervals between June 7 and July 13, ice would be drifted back into the harbour by north winds. This ice floating up and down the harbour on the strong currents existing there constitutes a serious inconvenience and danger to ships at anchor and to docks and other works which may be constructed along the shore. The harbour has been reported on occasions to have been blocked by ice as late as August owing to long continued north winds. This liability of the harbour to being filled with loose heavy ice drifting up and down with the strong currents will need to be seriously considered in choosing the type of docks to be built here. As shown on the chart, the direction of the current tends to throw the drifting ice against the east shore, the only available place for docks at the present time. The ice, however, does not jam here very much but is swept on out by the strong current. Jams more frequently occur on the west side between the police barracks and Cockrill's Point.

ANCHORAGE.

At the present time very little shelter can be had at low tide by any ship drawing over 18 or 20 feet of water. Space to accommodate two or three ships of this size might be had, but anything larger would have to anchor almost in front of the entrance, which, being about three-quarters of a mile, allows the full force of the seas to be felt. The seas enter the harbour with sufficient force to cause a heavy swell to be felt throughout the harbour; in fact it is reported that at times it is impossible for the smaller boats to cross the harbour for two or three days at a time. The bottom consisting of mud, affords a fairly good holding ground for anchors.

MATERIAL.

The material forming the harbour bottom is mud, thickly strewn with boulders of all sizes, and is probably a deposit from the Churchill river.

Excavating for ships berths close inshore to avoid the heavy drift ice will probably encounter solid rock, as the solid rock in several places runs to the water edge.

MATERIALS FOR CONSTRUCTION.

Stone for construction purposes is very plentiful. Marble if you like to use it. All timber will have to be brought in either by rail or by ship.

DEFENCE.

Fort Churchill being practically upon the open sea can only be defended by strong forts and batteries placed in the immediate neighbourhood of the port itself.

PORT NELSON.

THE CHART.

The chart or map accompanying this report has been drawn to a scale of 4,000 feet to 1 inch, as being best adapted for the purpose of giving a comprehensive view of the general situation at Port Nelson. Lines are shown on the chart inclosing the portion which was found open all last season; other lines showing the portion where the ice did not attain a greater thickness than 10 inches. The shore line is plotted in

from a traverse of the shores. Wherever the ice was of sufficient strength the sounding was done through holes, the method of locating being indicated on the chart. The soundings in the open water portion were taken from a boat hired from the Hudson Bay Company at York Factory, and were taken in May and June after the ice had gone out. This portion of the work was accomplished under great difficulties, as only five small buoys could be obtained to mark ten miles of river.

The boat, which was the best obtainable, was the usual coast boat of very shallow draft and clumsy rig, but endowed with special qualities in the matter of drifting.

Owing to this propensity and to the fact that the small buoys were not visible from one to the other, some difficulty was experienced in keeping the proper course. However, after ten days or two weeks hard work a sufficient amount of information was obtained to enable us to state with certainty that a good channel exists in which a ship drawing 26 feet might safely enter at all stages of the tide. Mr. R. D. Fry, the engineer in charge of the party, believes this chart to be a conservative representation of the actual conditions at Port Nelson, and that more extended surveys with the proper equipment will probably show a more favourable situation.

In order to get the best results it will be necessary to have a good strong boat equipped with power, preferably a good sea-going tug which could be fitted to burn either coal or wood, with a dozen large sized buoys and fifty or sixty smaller ones to mark the channel and points to be sounded.

GENERAL DESCRIPTION.

Port Nelson is at the mouth of the Nelson river, while York Factory is situated at the mouth of the Hayes river, about fifteen or eighteen miles from Port Nelson.

The site at the mouth of the Hayes was chosen by the Hudson Bay Company on account of the better communication with a greater number of inland posts, and also being a much smaller stream was not so difficult to navigate.

A great deal of tracking had to be done on both rivers, and the Hayes being much smaller, offered less trouble in crossing and recrossing to take advantage of paths to tow from. The Nelson river is known locally as the North river, and Port Nelson is named by the British Admiralty as York Roads. Hudson bay vessels crossing to York Factory with supplies anchor about 15 or 20 miles from the post in York Roads. The site of York Factory was not chosen on account of its accessibility from the sea, but entirely on account of the easier communication with inland posts. The Nelson river proper may be said to end at Flamboro Head, which is the approximate limit to which the tide reaches. The estuary is a wide tidal flat with the main channel running approximately down the centre, finally discharging into an open sea abreast of Beacon Point, some 25 miles from Flamboro Head. At Flamboro Head the banks rise sheer from the water edge to a height of 100 to 125 feet. From this point they gradually diminish in height on both sides of the river, until at Sam's creek on the north, and Beacon Point on the south, they are about ten feet above the water. The north shore is of clay with a sufficient fall for drainage and covered with a fair growth of spruce.

A good site for terminals and town may be had in the vicinity of the point marked on the chart. Above this point the banks become higher and much more abrupt.

The south shore is also of clay with a good slope for drainage, but at the present time is covered with a very heavy growth of moss, rendering it very wet. An abundant supply of fresh water may be had either from the Nelson river itself or from various smaller streams and lakes in its vicinity.

TIDES AND CURRENTS.

The main current when the tide is ebbing is along the main channel, the current over the flats running approximately parallel to it. As the water lowers the currents

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over the flats converge more and more upon the main current, till at low tide they are approximately at right angles to and approaching it. On the ebb tide, the current flows at the rate of about $3\frac{1}{2}$ miles per hour, being strongest at the mouth abreast of Beacon Point. Under favourable conditions the current here might rise as high as 4 miles per hour. So great is the discharge of the Nelson river that a perceptible current may be noticed several miles out to sea. With the incoming tide a current of about $2\frac{1}{2}$ miles is obtained.

During the observations, extending from March 20 to June 10, the lowest tide observed was 6.9 feet and the highest 10.9. A longer series of observations will probably establish greater extremes.

The Admiralty charts give ordinary spring tides as ranging from 10 to 14 feet. It is probable, however, that any rise greater than 12 feet may be classed as an occurrence out of the ordinary, and due probably to some particular combination of wind and tide. The tides were found to be very variable, due no doubt to the comparative shallowness of the water. This will require a long series of observations before accurate tide tables can be prepared. This condition is not peculiar to Port Nelson, but applies generally to the tides in Hudson bay.

Salt water is never found above Beacon point except when a very strong easterly gale is blowing with the incoming tide, when a slightly brackish taste may be detected two or three miles above Beacon Point. When the tide is ebbing fresh water is obtained far out to sea. Salt water is never obtained within many miles of the point selected for the terminals.

ICE CONDITIONS.

About the 20th December the river is usually frozen over at Seal Island or Flamboro Head. From this time on the ice gradually creeps down the estuary and out from the shore line until the first half of the month of April. About this date the weather moderated to such an extent that the thawing through the day counterbalanced the freezing at night and the ice began to recede towards Flamboro Head, the estuary being usually again clear of ice by May 15. The ice is broken up into large floes by the rising tide, and is borne off out to sea by the ebb tide. Owing to the appreciable current of the Nelson river being felt so far out to sea very little of this ice ever drifts back again. Between May 15 and June 1, the upper Nelson ice breaks up and passes down the centre of the estuary in the main channel, usually occupying from 24 to 36 hours on passing out to sea. During last winter no ice jams occurred inside of a line drawn from Beacon point to Sam's creek and a careful scrutiny of the shore line after the snow and ice had disappeared failed to find any trace of its ever doing so. The photos accompanying this report give a fair representation of the usual ice conditions at Nelson. Last winter was a shade colder than average.

The winter of 1878, an exceptionally mild winter, the channel remained open for 40 miles above Flamboro Head.

During the freeze up in the fall, a considerable quantity of slush ice comes down from the upper Nelson.

Last winter at Seal island and along the shore the ice attained a thickness of between $4\frac{1}{2}$ and 5 feet. The average thickness at York Factory, where a record has been kept up for many years, seems to be about 4 feet 8 inches.

During the winter more or less ice floats up and down the open channel with the tides, but being very scattered no jams ever occur.

ANCHORAGE.

The anchorage being some nine or ten miles in from the mouth of the channel no serious sea is ever experienced which may cause trouble to anything larger than

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canoes or row boats. The condition of the seas at Port Nelson will probably be found to resemble those experienced at Quebec on the St. Lawrence. The bottom is of sufficient stiffness to furnish a secure holding ground for anchors.

MATERIAL.

The material in the flats consists of blue clay with an occasional pocket of coarse sand and gravel with boulders scattered thinly around. In the channel the material is a very stiff blue clay, affording excellent holding ground for anchors. Probably all of the material can be handled by dredges at a very low cost and may be used for reclamation works around the docks. The bottom of the channel is swept clean and bare by the current of the Nelson, and is of so stiff a nature that the small anchor used by the Survey, probably weighing about 200 lbs. would frequently drag for some distance before taking hold. The material on the flats is not so hard on top, but becomes harder as depth is obtained.

MATERIAL FOR CONSTRUCTION.

Stone for the construction of breakwaters and other works may be cheaply obtained. About 75,000 or 100,00 cubic yards may be picked up along the tidal flats in the shape of scattered boulders. Up the Nelson river, about 40 miles above Flam-oro Head is a splendid quarry where any required quantity can be had, and landed cheaply at the works by means of the Nelson river.

Piles in large quantities will be obtainable from various streams entering Nelson river and Hudson bay.

Cement and other material, being brought in by water, should be comparatively cheap.

DEFENCE.

The defence of Nelson from hostile fleets will be comparatively easy, the long comparatively narrow channel approach being easily rendered impregnable by means of sea mines, and rendered otherwise dangerous by the removal or changing of buoys and other channel marks. Battleships which carry the extreme long range guns are of such a draft as to render it somewhat dangerous to manoeuvre in less than 45 feet of water thus preventing their closer approach than 15 or 18 miles, a distance considerably greater than the effective range of even the heaviest guns. The lighter ships which might approach closer carry correspondingly lighter guns. The establishment of strong batteries and forts at Sam's creek would seem to be all that is necessary to render Port Nelson absolutely unassailable.

It might be mentioned here in passing the greatly increased difficulty a hostile fleet would have on blockading the Atlantic coast of Canada were the Hudson bay route opened. The fact that ships may enter and leave Port Nelson all the year round is a fact worth remembering when the possibilities of war are considered.

WINNIPEG, September 8, 1909.

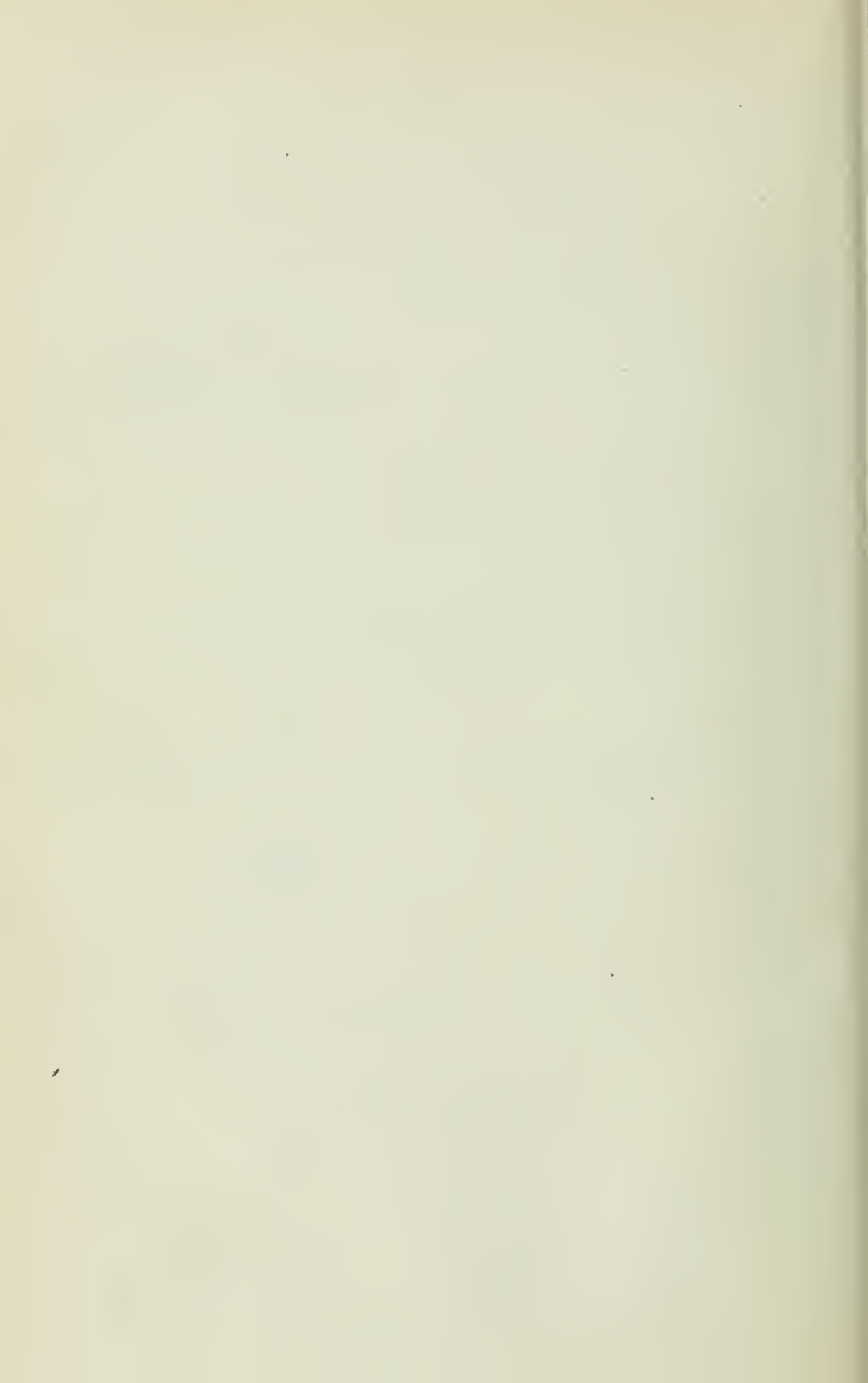
(Sgd.) JOHN ARMSTRONG,

Chief Engineer Hudson Bay Railway Surveys.

PART VI

QUEBEC BRIDGE RECONSTRUCTION

REPORT OF CHAIRMAN OF BOARD OF ENGINEERS



DEPARTMENT OF RAILWAYS AND CANALS,

BOARD OF ENGINEERS, QUEBEC BRIDGE,

MONTREAL, Saturday, June 11, 1910.

SIR,—I beg to report progress of work on the reconstruction of the Quebec bridge for the year ending March 31, 1910, as follows:—

Borings.—An extensive series of borings was made during the summer of 1909 to determine the material in the vicinity of the north and south main piers, and the location of the bed rock. Some nineteen borings were made in all. The result of these borings established the fact that on the north side a new pier could be sunk outside of the present main pier and down to bed rock. On the south side the borings indicated that the foundations upon which the present south pier rested was sufficient to support the enlarged south pier and the loads to be superimposed thereon.

Tests.—It was arranged with Professor A. N. Talbot of the University of Illinois, to make a series of tests of nickel steel riveted joints. These tests were carried out with great accuracy, but the result did not show that there was any material advantage in using nickel steel rivets in preference to carbon steel rivets.

Masonry.—The contract for the construction of the piers and abutments of the new Quebec bridge was awarded in December, 1909, to the firm of M. P. & J. T. Davis, of Quebec. Work on this contract has proceeded steadily. Preparatory work of considerable magnitude has been performed at the site of the bridge on the north side of the river, such as building trestles, railway tracks, freight elevator, &c., which will be used for the handling of material and supplies. No work has yet been started on the south side. At Pointe a Pizeau the contractor is constructing the caisson for the new north main pier. This work is proceeding rapidly and the caisson will probably be ready for floating in place about July 1, 1910.

Removal of Debris.—The contract for the removal of the debris was awarded in December, 1909, to the firm of Charles Koenig & Company, of Quebec. The contractor is making fair progress in the removal of this wreckage and up to the end of March had removed some 1,890 tons, or 21 per cent of the entire work. It is expected to have the wreckage in the vicinity of the main pier removed by August 1, 1910, in order to allow the contractor for masonry to start work at this point.

Compression Tests.—A contract has been awarded to the Phœnix Bridge Company of Phœnixville, Pa., for the manufacture and testing of a series of model chords and posts such as will be used in the design of the board now being prepared. Models of eight separate members will be made in duplicate, making sixteen tests in all. The first of these model chords will be ready for testing about May 1, 1910.

Tension Tests.—A contract has been awarded to the Phœnix Bridge Company, of Phœnixville, Pa., for the manufacture and testing of fifty nickel steel full size eye-bars, similar to those used in the design of the Quebec bridge now being prepared by the board. The Phœnix Bridge Company will be ready to start the testing of these members about June 1, 1910.

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Plans.—The plans of the cantilever design being prepared by the board are progressing rapidly and will be entirely completed and ready for calling for tenders by June 1, 1910. The specifications are also under way and will be ready at that date.

Alternative Plans.—Advertisements were inserted in the newspapers in November, 1909, advising contractors that they would be permitted to submit plans of their own in addition to tendering on the plans prepared by the board. I believe it is the intention of several of the bridge companies to take advantage of the privilege granted by the department.

All of which is respectfully submitted.

(Sgd.)

H. E. VAUTELET,

Chairman and Chief Engineer.

PART VII

REPORTS OF CANAL SUPERINTENDING ENGINEERS AND
OTHERS FOR THE YEAR 1909-10

1. L. S. Pariseau, Acting Superintending Engineer, Quebec Canals.
2. W. A. Stewart, Superintendent, Ontario-St. Lawrence Canals.
3. C. D. Sargent, Resident Engineer, Ontario-St. Lawrence Canals.
4. L. N. Rheaume, Engineer-in-charge, Ontario-St. Lawrence Canals.
5. J. L. Weller, Superintending Engineer, Welland Canal.
6. J. W. LeB. Ross, Superintending Engineer, Sault Ste. Marie Canal.
7. F. B. Fripp, Engineer-in-charge, Sault Ste. Marie Canal.
8. A. T. Phillips, Superintending Engineer, Rideau Canal.
9. J. H. McClellan, Superintendent, Trent Canal.
10. A. J. Grant, Superintending Engineer, Trent Canal.
11. J. H. Devereaux, Lock Master, St. Peter's Canal.

DEPARTMENT OF RAILWAYS AND CANALS,
OFFICE OF THE CHIEF ENGINEER,
OTTAWA, July 1, 1910.

A. W. CAMPBELL, Esq.,
Deputy Minister, Ottawa.

SIR,—I have the honour to transmit herewith the annual reports of the Superintending engineers and superintendents of the several canal works of the Dominion for the fiscal year ending March 31, 1910.

In view of the fact that my appointment as chief engineer of the department was made subsequently to that date, I have considered it best to dispense with commenting in the matter, leaving these reports to speak for themselves.

I have the honour to be, sir,

Your obedient servant,

W. A. BOWDEN,
Chief Engineer.

QUEBEC CANALS.

SUPERINTENDING ENGINEER'S OFFICE,

MONTREAL, June 21, 1910.

W. A. BOWDEN, Esq.,
Chief Engineer, Railways and Canals.
Ottawa.

SIR.—I have the honour to submit herewith the annual report on the works under the charge of the superintending engineer of the Quebec canals, for the fiscal year ended March 31, 1910.

This division comprises the Lachine, the Soulanges and the Beauharnois canals on the St. Lawrence route; the Ste. Anne, the Carillon and Grenville canals on the Ottawa river, and the St. Ours and the Chambly canals on the Richelieu river.

Of these, the Lachine canal is by far the most important on account of its immediate connection with the harbour of Montreal.

I have much pleasure in stating that there was no interruption to navigation on the canals of this division and that the different staffs have performed their respective duties in a very satisfactory manner.

The repairs and renewals on these canals have been done, under the direction of the overseers and superintendents, whereas the works chargeable to capital and income, on the Lachine canal, have been executed under the immediate supervision of Mr. H. R. Lordly, C.E. Works of this kind on the Soulanges, Beauharnois, Ste. Anne, Carillon, Grenville, St. Ours and Chambly canals, have been supervised by the undersigned.

CANAL STORES.

These stores have been well kept and the book-keeping inaugurated by Mr. P. B. Benoit, a few years ago, for keeping track of the materials and tools purchased for the use of the canals, is now better understood by the officials having charge of these stores.

The comptroller's report is to the effect that only a few errors have been made this year and that all materials and tools have been fairly well accounted for.

SURVEYS.

The survey of the Soulanges canal has been continued from St. Dominique to St. Antoine bridge, a distance of six miles. This survey is made in order to get an accurate plan showing all the properties, ditches, roads, culverts, highways and farm bridges, &c., situated on each side of the canal and comprised in the strip of land between the Grand Trunk Railway track and the River St. Lawrence. Levels have also been taken for the purpose of getting the necessary data to deal with complaints of flooding said to have been caused by the construction of the canal.

Soundings have been taken in the Pointe des Cascades bay to find a better channel leading to the protection dock in which are kept the spare lock gates of the Soulanges canal.

DREDGING.

The dredging fleet of the Quebec canals came out of the dry dock, on May 4, 1909, and after one month's work cleaning the bottom of the Lachine canal at Cote St. Paul, Rockfield and at Black Bridge, it was taken to the Soulanges canal, to deepen and straighten the channel between the lower entrance of the canal and the gate protection dock.

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About 8,000 yards of material were taken out of the channel and deposited on the shores of the Cascades bay, in order to protect them against the erosive action of the waves.

From Soulanges, the fleet went to Grenville and worked at cleaning around the locks during the whole month of July.

In August and September the dredge was kept busy at deepening and widening the lower and upper entrances of the St. Ours lock. It then came back to Montreal and continued cleaning the canal prism above lock No. 2 and the side basins off the north side of basin No. 2, until the end of the season.

REPAIRS TO DREDGING FLEET.

Two of the vessels have met with serious mishaps during the year. Tug *Frank Perew* broke her propeller wheel while working at Grenville, and the steam derrick broke her boom and her A frame in an attempt to raise an old sunken barge out of the Lachine canal upper entrance. Nearly three thousand (\$3,000) dollars were expended in repairing the damages caused by these accidents.

During the winter the machinery of the steam derrick has been considerably improved and is now fitted to work a clam shell. The old wooden frame on which the machinery rested was replaced by a solid cast iron one and new friction clutches were installed at the place of the positive 'embrayages.'

In addition to the above, the other vessels of the dredging fleet were overhauled and put in a fairly good condition to resume work during the present season.

LACHINE CANAL.

Length, $8\frac{1}{2}$ miles; total rise, 45 feet; 5 locks, 270 feet x 45 feet with 14 feet on sills; 5 old locks 200 feet x 45 feet with 9 feet of water on sills, still available to navigation.

The water was drawn off the canal for general repairs and improvements on April 1 and re-admitted on May 2, a day later than usual.

During this month, the bottom of the locks, weirs and reaches, was cleared of all refuses, stones dropped from scows, water soaked logs, &c., all sluices, gates, valves, protection racks, &c., were overhauled and made right for the navigable season and all stone masonry, as far as was possible, was pointed with cement.

Throughout the whole year the canal grounds, buildings and other structures, roads, sidewalks, fences, culverts, wharfs, booms, ditches and the little River St. Pierre, were kept in a fairly good state of cleanliness and repair, and the telephone and lighting systems were maintained in efficient working order.

The new electric system for operating the lock gates was completed on every lock, old and new, early in the season and has given full satisfaction.

A considerable amount of repair work was done all along the canal, and amongst the chief items are the following:—

REPAIRS AND RENEWALS.

Locks.—Many broken and missing coping stones were replaced by concrete moulded in place and, in some cases, faced with heavy steel plates.

The portions of the side walls situated above the upper gate recesses at locks Nos. 3, 4 and 5 were raised about three feet with concrete faced with steel plates for additional safety of the large steel freighters entering these locks on their downward trips.

The old wooden anchor blocks for suspending the gates on old locks Nos. 3, 4 and 5, were replaced by heavy cast iron ones set in concrete and permanently secured to the lock masonry by means of large anchor bolts.

In order to provide a suitable foundation for the machinery to operate the lock gate, concrete blocks were built behind the lock walls and opposite the four gate

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recesses of each of the ten locks. These blocks were made sufficiently large to resist the pulling strain exercised by the machinery and were set below the frost line.

Lock gates.—The platforms and mullions of the gates for the old and new locks, as far as possible, were renewed and the gates themselves scraped and repainted.

Spare gates.—Two pairs of lock gates were built during the year for old locks Nos. 3 and 5 and one pair for new lock No. 3. These were made so as to meet the requirements of the new electric machinery and those already on hand were altered to the same purpose.

Bridges.—The eight swing bridges over the canal were kept in good order, some of them replanked with 2-inch oak and partly painted over. The top floors of the nine stationary bridges were renewed and the bridges painted over.

The bridge constructed last year with scrap channels and beams proceeding from the demolition of the old Wellington street bridge, was put in place over the old supply weir at Lachine, by the canal repair men. This work necessitated the levelling of the piers of the old bridge, also the construction of concrete sidewalks on both sides and at each end of the bridge.

Wharfs.—The wharf opposite the Canada Sugar Refinery, on the south side of the canal, was substantially repaired and extended up stream 75 feet.

Mooring posts.—50 cast iron mooring posts and 100 nigger heads were permanently set in concrete at different points along the canal.

Slope walls.—The work of facing with concrete the slope walls of the canal, in the long reach, above Cote St. Paul locks, was finished during the year and there remains only the revetment wall on the south side and some repairs to the vertical walls to complete the work in said reach.

The season's operations have stopped a serious leak through the canal bank at Cote St. Paul.

These works are being done under contract by Messrs. Haney, Quinlan & Robertson.

Widening and wharf accommodation at St. Henri and Cote St. Paul.—This work consisting of widening the canal below lock 4 for a distance of 3,300 feet on the north side, and 1,800 feet on the south side, was started by the contractors, the Canadian General Development Company, Limited, at the beginning of the year and pushed very vigorously. All the north wall is finished and only a small portion of the south wall remains to be done. However, it will take all of the coming season to finish the dredging and make the total area of the basin available for navigation.

INCOME.

Rebuilding wall north side Basin No. 2.—This work, which also includes the re-flooring with concrete and scoria blocks of the sheds on Colborne street, was satisfactorily completed by the contractors, Messrs. Quinlan & Robertson.

The wharfs in the immediate vicinity of these sheds were also permanently paved, the walls all rebuilt in concrete and the entire basin is now in first-class condition.

SOULANGES CANAL.

Length, 14 miles; 5 locks, 270 x 45 feet, with 15 feet of water on sills, total rise 84 feet.

REPAIRS AND RENEWALS.

Shops.—The carpenters' shop was provided with a piercing and mortising machine and the blacksmiths' shop with a large size champion forge, mechanical blower, electric motors, &c. The provision of tools for the machine shops was much added to.

Locks.—In order to prevent, as far as possible, the coping stones of the locks and wing walls from being chipped or broken by the heavy steel freighters coming into contact with them, the face of these stones was bevelled six inches and their top arris rounded to a three-inch radius. This work has proven very effective and since its completion, not a stone has been damaged, although collisions of freighters with lock walls have been as numerous as before.

Lock Gates.—The platforms of the lock gates have been renewed and the gates themselves scraped and repainted.

Bridges.—New floorings of tamarack planks, three inches in thickness were laid on the St. Dominique and Coteau Landing highway bridges and twelve of the farm bridges were recovered with pine planks.

Buildings.—The storing sheds, the clerk's lodging and the shops have been provided with spouts and gutters, in order to prevent their foundations from being deteriorated by rain water. The overseer's lodging and outbuildings have been roofed with galvanized iron and repainted. The collector's house at Coteau Landing was considerably repaired.

Fences and Sidewalks.—Besides keeping these structures in good repair a new fence was erected to divide off the grounds around the overseer's lodging from a public passage between the highway road and the foot bridge across the tail race of weir No. 3 and a concrete sidewalk, about two hundred feet in length, has been laid from the overseer's house to the above-mentioned foot bridge.

Ditches and roads.—The most important ditches were thoroughly cleaned and the road along the canal kept in a fairly good order.

Slopes.—The slopes of the canal which had been deteriorated by the wash of passing vessels, have been reformed and faced with flat quarry stones, the quantity of stones used for this purpose amounting to several hundred cubic yards. The top portion of the inner slope of the south bank, on at least 1,400 feet on each side of the electric power house, was reformed and sodded over.

Canal lands.—The canal banks were cleaned out of bad weeds twice during the summer and the lock grounds were kept clean throughout the season.

Electric transmission line.—The No. 4 wires have been replaced by larger ones, viz.:—No. 0.0 from the power station to about one mile further up the canal, with a view of getting better results in lighting the far end of the canal, and the change has proved very satisfactory.

The old three-wire cables laid across the canal at locks Nos. 1, 2 and 3 were taken up and replaced by single wire cables laid in galvanized iron pipes crossing at the foot of lock No. 2. These cables are now carrying the electric current across the canal at its original tension of 2,200 volts. The transformers on the south side of the canal have been placed in concrete boxes sunk into the ground near the gate and sluice motors.

Water supply.—A four-inch cast iron pipe was laid from the canal to the three electricians' lodgings, and the same size pipe laid during the previous year was extended across the canal at the head of lock No. 2 and to the overseer's house.

CAPITAL.

Buildings.—A small fireproof building (brick and concrete) was erected in the shop yard to house the electric transformers which had been formerly imprudently placed in the garret of the shop building.

Concrete lining of slopes.—The inner slope of the south embankment of the canal, for a total distance of 4,215 feet, was faced with a coat of concrete generally 18 inches in thickness. This work was performed under contract by Messrs. Haney, Miller, Quinlan and Robertson, by means of a plan specially designed for the purpose and

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approved by the department. Though the portions of the bank where leakage was most considerable have been protected during the year by this concrete lining, the works will be continued this year until every leak from the canal has been stopped.

Side walls.—Towards the end of last summer, a leak through the north bank of the canal through locks Nos. 1 and 2, which had given considerable trouble for some years, became so very threatening that it was found expedient to build a strong concrete wall in front of this bank before navigation would open again. This work was entrusted to Messrs. Haney, Miller, Quinlan and Robertson, who had on the spot a large plant to do the work with. At the end of the fiscal year, the contractors had the excavation done, and nearly all the foundation in place and were in a fair way to complete the wall for the opening of navigation.

INCOME.

Mooring posts.—Ten new cast iron mooring posts inserted in a large mass of concrete were set up on the north side of the canal, where most needed, viz.: opposite the Montreal, Light, Heat and Power Company's intake channel and immediately above St. Dominique bridge. Many of the old posts have been taken up and reset in concrete blocks of much larger dimensions than were those originally used.

Gate lifting scow.—A steel scow with two large derricks on its deck, operated by worm gear winches and capable of lifting thirty tons each, has been received at the beginning of the season for the purpose of hanging the canal lock gates. The hull of this scow was built by Messrs. Beauchemin & Co., the derricks by the Phoenix Bridge and Iron Works, Ltd., and the winches by the Hall Engineering Co., and the fitting up was completed by the canal men.

BEAUHARNOIS CANAL.

The company having this canal under rental have kept it closed to navigation during most of the last season for the purpose of taking borings from the head of the canal to where their power house is to be constructed. The canal was kept practically in the same state as it was during the previous year.

INCOME.

Ste. Barbe and Hungry Bay Dykes.—The work of protecting these clay dykes against the invading waters of Lake St. Francis by building a chain of boulders some distance into the lake was continued during the winter. The protection of the Hungry bay dyke is now completed and will only have to be maintained in future, but the work of Ste. Barbe will have to be carried on a few years longer.

Macadam.—The macadamizing of the public road on top of Hungry bay dyke was commenced during the year and about 3,500 lineal feet of road were completed. The crushed stone for this work is purchased under contract from Mr. Alfred Cossette, but the trimming of the road, the placing of the crushed stone and the rolling of it was done by day labour under the supervision of an official of the department.

STE. ANNE LOCK.

Length $\frac{1}{2}$ mile, one lock 200 x 45 feet, 9 feet of water on sills, total rise 3 feet. Old lock still available to navigation 200 x 45 with 6 feet of water on sills.

REPAIRS AND RENEWALS.

Besides the usual repairs to locks, buildings, fences, &c., the following were performed.

20—16 $\frac{1}{2}$

1 GEORGE V., A. 1911

Guide Piers.—The top of the two cribwork piers on each side of Baker's channel and of the division pier above the locks were repaired and the mooring posts on the first named pier were renewed.

Lock Grounds.—Gravel was deposited in all the alleys and on the ground surrounding the locks and the grass was kept short and in nice clean condition throughout the season.

Slide.—A permanent slide for hauling lock gates was constructed and a pair of spare gates were hauled up.

INCOME.

Bridges.—The old wooden bridges over the slips in the wharf below the locks were replaced by others consisting of steel I beams covered with four-inch plank and resting on concrete abutments. A pipe railing was placed on the inner side of each bridge.

Mooring posts.—The wooden posts on each side of the new lock were replaced with large cast iron posts with moulded head inserted in heavy concrete mass sunk in the ground below the frost line. There were eight of these posts put in position.

CARILLON AND GRENVILLE CANALS.

CARILLON CANAL.—Length $\frac{3}{4}$ mile, 2 locks 200 x 45 feet, 9 feet of water on sills, total rise 16 feet.

GRENVILLE CANAL.—Length $5\frac{3}{4}$ miles, 5 locks 200 x 45 feet, 9 feet of water on sills, total rise $43\frac{3}{4}$ feet.

REPAIRS AND RENEWALS.

Among the works performed under this heading may be mentioned the following as the most important:—

Maintenance of the canal banks, towpaths and roads, fences, telephone line, &c.

Cleaning ditches, by-washes, culverts, lock grounds, &c.

Painting lock and weir masonry with cement mortar.

Repairing lock gates, bridges, guide and boom piers, scows, &c.

Building new gates for locks Nos. 5 and 7, a wood shed and an ice-house for the use of the canal office.

Cutting new drain between locks Nos. 4 and 5.

INCOME.

Public road.—The macadamizing of the two miles of road along the old abandoned canal at Carillon, part of which had been done during the previous year, was completed.

The stone crusher and the steam roller used on the above work were shipped respectively to the Soulanges canal and to Valleyfield.

Carillon dam.—An appropriation of \$15,000 had been voted for this year to complete the repairs to the gap in the Carillon dam, but this work could not be done on account of the water in the Ottawa river remaining much higher than usual. However, all the necessary timber for these repairs has been purchased and delivered on the spot. It is contemplated to resume work as soon as possible during the present fiscal year.

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ST. OURS LOCK.

Length of canal, $\frac{1}{2}$ mile; one lock, 200 x 45 feet, 7 feet of water on sills; total rise, 5 feet.

REPAIRS AND RENEWALS.

All the various structures on the canal have been kept in very good repair during this year except the boom piers below the lock.

These piers have been only superficially repaired, it being understood that they will be replaced by permanent concrete structures within a year or two.

The chief items of work performed here are the following:—

Guiding Booms.—All the booms that are stretched along the boom piers in both the upper and lower entrances of the lock, have been taken out of the water and thoroughly repaired.

Scows.—The large derrick scow was recaulked and painted and so were the smaller vessels.

Island.—The island was kept clean and it was further protected against scouring by placing on its shores about 240 cubic yards of field stones.

Painting.—All the buildings and fences were whitewashed. The grounds around the lock and buildings have been kept in perfect order during the whole year.

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 telephone and light services on the canal have been very satisfactory everywhere except in the harbour of St. Johns, where the lighting was supplied under contract by the St. Johns Electric Light Co. This company, however, has improved its power plant and better service is expected for the coming year.

The water at St. Johns was extremely low during the greatest part of the summer and on one day, was only 5 feet 11 inches higher than the sills of the guard lock. This unusually low water was attributed to the blasting of a large number of boulders on the crest of the natural dam immediately above the St. Johns rapids. The level of the water in the river above the canal will be watched closely this year, and should it shows signs to become as low as last year, a temporary clay and boulder dam will be built at some suitable point by the Public Works, pending the construction of the permanent dam at Vikerman's Point, below Ste. Therese island.

The canal was kept clean and in good state of repair.

The chief items of work performed under this heading during the year 1909-10, were the following:—

Banks and Grounds.—The canal banks and the grounds around the locks and buildings were kept clean of bad weeds and refuse of all kinds, and wherever the slope walls had tumbled down, they were rebuilt. All the farm roads off the tow-path were put in good order and some levelling was done with material taken from the canal bottom near the Canadian Pacific Railway swing bridge, at St. Johns, P.Q.

Mooring Posts.—About thirty mooring posts have been renewed at different points along the canal.

Locks.—Besides the usual pointing with cement, the gates were scraped and painted. A new pair of gates were put in place at lock No. 9. Two new guiding cribworks were built at the head of lock No. 2.

1 GEORGE V., A. 1911

Drains and Weirs.—Some of the drains were deepened and all the others were cleaned. The weirs have been kept in good working order.

Bridges.—A number of bridges had their floorings renewed and nearly every one was given a coat of paint. The approaches to bridges No. 3 and 8, were macadamized and a concrete sidewalk crossing the tow-path was built at bridge No. 8. The end walls of the pipe culverts under the public road to St. Johns, were rebuilt.

Ditches.—Several new ditches were cut along and on the canal property, the total length being about three miles.

Buildings.—The oldest structures have been pulled down and replaced. All the others have been thoroughly repaired, cleaned, whitewashed or painted.

Fences.—About 1,700 lineal feet of new fence were erected along the Deneault drain and about $3\frac{1}{2}$ miles of the existing fences reset and repaired.

Scows.—The dredge and scows belonging to the canal were repaired and given one coat of paint. The machinery of the dredge and derricks was overhauled and somewhat altered with the view of getting better results, and a new bucket was purchased for the dredge.

CAPITAL.

St. Johns Harbour.—The proposed improvements in the harbour of St. Johns consist in the removal of the Donaghy wharf, the extension of the present canal wharf up to the Central Vermont Railway bridge, the building of a new wharf parallel to the said bridge, on the up stream side, the erection of a breakwater and the laying of an inlet pipe line for the St. Johns aqueduct.

That portion of the improvements located above the bridge was completed during the fiscal year 1909-10 by Messrs. John G. Poupore & Co., to whom the contract for this work had been awarded on December 15, 1908.

All the works covered by this contract would likely have been completed by this time, had not the Grand Trunk Railway Co. objected to the department taking possession of their water lot, within which the greatest part of the improvements are located.

Power house.—The electric power house at Chambly, the foundations of which were laid during the previous year, was completed, but nothing yet has been done towards installing the electric machinery, there being no appropriation for this kind of work.

INCOME.

Bridges.—The ramps to the Jones bridge across the canal and tow-path at St. Johns, were totally renewed, this work involving the driving of many piles. Ten wooden bridges across the public road from Chambly to St. Johns were replaced with culvert pipes of large diameter. The length of these culverts in all cases is equal to the full width of the road.

Tow-path.—The macadamizing of the tow-path along the canal, which had been going on for a number of years, was completed during the fiscal year just ended, and the tow-path from one end to the other is in perfect order.

Booms.—The guide booms on the east side of the upper entrance of the canal were totally renewed and covered with two-inch planks.

I have the honour to be, sir,

Your obedient servant,

L. S. PARISEAU,

Acting Superintending Engineer Quebec Canals.

SESSIONAL PAPER No. 20

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, 1910.

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.
1909.								
April.....	37	0	20	10	19	4	16	1
May.....	25	1	20	6	21	1	19	2
June.....	24	4	18	6	21	4	17	6
July.....	18	4	17	0	17	4	16	8
August.....	17	10	16	1	17	2	16	2
September.....	16	5	15	7	16	2	15	8
October.....	16	5	14	10	15	10	15	2
November.....	16	1	14	3	15	2	14	10
December.....	21	10	14	6	15	9	14	6
1910.								
January.....	29	10	22	4	16	2	14	6
February.....	25	5	21	9	15	9	13	6
March.....	34	0	22	5	17	0	14	4

SOULANGES CANAL.

STATEMENT showing the depth of the River Water on the Mitre Sills of Lock No. 1, at lower entrance, and Lock No. 5 at upper entrance, during the fiscal year ending March 31, 1910.

Months.	LOCK NO. 1, LOWER SILL.				LOCK NO. 5, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April.....	21	9	19	6	17	8	16	6
May.....	23	0	20	5	17	7	17	0
June.....	22	9	19	2	17	4	17	0
July.....	19	2	18	5	17	2	17	0
August.....	18	5	17	9	17	0	16	8
September.....	17	9	17	4	16	8	16	4
October.....	17	4	16	9	16	6	16	0
November.....	17	0	16	8	16	3	15	6
December.....	18	2	16	8	16	6	15	6
1910.								
January.....	18	8	17	8	16	8	15	3
February.....	18	9	18	0	16	5	15	4
March.....	19	3	18	4	17	2	15	6

1 GEORGE V., A. 1911

BEAUHARNOIS CANAL.

STATEMENT showing the depth of the River Water on the Mitre Sills of Lock No. 6, at lower entrance, and Lock No. 14 at upper entrance, during the fiscal year ending March 31, 1910.

Months.	LOCK NO. 6, LOWER SILL.				LOCK NO. 14, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April	13	2	11	5	12	7	11	3
May	15	8	13	4	12	6	11	10
June	15	0	11	9	12	1	11	10
July	11	10	11	0	11	11	11	7
August	12	0	11	0	11	9	11	4
September	10	10	10	0	11	7	11	0
October	10	2	9	9	11	3	10	8
November	9	8	9	4	11	0	10	4
December	10	2	9	5	11	9	10	5
1910.								
January	15	0	10	2	11	11	10	4
February	20	0	12	10	10	11	9	9
March	13	0	11	6	11	10	10	5

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, 1910.

Months.	LOCK NO. 9, LOWER SILL.				LOCK NO. 1, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April	20	10	17	1	13	0	10	0
May	19	1	16	7	12	9	11	9
June	16	5	12	2	11	10	9	5
July	12	2	9	10	9	7	8	4
August	9	10	8	7	8	6	7	6
September	9	4	7	10	8	0	6	9
October	8	4	7	6	7	9	6	8
November	9	1	7	5	7	6	6	3
December	8	3	7	7	7	5	6	10
1910.								
January	10	0	7	8	8	2	6	11
February	10	9	9	5	8	5	8	0
March	16	11	10	11	12	4	8	6

SESSIONAL PAPER No. 20

ST. OURS LOCK.

STATEMENT showing the depth of the River Water on the Mitre Sills of St. Ours Lock during the fiscal year ending March 31, 1910.

Months.	LOCK NO. 1, LOWER SILL.				LOCK NO. 1, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April	21	0	16	0	17	0	12	5
May.....	19	7	16	3	15	6	13	3
June.....	17	7	11	5	13	6	10	5
July.....	11	4	8	11	10	4	8	11
August.....	9	11	8	1	8	11	8	1
September.....	9	5	7	7	8	7	7	10
October.....	9	7	6	11	8	1	7	7
November.....	8	8	6	6	8	6	7	6
December.....	10	9	6	9	7	11	7	8
1910.								
January.....	11	0	8	7	8	10	7	6
February.....	10	3	8	3	8	9	8	3
March.....	17	1	9	8	13	4	9	0

STE. ANNE'S LOCK.

STATEMENT showing the depth of the River Water on the Mitre Sills of Ste. Anne's Lock at lower and upper entrances, during the fiscal year ending March 31, 1910.

March.	LOCK NO. 1, LOWER SILL.				LOCK NO. 1, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April	15	1	11	7	16	4	11	9
May.....	16	6	14	0	20	0	16	0
June.....	16	1	12	7	19	8	14	0
July.....	12	6	11	9	13	11	12	3
August.....	12	4	11	1	12	3	11	1
September.....	11	1	10	7	11	10	11	7
October.....	10	8	10	2	11	9	11	3
November.....	10	4	9	11	11	11	11	3
December.....	11	2	10	4	12	0	11	5
1910.								
January.....	11	7	10	2	11	5	11	0
February.....	10	9	9	7	11	2	10	7
March.....	12	5	9	6	13	4	10	6

1 GEORGE V., A. 1911

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, 1910.

Months.	LOCK NO. 1, LOWER SILL.				LOCK NO. 2, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April.....	18	5	12	11	18	6	12	4
May.....	22	9	17	8	22	8	17	0
June.....	22	6	15	7	22	4	15	7
July.....	15	5	13	6	15	5	13	6
August.....	15	3	12	11	15	3	12	7
September.....	13	3	12	10	12	10	12	4
October.....	13	1	12	4	12	9	12	0
November.....	12	11	12	3	12	8	12	0
December.....	13	4	12	7	13	10	12	5
1910.								
January.....	13	11	12	6	15	6	12	6
February.....	12	11	12	8	13	6	11	10
March.....	15	3	12	7	14	5	12	0

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, 1910.

Months.	LOCKS NO. 3, LOWER SILL.				LOCK NO. 7, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1909.								
April.....	22	7	15	4	19	3	12	0
May.....	28	6	22	2	24	11	18	9
June.....	27	11	19	3	23	10	16	6
July.....	19	1	16	4	16	8	13	8
August.....	18	7	15	4	16	0	12	6
September.....	15	6	15	2	12	10	12	4
October.....	15	5	14	8	12	9	12	0
November.....	15	6	14	7	12	10	12	0
December.....	16	4	14	11	12	10	12	4
1910.								
January.....	18	5	15	2	12	4	11	4
February.....	16	4	14	6	12	0	10	3
March.....	17	5	14	2	15	3	10	5

ST. LAWRENCE CANALS.

OFFICE OF THE SUPERINTENDENT.

CORNWALL, Ont., March 30, 1910.

SIR,—I beg to forward herewith the annual report on the maintenance and operation of the Ontario-St. Lawrence canals for the fiscal year ending March 31, 1910.

The district stretches from Cornwall, at the foot of the Long Sault rapids on the St. Lawrence river, to Presque Isle bay on Lake Ontario, and embraces the Cornwall canal, overcoming the Long Sault rapids; the Farran Point canal, overcoming the Farran Point rapids; the Rapide Plat canal, overcoming the Rapide Plat, and the Galop canal, overcoming the Galop rapids and the Murray canal joining the Bay of Quinté and Presqu'Isle bay. The united length of canal is 28 miles, overcoming a rise of 78 feet in the river.

THE CORNWALL CANAL

was opened for navigation May 3 and closed December 6, 1909, and was operated during the season without serious interruption or accident.

During the period the canal was unwatered in the spring, all repairs to structures below water were completed. In this time 50 feet of concrete wash wall was put in the south bank at each end of locks Nos. 19 and 20, at the lower ends of locks Nos. 18, 21, and Mille Roches bridge, and in both banks at the upper end of Cornwall bridge wing walls. The wash wall consists of a backing of small stone of about a foot in depth on the slope of the bank, faced with a foot thick of concrete and extending about a foot vertically below normal water level and about three feet above; two concrete culverts across the new bank on the north side between locks No. 18 and No. 19. All the weir valves at locks No. 18, No. 19 and No. 20 were taken out and repaired and refitted; all the fallen rip-rap was replaced.

The earth bank on the north side between locks No. 18 and No. 19 was built up to the grade, and will be completed during the next year with a concrete wash wall.

The rebuilding of the old timber entrance pier and wharf on the north side of the lower entrance to the canal, with a concrete superstructure, was completed, and came through the winter ice-shove in good condition.

All the spare gates for locks Nos. 15 and No. 17 were provided with a pin suspension gear instead of a screw; the valves all refitted and then the spare gates stepped, replacing the ones in use, which were similarly refitted and stored for spares. The same work was done on one pair for lock No. 19, making in all eight pairs of gates overhauled.

A new floor was laid over the weir bridges at locks Nos. 17 and No. 19.

Fender posts to keep side-wheel steamers off the lock copings were erected at locks Nos. 15, No. 17 and No. 18, and made ready for lock No. 19, to be erected during the coming year.

The Cornwall and Mille Roches bridges were painted.

A considerable quantity of stone was procured from neighbouring farmers during the early winter.

Two new fire-box side plates were put in the boiler of the *Alert*.

During the last months of the season extra men were temporarily employed on the operation of several of the locks. Their services did not prove of sufficient value to warrant their being employed permanently.

Thomas Carr, lockman at lock No. 17, was superannuated.

THE WILLIAMSBURG CANALS

were opened May 1 and closed December 8, 1909, and were operated during the season without serious interruption or accident.

The rip-rap was repaired at different points along the line as required. Two hundred (200) cords of field stone were placed as a toe along the outer bank below the lift lock, Galop canal.

The Iroquois and the Cardinal bridges were painted. This completed the painting of all the bridges in the district.

All the lock gates, watch houses, &c., were painted.

Owing to the rebuilding of the piers at the head of the Galop canal it was necessary to find other storage space for spare gates, and they were taken away and stored near the lock for which each pair was intended.

All the ditches were cleaned out.

Extensive repairs were made to the north lower entrance pier, Farran Point, and the lower entrance pier at Morrisburg was refloored.

Ten iron snubbing posts set in a block of concrete were placed along the approach walls at lock No. 23 and 35, iron snubbing posts were placed between locks No. 27 and No. 28.

The work on Bridge street, Cardinal, was completed; and it is now in condition to be turned over to the municipality.

The work of rebuilding the spare gates for lock No. 24 is well under way, and will be completed early next year.

A large stock of field stone was procured for further protection to the outer bank of the Galop canal.

It has become evident that a considerable amount of cleaning up of the bottom of the Rapide Plat is necessary. An appropriation will be asked for the coming year.

The question of operating and lighting the Williamsburg canals by electric power is being gone into, and it is hoped that a scheme will be ready for next year.

THE MURRAY CANAL

was opened for navigation on April 12, and closed December 7, 1909, and was operated throughout the season without interruption or accident.

All the bridges, houses, &c., were painted and maintained in good condition.

A new floor was put on the Smithfield bridge, and one new king post put in the Trenton road bridge.

The ditches were kept open and the banks came through the winter in excellent condition.

At the east end the banks were trimmed and re-levelled, and a stretch of 1,000 feet of rip-rap relaid.

The traffic on this canal has increased largely in late years, and further increase is promised. Many large freighters are using this route, but are forced to load light as the canal was built to give only 11-foot navigation. If this traffic is to continue, the question of widening and deepening the canal must be considered.

Appended are statements of water levels and fines and damages.

I am, sir,

Your obedient servant,

W. A. STEWART,

Superintendent.

A. W. CAMPBELL, Esq., C.E.,

Deputy Minister,

Department of Railways and Canals,

Ottawa, Ont.

SESSIONAL PAPER No. 20

STATEMENT of Fines and Damages, in connection with Ontario-St. Lawrence Canals, during Season of 1909.
CORNWALL CANAL.

Lock.	Date.	Name of Vessels.	Damage.	Fine.	Name of Owner.	Remarks.
			\$ cts.	\$ cts.		
15	May 4	'Mary Ellen'		5 00	Ed. Jesner	Paid.
18	June 25	'Wasaga'		20 00	Collingwood Shipping Co.	"
15	July 27	'Odland'	2 18	5 00	A. Fredrickson	"
20	" 31	'A. Runions'		5 00		"
19	Aug. 9	'G. Manson'		50 00	Inland Nav. Co.	"
21	" 10	'J. Dawson'		5 00		"
15	" 16	'F. Bourgon'		5 00		"
19	Sept. 16	'John Lambert'	30 00	50 00	G. L. & St. L. Trans. Co.	"
20	" 16	'Drooning Maud'	14 92	30 00	A. Fredrickson	"
19	" 17	'Meteor'	50 52	50 00	James Fendergast	"
20	" 22	'Glengarry'	13 78		H. W. Richardson	"
17	Oct. 11	'J. H. Plummer'		20 00	C. L. & O. Nav. Co.	"
20	" 16	'J. Creter'	100 00		G. L. & St. L. Trans. Co.	"
18	" 19	'Waccanaw'	5 96		J. L. Croswaite	"
21	Nov. 23	'Newona'	15 00	20 00	Redford Steamship Line	Not paid.

WILLIAMSBURG CANALS.

22	June 25	'Ben Harrison'	100 00		J. L. Croswaite	Paid.
24	Nov. 10	'Keywest'	25 00			"

MURRAY CANAL.

Ry. Bge.	Oct. 2	'L. S. Porter'	23 25		Hepburn Bros.	Not paid.
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Record of Highest and Lowest Levels of Water on the Ontario-St. Lawrence Canals for Year ending March 31, 1910.

Month.	CORNWALL CANAL.			FARRAN'S POINT CANAL.			RAPIDE PLAT CANAL.			GALOP CANAL.			LEFT 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.	High.	Low.	High.	Low.	High.	Low.				
1909.																				
April.....	17.3	15.9	17.9	15.5	18.7	17.3	19.5	18.0	18.7	17.0	18.0	16.2	21.0	19.5	16.8	15.5	17.6	16.1	14.3	12.3
May.....	16.9	16.2	16.9	15.7	18.9	17.8	19.9	18.9	18.2	18.2	18.5	16.8	22.2	20.7	17.5	16.5	19.0	17.4	14.9	13.8
June.....	16.5	16.1	17.2	16.5	19.2	18.5	20.2	19.4	18.6	18.7	17.9	22.2	21.3	17.8	16.9	18.7	17.9	14.8	14.1	13.4
July.....	16.4	16.1	17.0	16.4	18.9	18.6	19.8	19.4	19.0	18.5	18.6	17.8	22.1	21.3	17.7	17.0	18.7	18.0	14.9	14.1
August.....	16.3	15.9	16.6	16.3	18.7	18.0	19.6	18.9	18.6	18.0	18.0	17.3	21.5	20.7	17.0	16.5	18.1	17.4	14.4	13.6
September.....	16.0	15.4	16.5	15.7	18.4	17.3	19.3	18.2	18.5	17.2	17.8	16.6	21.3	19.7	16.9	15.8	18.0	16.6	13.10	13.2
October.....	15.7	15.0	16.0	15.4	17.8	16.7	18.6	17.5	17.7	16.6	17.7	16.0	20.3	19.0	16.5	15.4	17.4	15.8	13.3	12.7
November.....	15.3	14.7	15.8	14.5	17.7	16.2	18.4	16.8	17.5	15.7	17.4	15.3	20.6	18.2	16.4	14.4	17.3	14.5	12.9	12.0
December.....	16.5	14.6	16.0	14.5	18.3	16.3	19.0	16.8	18.0	15.6	18.5	14.9	21.5	17.9	16.2	14.8	17.0	15.0	12.8	11.9
1910.																				
January.....	27.0	16.5	15.8	14.5	17.8	16.0	18.4	16.7	16.9	14.4	15.8	13.6	19.0	16.2	15.4	14.4	15.9	13.2	12.7	12.0
February.....	25.3	21.7	15.0	13.8	16.6	15.3	17.1	15.6	16.3	14.1	15.5	13.7	18.5	16.0	15.1	13.8	15.3	13.1	12.6	12.1
March.....	23.0	15.5	16.0	14.0	18.0	16.0	18.5	16.4	17.5	15.3	16.8	14.5	20.2	17.2	16.3	14.4	17.2	14.3	13.3	12.6

SESSIONAL PAPER No. 20

RESIDENT ENGINEER'S OFFICE,

CORNWALL, April 1, 1910.

SIR,—I have the honour to submit my annual report on the works under my direction for the fiscal year ending March 31, 1910.

CORNWALL CANAL.

Improving Upper Entrance to Lock No. 17.—Plans and specifications have been prepared and tenders are now being invited for this work.

The work contemplated comprises the construction of a cribwork and concrete approach wall on the north side of the upper entrance to this lock, the widening by dredging of the bottom of canal in the vicinity and the construction of a small waste weir to supplement the present waste weir to the river at this point, the capacity of which is insufficient to control the water in this level when the mills at the foot of the canal are closed.

The work as designed will materially assist vessels of the larger class entering this lock, the approach to which at present is extremely difficult.

Repairing Washout in South Canal Bank above Lock No. 18.—A contract was entered into with Mr. Thomas A. Nicholson, of St. Catharines, for this work, which was commenced in August, 1908, and carried on without interruption during the remainder of the season.

The canal was unwatered on March 29, 1909, when work was resumed, and during the month of April the concrete wall previously constructed across the washout was extended eastward to connect with the masonry retaining wall at the head of Lock No. 18, the temporary timber dam which had been constructed in the canal around the washout was removed, and the whole bottom of canal in the neighbourhood of the washout cleaned out and made ready for navigation.

This work was diligently prosecuted day and night under the most unfavourable weather conditions and the canal was opened for navigation on May 3.

The work of filling behind concrete wall, trimming, sodding and protecting the river side of new canal bank across washout was immediately proceeded with and the whole of the works embraced in this contract were satisfactorily completed on October 9, 1909. The final estimate for this work has been paid.

A portion of the south canal bank immediately west of the washout showed signs of weakness, so it was deemed expedient to extend the concrete wall westward for a distance of 465 feet, and accordingly plans and specifications were prepared, and tenders invited for this work. The contract was awarded to Mr. Gordon R. Phillips, of Cornwall.

During the winter months the contractor placed some materials on the ground, erected his plant and made all possible preparations for starting the work as soon as the canal was unwatered. The water was drawn off the canal on March 30, and on the following day the contractor commenced operations. This work will be pushed forward as rapidly as possible during the month of April to insure against any delay to the opening of navigation on May 1.

The work of trimming the high north slope above lock No. 21, under contract with Messrs. J. J. & V. S. Fallon, of Cornwall, and which was commenced during the season of 1908, was finally completed in a satisfactory manner on November 17, 1909.

The final estimate for this work has been paid.

WILLIAMSBURG CANALS.

A contract was entered into on August 6, 1909, with Messrs. McCoy & Wilford, Ltd., for the removal of the tops of the old wooden piers and bridges across the head and tail race to the weir at lock No. 27, which were badly decayed, and the rebuilding of same in concrete and steel.

The work was commenced and carried on without interruption till the close of the season.

This work will be resumed this month, and I expect will be completed this season.

MURRAY CANAL.

Several complaints have been received during the past two seasons from the owners of vessels navigating this canal regarding the present depth of water available for navigation. I had some soundings taken near the eastern entrance to the canal, which show that the full depth as originally constructed does not at present exist at certain points.

This canal as originally constructed provided for a depth of only 11 feet at low water stage in Lake Ontario.

Owing to the very large increase in traffic through this canal in the last two years and the large class of boats now navigating it, it will be necessary, I think, in the near future to have this canal placed on the same basis as the rest of the canals on the system and provide for 14-foot navigation at low water, and I purpose asking for a small appropriation to enable me to have surveys and estimates of cost made next season with this end in view.

I have the honour to be, sir,

Your obedient servant,

C. D. SARGENT,

Resident Engineer.

W. A. BOWDEN, Esq., C.E.,

Chief Engineer, Dept. of Railways and Canals,
Ottawa, Ont.

GALOP CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

OTTAWA, April 7, 1910.

SIR,—I have the honour to submit my annual report upon works of construction and survey in connection with the enlargement of the Ontario-St. Lawrence canals for the fiscal year ending March 31, 1910.

GALOP CANAL.

UPPER ENTRANCE.

This contract was awarded to Messrs. Murray & Cleveland in November, 1888, and was entirely completed on October 23, 1907.

The final estimate was completed and sent to the department on July 31, 1909. A number of claims have already been submitted to the department and have not as yet been adjusted or disposed of.

SESSIONAL PAPER No. 20

REMOVAL OF SHOALS IN RIVER, WEST OF UPPER ENTRANCE OF GALOP CANAL.

This contract was awarded to Mr. M. A. Cleveland on July 25, 1907, and was entirely completed on September 15, 1909, thereby affording an interrupted channel of seventeen feet deep of navigable water between the upper entrance of the Galop canal and the lower entrance of the North channel. The final estimate for this work was completed and sent to the department on January 3 last.

NORTH CHANNEL AND 'GUT DAM.'

The contract for these works was awarded to Mr. M. A. Cleveland, and commenced on May 14, 1897, and completed on October 1, 1908.

A final estimate of the work was prepared in the Cornwall district office, completed and sent to the department on November 6, 1908.

A number of claims arising out of some material changes made in the original contract for this work still remain to be presented to the department for adjustment.

GALOP RAPID IMPROVEMENT.

This work under contract with the Gilbert Bros. Engineering Company, Limited, since September 25, 1897, was stopped in September, 1906, the government having decided that no more money would be granted for the work.

Detail plans, cross-sections, diagrams and calculations for the final estimate of this work were completed in December, 1909. A number of disputed claims still remain to be adjusted before the Exchequer Court. In connection with these claims, detail cross-sections and calculations of quantities have also been prepared in the Cornwall office with a view of affording all necessary information bearing upon the claims.

All works in connection with the enlargement of canals in this district and final estimates having been completed, this office was closed on March 31 last.

IMPROVEMENT OF RIVER STRETCHES BETWEEN CANALS.

I beg leave to draw your attention to the fact that, before the entire completion of this part of the canal system, it was contemplated to afford a more direct navigable route by straightening the river channel stretches between canals. In my report for year ending June 30, 1904, I suggested several improvements in this direction.

The chief engineer reported as follows, viz.: 'As the hydrographic survey service has been transferred from this department to the Marine and Fisheries Department this work, it appears to me, will devolve upon them.'

Since then I must say that the traffic upon the upper St. Lawrence river has increased materially and is assuming greater proportions every year.

A great number of large iron vessels were placed on this route. The many inconveniences and delays encountered in having to cross the river from one side to the other in order to follow the marked channel, have become a source of great drawback to navigation.

It is not a hidden fact that owing to these inconveniences many large crafts have been withdrawn from this route.

Besides, the entrances to several of the canals require to be materially improved.

With a view of overcoming these difficulties I will mention some of the improvements of immediate importance and their requirements. I beg to refer you to the following, viz.:—

1. The eddy at the entrance of the Farran's Point canal lock No. 22 is subject to frequent difficulties to large vessels, and has already proved disastrous to some. The cause of the eddy is due to the fact that on the north side of Croils island, which

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belongs to the United States, there are two rocky points projecting into the river against which the current dashes, and the result is that at the foot of the canal water whirls around into the bay immediately below the lock.

The United States not being directly interested in improving the river channel at this point, the only alternative being left to overcome the effects of this eddy would be to cut off a part of Baker's Point immediately below the above mentioned bay, and dredge out a straighter course from the entrance of the lock east, thereby affording a free and uninterrupted flow of the river on the north side of the river.

2. Further up the river is Weaver's Point, situated about two miles west of the village of Aultsville, and which is an objectionable feature to the channel. East and west of it, there is deep water.

To straighten the channel this point could be materially reduced.

3. A mile further up is Prunner's shoal which would require to be dredged out and possibly a small portion of Cook's Point immediately below, in order to form a better alignment.

4. About two miles below Morrisburg, 'Jackass shoal,' which lies in the middle of the river, requires to be removed. This shoal is triangular shape, and although carefully marked, long tows of barges have been known to break up during heavy storms and foggy weather, some of the barges becoming total wrecks.

5. The next objectionable feature that presents itself is at the lower entrance of the Rapide Plat canal, at Morrisburg. The channel at this point could be materially improved by cutting down Rose's Point situated a mile below Morrisburg.

6. At Pine Tree Point, opposite which is the narrowest part of the St. Lawrence, about two miles east of the village of Iroquois.

For some distance below this point the vessels follow the American or south side of the river and have to cross over, opposite Iroquois, in order to get into the entrance to lock No. 25.

Complaints have frequently been made by vesselmen on account of having to follow such a long wandering course instead of a more direct one.

To overcome this, a cut through Pine Tree Point would require to be made, and from thence a continuous series of small shoals would have to be dredged out in order to reach the lock in a more direct course.

7. The last and probably the most objectionable features of the river channel, is at a place about two miles west of Iroquois, where the river takes a sharp turn south of Toussant's Island.

During the navigation season, it has happened frequently that boats get into trouble in making this sharp turn, coming down stream, by running aground on the shoals of Toussant's Island. It is also a fact that owing to this danger, navigation companies have withdrawn their vessels from the St. Lawrence route. This inconvenience would be released by cutting a new channel between the north side of Toussant's Island and Presqn'Isle of the mainland.

I trust that these observations will meet with favourable consideration, that surveys of these places may soon be ordered to be made, and that the department may shortly realize the necessity of undertaking some of the most important suggested improvements.

I have the honour to be, sir,

Your obedient servant,

L. N. RHEAUME,

Engineer in charge Ontario-St. Lawrence Canals.

W. A. BOWDEN, Esq., C.E.,

Chief Engineer, Department of Railways and Canals,
Ottawa, Ont.

SESSIONAL PAPER No. 20

ST. CATHARINES, ONT., March 31, 1910.

SIR,—I have the honour to report upon the maintenance and operation of the Welland canal and its branches for the fiscal year ending March 31, 1910.

NAVIGATION SEASON.

The canal opened for navigation on April 15 and closed December 20, 1909.

ACCIDENTS.

One serious accident occurred during the year, the Steamer *Gargantua*, bound up on May 16, 1909, carried away three gates in lock No. 21. Repairs were carried out quickly, spare gates being stepped and navigation resumed in twenty hours.

IMPROVEMENTS—NEW CANAL.

Mr. Joseph Battle has completed his contract to build dock south of the town of Welland, and the dock is now being used occasionally.

Mr. W. E. Phin has not quite completed his contract for widening the canal about a mile north of Welland. He is now trimming the slopes, and the whole work will be completed in a couple of months.

PORT COLBORNE.

Messrs. Hogan and Macdonnell have made slow progress with clearing up the excavation of the outer harbour. A good channel, 22 feet in depth, at a time when there is 14 feet of water on the sill of the lock is available to the elevator, and the contractors are now making an effort to have the whole harbour cleared and the contract completed by October 1.

The government elevator did a small amount of business last fall, and it is expected will do a fair business the coming year. The Grand Trunk Railway Company have decided to use it for lightering grain to Port Dalhousie instead of their own old elevator. The railway spur connecting the Grand Trunk with the elevator was completed in 1909 by the department.

REPAIRS—NEW CANAL.

Ordinary repairs to structures on the new canal were carried out during the year.

Mr. David Walker completed his contract for placing rip-rap on certain portions of the summit level where the old stone had been washed away by high water and the action of waves caused by passing vessels.

A dangerous leak broke through the bank at lock No. 19 weir on July 11, necessitating the drawing of the level, delaying navigation two days, during which time the leak was temporarily stopped, and while the water was out of the canal in March, 1910, an old dry wall at the head of the weir through which the water passed was torn down and rebuilt in concrete.

REPAIRS—OLD CANAL.

The water was not drawn from the old canal this spring, the foundations of the locks and weirs being considered in safe condition.

A new steel bridge, with concrete floor, was placed over the raceway at lock No. 2.

WELLAND CANAL FEEDER.

The lock at the junction was unwatered in the spring of 1909, the foundation repaired and new gates placed in position.

The swing bridge across the feeder at Bolton road was entirely rebuilt on a pile and concrete foundation. A new wooden superstructure was built, the bolts and castings from the old bridge at Port Robinson lock being utilized.

PORT MAITLAND.

Mr. M. J. Hogan satisfactorily completed his contract for renewing superstructure of west pier at Port Maitland with concrete.

PORT ROBINSON.

The swing bridge across the head of the lock was replaced by the old bridge which formerly crossed the new canal a short distance north of the village, it being cut down to suit its new requirements.

WELLAND SHIP CANAL.

During the past year a large number of borings were taken along the route of the proposed Welland ship canal mentioned in my last report. This work will be continued during the coming year before a definite line is decided upon.

GENERAL.

The water in Lakes Erie and Ontario was kept well above normal during the whole of the year.

Mr. John E. Scott, overseer of the feeder division, was superannuated on May 1, 1909.

The following superannuated employees died during the year:—

Michael McCarthy, on June 2, 1909.

John E. Scott, on June 17, 1909.

Aaron Higgins, on December 7, 1909.

Attached is a statement of moneys collected for damages caused 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 at Port Dalhousie and Port Colborne for each month of the year.

I have the honour to be, sir,

Your obedient servant,

J. L. WELLER,

Superintending Engineer.

W. A. BOWDEN, Esq.,

Chief Engineer, Dept. Railways and Canals,
Ottawa, Ont.

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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, 1910.

Months.	Lower Sill.		Months.	Lower Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1909.	Ft. In.	Ft. In.	1909.	Ft. In.	Ft. In.
April	13 8	12 7	November.....	12 8	12 4
May	11 6	13 6	December.....	12 4	12 1
June.....	14 6	14 2	1910.		
July.....	14 3	14 0	January.....	12 3	11 11
August.....	14 2	13 9	February.....	12 3	12 1
September.....	13 10	13 2	March.....	12 10	12 2
October.....	13 1	12 7			

STATEMENT showing the highest and lowest depths of water on the Upper Mitre Sill,
Lock No. 27, New Welland Canal, Port Colborne, for the fiscal year ending March
31, 1910.

Months.	Upper sill.		Months.	Upper Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1909.	Ft. In.	Ft. In.	1909.	Ft. In.	Ft. In.
April.....	13 2	10 8	November.....	13 7	10 8
May.....	13 6	11 8	December.....	16 0	13 0
June.....	13 2	11 11	1910.		
July.....	13 0	12 4	January.....	12 2	9 8
August.....	12 6	12 1	February.....	11 0	10 2
September.....	13 0	11 4	March.....	11 11	10 6
October.....	14 5	10 6			

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STATEMENT of Damages to Welland Canal property during the fiscal year ending March 31, 1910, and the amount paid on account of said damages.

Date of Damage.	Name of Vessel.	Amount of Damage.	Amount Paid.	Date paid.	Where paid.
1909.		\$ cts.	\$ cts.	1909.	
May 12....	Tug 'J. E. Russell'.....	30 00	30 00	May 14....	Port Colborne.
June 2....	Str. 'Corrunna'.....	26 94	26 94	Aug. 3....	Port Dalhousie.
May 16....	" 'Gargantua'.....	6,485 66	5,000 00	May 18....	Port Colborne.
July 29 ..	" 'Robt. Wallace'.....	100 10	100 10	Aug. 24....	Port Dalhousie.
				1910.	
Nov. 11....	" 'Samuel Marshall'.....	100 05	100 05	May 18....	Port Dalhousie.

SAULT STE. MARIE CANAL.

SUPERINTENDING ENGINEER'S OFFICE.

SAULT STE. MARIE, Ont., April 1, 1910.

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, 1910.

The canal opened for traffic on April 21, 1909, and closed on December 16, having been in operation for 225 days. Traffic was interrupted on three occasions, amounting in all to about 14 days.

Traffic passing this point during the last season showed a very large increase over the figures for 1908, but amounted to about the same as in 1907. The traffic through the Canadian canal, however, showed an increase of 86 per cent over 1908 and 46 per cent over 1907, indicating that a larger proportion of the traffic went through the Canadian canal than heretofore, which was owing, largely, to the fact that the depth of water on the sill of the Canadian lock is about six inches greater than on the sill of the American lock, and also owing to the fact that the approaches to the Canadian canal have been greatly improved.

The usual exchange of ship's reports was made with the St. Mary's Falls canal from which a statistical report has been compiled and published by the United States canal authorities, of the traffic passing this point, and from which the following statement is derived.

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Year.	Number of Vessels passed.	Registered Tonnage of Vessels.	Total Freight Tonnage.	Cost of Carrying per mile ton.	Estimated Value of freight carried.	Percentage of Freight carried in Canadian Vessels.	Number of Passengers.
				Mills.	\$	p. c.	
1855	193	106,296	14,503				4,270
1860	916	408,657	153,721				9,230
1865	997	409,062	181,688				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	8,888,759	1 35	128,178,208	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	99	113,114,503	3 5	27,236
1895	17,956	16,806,781	15,062,580	1 14	159,575,129	3 75	31,156
1896	18,615	17,249,418	16,239,071	1 0	195,146,842	3	37,066
1897	17,171	17,619,923	18,982,755	83	218,235,927	3 0	40,213
1898	17,761	18,622,764	21,234,634	79	233,069,739	2 2	43,426
1899	20,255	21,958,347	25,255,810	1 5	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	99	289,906,865	4 0	59,663
1902	22,659	31,955,582	35,961,146	89	358,306,300	4 0	59,377
1903	18,596	27,736,444	34,674,437	92	349,405,014	6 0	55,175
1904	16,120	24,364,133	31,546,106	81	334,562,686	6 0	37,695
1905	21,679	36,617,699	44,270,680	85	416,965,484	5 0	54,204
1906	22,155	41,098,324	51,751,080	84	537,463,454	5 0	63,033
1907	20,437	44,087,974	58,217,214	80	569,830,188	5 0	62,758
1908	15,181	31,091,730	41,390,557	69	470,141,318	7 0	53,287
1909	13,204	46,751,717	57,895,149	79	626,104,173	6 0	59,948

ACCIDENTS.

On June 9 last, at 1.45 p.m., while the Canadian Pacific Railway Company's steamer *Assiniboia* was in the lock, the *Crescent City* of the Pittsburg Steamship Company entering the lock at the upper end, and Mr. C. S. Boone's dredge No. 10 was lying near the end of the lower north entrance pier the steamer *Perry G. Walker*, of the Gilchrist Transportation Company, entered the lower approach to the canal and attempted to make a landing at the north pier, but through some misunderstanding of the signals the engine failed to reverse in time and the steamer was carried against the south lower main gate, forcing it back and allowing the north gate to fall over. The force of the current carried the *Walker* back, her bow swinging to the south and the *Assiniboia* was carried down against her, striking a glancing blow on the starboard side amidships.

The *Crescent City* made every effort to retard her motion by getting lines out and reversing her engine, so as to give the other vessels time to get out of the way, but she was carried against the *Assiniboia*, striking the latter a glancing blow on the starboard quarter.

The *Walker* also collided with the north and south entrance piers, doing serious damage to both of them.

The *Crescent City* dropped on to the breast wall of the upper main gates, carrying away the timber work from the top and lower face of the wall and also breaking off the corner of the masonry.

Both the *Assiniboia* and *Crescent City* collided with the lower main gates in passing, breaking both gates, the north gate on a line parallel to the timber and the south gate on an oblique line from the centre of the bottom timber to about the centre of the toe of the gate.

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All the vessels made their way to the American side of the river, with the assistance of tugs, where they were examined by divers. The *Assiniboia*, after waiting some hours and making sure that she was not seriously damaged, proceeded on her way to Owen Sound. The *Walker*, after making some temporary repairs was able to proceed up through the American lock on the 12th, on her way to Superior. The *Crescent City* sank at the wharf on the American side of the river, but was raised three or four days later and proceeded on her way to Cleveland.

The upper main gates, which were open at the time of the accident, remained in position for a few moments, but were finally drawn away from the wall by the current and torn from their fastenings.

The auxiliary gates were made secure and then attention was given to the closing of the movable dam, which work was accomplished at 9 p.m., with the exception of six wickets which jammed and one wicket frame which buckled so badly that it could not be used, and was hoisted up out of the way. The six wickets were forced down to place with fifty ton hydraulic jacks.

The space, 6 feet x 25 feet, which should have been closed by the broken wicket and frame, was closed by making a bulkhead of 10-inch x 12-inch x 24 feet pine timbers and forcing it down with hydraulic jacks. In this operation two fifty-ton and one one-hundred ton hydraulic jacks were used, and the bulkhead forced down 24 feet, when it refused to go further, and the final 1 foot of space closed by loading a stick of timber with sand bags and lowering it down until the current took it in to place.

This placing of the bulkhead proved to be a work of considerable difficulty, owing to the fact that the timber had to be forced over the rivet heads and brace rods on the upper side of the frames. Had the surface of the frames been smooth much less difficulty would have been experienced.

The openings between the wicket frames were partly closed with planks, bundles of straw and sand bags and on the afternoon of the 13th it was decided to make an attempt to close the auxiliary gates, the necessary tackle having previously been got ready.

At 3.10 p.m. on the 13th, with the current running at three miles per hour, the auxiliary gates were safely closed, having been severely strained during the operation.

Forty-five minutes after the gates were closed the water had risen to the upper level between the gates and the dam, giving an idea of the amount of leakage through the dam.

The upper and lower guard gates were then closed, considerable difficulty being experienced in closing the latter owing to the large amount of sediment deposited around the gates, and the pumps were not started until 2 a.m. on the 14th. The work of pumping out the lock proceeded very slowly, as the culvert leading to the pumps was badly clogged.

After the lock was unwatered, it was found that the breast wall at the upper main gates was swept clean of sheaves, timber work, &c., and the top corner of the lower side of the wall chipped off. New sheaves, which were on hand, were placed, new timbers put in position and the wall repaired with concrete.

In the bottom of the lock, immediately below the upper breast wall, both thicknesses of planking were torn off for a considerable area and the timbers over one culvert broken for an area of about 10 feet square, apparently by the south main gate when it was carried away. These timbers and planking were replaced.

Thirty-six of the forty gratings, which cover the entrance to the culverts at the upper end, were torn off and carried down into the culverts. These had to be taken to pieces, straightened and replaced.

A very large quantity of sand and stones, carried down from above the lock, was deposited at both ends of the lock, and in the culverts, all of which was removed.

Three light cables, which crossed the lock at the lower end and which were carried away, were replaced.

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All of the work in the lock bottom was completed at noon on the 17th, the water let into the lock, and the work of raising the dam commenced.

The damaged lower main gates were removed and placed behind the lower entrance pier. The upper main gates were located by sweeping, on the bottom in the lower entrance and were raised and placed behind the lower entrance pier.

The lower entrance was swept and a large deposit found immediately below the lock, all of which was removed by a dredge, and a derrick scow with a diver.

The spare upper main gates which were built last spring were stepped at 4 p.m. on the 18th, but owing to some difficulty in the fit of the gates, the lock was not opened for traffic until 5.30 p.m. on the 21st.

The locking of vessels was resumed with the new solid timber upper main gates and the old frame auxiliary gates, the latter being used in place of the lower main gates which were carried away. The only other gates left were the old frame upper and lower guard gates. These frame gates were all in bad condition, more particularly the auxiliary gates, and it was thought best to abandon them and replace them with solid timber gates. A contract was, therefore, entered into with Messrs. Roger Miller & Sons to build seven pairs of gates, that is, one pair of upper guard gates, one pair of lower guard gates, one pair of upper main gates for spare, two pairs each of lower main and auxiliary gates, one pair of each being for spare; so that when the contract for the building of gates is completed the lock will be equipped throughout with solid timber gates and with spare gates for the upper and lower main and auxiliary gates.

A full set of solid timber gates will be stepped by the opening of navigation this season, and all gates will be equipped with fastenings so that when they are pulled back into the recesses they will be locked to the wall, and thus be secured from being carried away in case of another accident of this kind.

The movable dam, which on the whole was a decided success, developed a number of weaknesses, more particularly in the bracing of the wicket frames. This bracing on the lower end of the frames consisted of 1-inch rods, most of which bent, allowing the frames to buckle; one frame being as much as 5 feet out of line at one end.

A great deal of difficulty was experienced in forcing the bulkhead down and also in placing planks over the openings between the frames on account of the brace rods and round rivet heads which interfered. The dam could be much improved by making the upper face of the frames smooth, by countersinking the rivets and placing the bracing on the inside of the frame, so that timber for planks could be forced down, if it became necessary to close the water off completely.

The cribwork of the lower entrance piers, where damaged by the *Walker*, has since been repaired.

At noon on September 5 the steamer *A. H. Hawgood*, belonging to Messrs. Hawgood & Co., of Cleveland, while downbound and crossing over from the south to the north pier, failed to answer her helm readily and came against the north wall with such force as to turn the float up on edge.

A hole 2 feet x 6 inches x 6 inches was made in her No. 1 port tank, which filled and the vessel settled about two and one-half feet to port. She was backed up to the end of the north pier and lightered and was passed down through the lock at 2 a.m. Traffic was not interrupted.

At 10 p.m. on September 25 the steamer *Midland King*, of the Midland Navigation Company, when approaching the lock from below, sheared to starboard, striking the lock wall, crushing in her fender streak and bending a plate between frames on the starboard side.

On November 26, while the steamer *Empress of Midland*, of the Midland Navigation Company was working her way towards the lock, along the north upper entrance wall, with two linemen ashore, the lock valves were partly opened, creating a current. The vessel was checked with her lines, which parted, allowing her to swing across the canal with her stern against the south wall. The captain then attempted to

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swing the stern of the vessel back by working the wheel when the blades of the latter were stripped off by striking the wall.

On December 27, while repairs to the lock were in progress, one man fell from the top of the wall down to the bottom of the lock and was instantly killed, while another man who was on the lock bottom had his arm broken by a falling timber.

PRECAUTIONS TAKEN TO PREVENT ACCIDENT TO THE LOCK.

Owing to the accident to the canal on June 9 last it was considered necessary to take precautions to prevent such accident in future, and to accomplish this end rules were posted up in the office to regulate the movement of boats approaching the canal. To see that these rules were carried out and to assist boats in landing at the piers, two extra linemen were appointed and stationed, one on the south pier in the lower entrance and the other on the north pier in the upper entrance.

All vessels are expected to come to a stop at the entrance piers, unless the gates are open for them, and to put linemen ashore. They are then permitted to enter the lock with their lines ready to check the movement of the vessel if necessary.

CONGESTION OF TRAFFIC.

Owing to the large increase in traffic during the last season, and also owing to the fact that the movement of vessels is not continuous, some days there being comparatively few boats and on others a great many, it was found impossible on busy days to accommodate all the waiting vessels at the piers, and a number were compelled to anchor out in the river to await their turn. As the place of anchoring is about two miles above the lock and beyond the control of the lockmaster, it became necessary during the latter part of last season to put on a patrol boat to regulate the movement of these vessels, send them to the lock in their proper turn and prevent them from racing for the lock. These arrangements worked well and it would seem desirable in view of the probable large increase in traffic in the future to continue them permanently.

INTERRUPTIONS TO TRAFFIC.

On two occasions during the past season the Poe lock of the American canal was out of commission, on the first occasion for three days, when the Canadian canal was working continuous for 101 hours passing 184 vessels of a total net registered tonnage of 553,287; and on the second occasion for eight days when the Canadian canal was in continuous operation for 264 hours passing 460 vessels of a total net registered tonnage of 1,372,145.

On the latter occasion the blockade of vessels proved to be quite serious, there being at one time 87 vessels waiting in the river above and 25 vessels waiting in the river below the canal.

Most of these vessels were delayed from 60 to 100 hours, while four vessels, which were too wide for the Canadian lock, were delayed a week. An estimate of the loss to the vessels delayed, based on their earning capacity, shows a loss of \$250,000.

OBSTRUCTION TO NAVIGATION.

A great deal of trouble was experienced during last season by vessels grounding near the end of the north upper entrance wall. Soundings taken at this point showed a deposit of clay and stones about 25 feet in width by 150 feet in length. This shoal was removed by a dredge and derrick scow.

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PAVEMENTS.

Owing to the numerous accidents which have occurred to lockmen and others in walking along the lock wall where lines from vessels were stretched across, a concrete pavement was constructed parallel to the lock and behind the mooring posts.

DRAFT OF VESSELS.

It has been found in the past that the marks on the bow and stern of vessels, indicating their draft, do not give the correct draft of the vessels, owing to the fact that loaded vessels will sag amidships as much as six inches when loaded. This has resulted in vessels being locked through with a greater draft than that recommended and the gate cables were frequently cut, causing considerable delay. This suggests the desirability of having all vessels marked amidships as well as at bow and stern, and an attempt was made during last season to have vessel owners mark their vessels in this way.

RANGES.

At the opening of last season the rear lower entrance range tower was blown down in a storm, and a temporary range was established by using the front range for a back range and erecting a temporary range in front. The rear tower has since been erected and the range restored as before.

In the upper entrance the old range was abandoned during last season owing to the dredging operations which were in progress and a temporary range erected. As the dredging of the channel was completed and a new centre line adopted, two new steel towers were erected for front and back ranges, and the old wooden beacon which formerly acted as a front range will shortly be removed.

NORTH UPPER ENTRANCE PIER.

This pier, which had been in a bad condition for some time, collapsed at the shore end during the early part of last season, and it was decided to dredge out the old pier and rebuild it on a line continuous with the north entrance wall. Accordingly a contract was entered into with Mr. J. J. Collins on September 18, 1909, to rebuild the pier, but owing to the lateness of the season nothing was done. This work will be commenced, as soon as the weather will permit, this spring.

NORTH LOWER ENTRANCE PIER.

The portion of this pier above water is in bad condition, and will be required to be overhauled. A portion of this work will be done during the coming season and the remainder carried over another year.

I have the honour to be, sir,

Your obedient servant,

J. W. LEB. ROSS,

Superintending Engineer.

W. A. BOWDEN, Esq.,
Acting Chief Engineer,
Dept. Railways and Canals,
Ottawa, Ont.

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SAULT STE. MARIE CANAL.

COMPARATIVE STATEMENT since Opening of Lock, Sept. 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.	
Canadian registered 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	-63
Vessel passages	1,193		5,189	3,996	4,376	-813
Time passing lock	212 h. 27 m.		984 h. 22 m.	771h. 55m.	684 h. 11 m.	300h. 11m.
Average time lockage	18.26 m.		18.42 m.		13.97 m.	
	1898.		1899.		1900.	
Period open	(April 11. Dec. 9.)		April 26. Dec. 20.		April 23. Dec. 16.	
Canadian registered tonnage	403,331	4,988	561,759	158,428	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	-456	2,610	90	2,205	-405
Vessel passages	3,712	-664	3,820	108	3,163	-657
Time passing lock	609 h. 30 m.	-74h. 40m.	643 h. 16 m.	33h. 46m.	541 h. 24 m.	-101h 52m.
Average time lockage	14.51 m.		14.73 m.		14.73 m.	
	1901.		1902.		1903.	
Period open	(April 20. Dec. 21.)		April 1. Dec. 20.		April 2. Dec. 13.	
Canadian registered tonnage	776,331	196,803	1,366,087	589,756	1,616,385	250,298
U.S. registered tonnage	1,672,631	56,492	3,238,069	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.	183h. 14m.	925 h. 57 m.	201h. 19m.	883 h. 10 m.	-42h. 47m.
Average time lockage	14.96 m.		16.25 m.		16.34 m.	
	1904.		1905.		1906.	
Period open	(April 30. Dec. 26.)		April 10. Dec. 20.		April 10. Dec. 20.	
Canadian registered tonnage	1,557,335	-59,050	1,799,336	242,001	1,959,186	159,850
U.S. registered tonnage	2,637,090	471,930	3,739,224	1,066,134	4,399,990	660,766
Total tonnage	4,230,425	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	-326	5,853	1,761	5,913	60
Time passing lock	811 h. 28 m.	-71h. 42m.	1060 h. 38 m.	249h. 10m.	1131 h. 23 m.	70h. 24m.
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.	
Canadian registered tonnage	2,288,349	329,143	2,556,552	268,203	2,912,586	356,034
U.S. registered tonnage	9,887,633	5,487,643	7,038,389	-2,849,244	14,899,562	7,861,173
Total tonnage	12,175,982	5,816,786	9,594,941	-2,581,041	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	1378 h. 58 m.	247h. 35m.	1258 h. 50 m.	-120h. 8m.	1853 h. 45 m.	594h. 55m.
Average time lockage	18.10 m.		20.60 m.		17.31 m.	

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RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

OTTAWA, April 1, 1910.

SIR,—I have the honour to submit herewith my report on the Rideau canal for the fiscal year ending March 31, 1910.

Navigation opened at Ottawa on May 1, 1909.

Navigation opened at Kingston Mills on May 1, 1909.

Navigation closed at Ottawa on November 30, 1909.

Navigation closed at Kingston Mills on November 29, 1909.

My last report which was written a few days before the spring freshet commenced last year, stated that I did not anticipate any serious damages therefrom, but I regret to have to record a most serious washout in the bank of the river at Black Rapids lock station, where the new dam abutted into it, on the Gloucester side of the river—a washout which delayed through navigation to Ottawa until the middle of June, as the break could not be closed until the water had subsided.

Particulars of this accident will be found under the heading of 'Black Rapids' in this report.

With the exception of the delay at the above mentioned point, navigation was uninterrupted for the whole season.

This year the spring freshet commenced the first week in March—a phenomenally early break up; earlier in fact than has ever been recorded in the history of the canal, and the water rose so fast that the work of rebuilding the west bulkhead at Hogsback (which was going on at the time) had to be temporarily abandoned, as it could not be completed until after the water had subsided. The apron is still too deeply submerged to resume work, but we have a month yet before navigation opens, and as the water must surely fall now that the freshet is subsiding, I have no anxiety about having the structure ready for navigation by May 1; in fact one week will be sufficient to raise all the bents, as all the sills except one are in place and the rest of the structure is framed ready for erection.

The principal works and repairs executed along the line of the Rideau canal during the past fiscal year ending March 31, 1910, are as follows:—

OTTAWA LOCK STATION (8 Locks and Basin).

Two pairs of lock gates for locks Nos. 5 and 6 were framed last summer, and are now being hung in place. The wide flight of stone steps on each side of lock No. 3, which had been dangerous on account of the disintegration of the stone, were covered last summer from top to bottom with a three-inch coat of fine concrete. The result is most satisfactory as this cement coating has stood the frost of last winter without a crack; and now these two fine flights of steps—which are sixteen feet wide, and each of which contains 20 steps—are as good as new. Sundry small repairs were made to the wharfs and roads round the canal basin.

A large quantity of stone was taken from the excavation for the new Grand Trunk railway hotel at the head of the locks—the stone having been given free by the contractor, Mr. John O'Toole, and taken on our scows to Black Rapids lock station; and there used for filling the new cribs built last winter. The Grand Trunk Railway Company is now, by permission of the Department, taking down the old cribwork on

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the east side of the basin, and building in its place a fine concrete retaining wall, from Sappers to Laurier bridges.

OTTAWA EAST SWING BRIDGE.

The approaches and swing span were replanked. An iron pipe railing on cast standards was erected by contract with the International Marine Signal Company, of Ottawa. Small repairs were made to the timber rest piers, and the bridge and the bridge keeper's house were painted.

BANK STREET SWING BRIDGE.

The east pier of the bridge (which was being built when I made my last report) was completed. The turntable was repaired and small general repairs made. The bridge keeper's house and the bridge were painted.

CONCESSION STREET SWING BRIDGE.

Small repairs were made to the flooring of the bridge, and the bridge and the bridge keeper's house were painted. The roadway between this bridge and the St. Lawrence and Ottawa Railway bridge (Canadian Pacific Railway) across the top of Dow's lake dam, was raised and graded with gravel; the work being done by contract with Mr. Owen McCarten, of Billings Bridge, Ont.

HARTWELL'S LOCK STATION (2 Locks).

The lockmaster's and lock labourers' houses were painted. About 900 feet of the eastern side of the cut were rip-rapped with stone to save the banks, and sundry repairs were made to the station generally.

HOGSBACK LOCK STATION (2 Locks and 1 Swing Bridge).

The lower end of the apron below west bulkhead was extended about 70 feet down stream, and has answered its purpose well; but it requires to be still further carried out this summer, to reduce the steep pitch of the water and ice during freshets, to save the scouring out of the soft shale rock at its foot. A new double boom was placed across the bay above the bulkheads to anchor the ice. A considerable length of the cut was rip-rapped with stone to save the erosion of the banks, which work has been gradually carried on for the past few years, and I hope this summer will complete it.

The west bulkhead which had become unsound from age, was taken down, the new one having been framed last year. The front of this structure was excavated and sheeted down to the rock; but before the bents could be erected, the unusually early break up, which occurred the first week in March, fully one month ahead of its usual time, flooded the site of the work, and we were consequently forced to cease work temporarily, until the water subsided. All the new sills, excepting one, were in place, and nothing remained but to erect the bents upon them and connect them with the roadway at each end.

This could have been done in a week, had the water not stopped the work; and it will be finished before navigation opens. No damage of any kind occurred, and we saved all the framed timber which was lying ready to erect. The only inconvenience occasioned was the interruption to highway travel across the bulkheads, but as this roadway is not recognized as a bridge (having been always posted 'No thoroughfare' at each end), no one has any real grievance at being turned back; but in order to protect the public, barriers have been erected at each end, and a night watchman placed in charge until the crossing is re-established.

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The rest and protection piers above the upper lock were rebuilt, the lockmaster's house was painted, and sundry repairs were made to the station in general.

BLACK RAPIDS LOCK STATION (1 Lock).

As stated in the preamble to this report, very serious damage was done by the washing out of the river bank on the Gloucester side, at the point where the new dam was built into it. The freshet in 1909 was the highest ever recorded, and the water cut round the end of the dam abutment and into the banks (which are nothing but sand) to such an extent that the dam was left standing about 200 feet out in the river. An enormous quantity of sand was cut out of the banks which are about 25 to 30 feet high; but fortunately it found its way into deep portions of the river below, and shoals were formed away from the channel, so that no obstruction to navigation arose from this cause.

To close this breach in order to impound the water for navigation, a coffer dam of square timber cribwork had to be put in, extending diagonally upstream for 375 feet; and great difficulty was experienced in connecting it with the shores, on account of the sand formation, which was eaten away by the water whenever a junction with the banks was made. Eventually, however, this was done; much vexatious delay having occurred whilst waiting for the first volume of the freshet to subside, and the cribs were placed in position and loaded with sacks of sand (no stone being available).

The next difficulty was the caulking of these cribs, as after they were sheeted with 3-inch plank, the water continually scoured underneath them, as the bottom was also fine sand and boulders; but in the end the leakage was finally overcome by means of large canvas tarpaulins, each being 200 feet x 40 feet, which were nailed to the sheeting and held out in the water by ropes and gradually allowed to be drawn down by the suction of the leakage. Sand and clay were then piled on top of the canvas, and the leakage stopped sufficiently to maintain navigation and allow of the repairs being made to the main dam.

All this work involved a delay to navigation of about six weeks, but when it is remembered that the coffer dam had to be built in the middle of a rushing river over 12 feet deep, with no anchorage but sand hills, no foundation but sand, and no ballast but sand bags; and also the fact that all the materials used in its construction had to be transported eleven miles to the site of the work over country roads, and at a season of the year when all roads are at their worst, I think it will be admitted that no undue delay was occasioned to the boatmen.

By direction of Mr. M. J. Butler, late chief engineer, the main dam was extended 100 feet, and a wing crib was built both above and below the dam, and up the gully into the bank.

The whole of the main dam has been covered with $\frac{3}{4}$ -inch steel plate; the plate having been purchased from Messrs. Drummond, McCall & Company, of Montreal, and the contract of laying the same having been awarded to the International Marine Signal Company of Ottawa. The new dam has stood the present freshet well, but there is a troublesome leakage under the wing crib at the point where it turns up the gully. I am of the opinion that 10-inch x 12-inch square piles are required all round the face of this portion of the crib, as sheeting cannot be driven down by manual power through the sand and boulders; but a pile driver can drive square timber down, and in this way I hope check the leakage. I have sent our pile driver down to the spot, and the piles will, I hope, arrive in two weeks, which will give us two weeks to drive them before navigation opens, after which it is proposed to deposit clay by means of a dredge and dump sews to completely staunch all the leakage.

The stone filling for all this work, amounting to over 3,000 cubic yards was supplied from our own quarry; but taken out and delivered into the cribs by contract with Mr. Bruley, of Billings' Bridge, Ont. The lower gates of the lock were rebuilt and the lower mitre sill renewed and concreted—the latter work necessitating the

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pumping out of the lock. The waste weir bulkhead was also renewed, and a new stone filled cribwork facing was built from the lock to the waste weir. The lay-by piers above the lock were also rebuilt, and repairs were made to the ice breakers in the river.

LONG ISLAND LOCK STATION (3 Locks and 1 Swing Bridge).

A new boom was framed and laid at the head of the island, and repairs made to the tops of the piers at the same place. Repairs were made to the piers at the White Horse dam, and sundry small repairs made to the station in general.

MANOTICK BRIDGE.

The bridge was painted by the bridge-tender, and sundry repairs made to the flooring and piers.

WELLINGTON BRIDGE.

Sundry small repairs were made to the flooring of the bridge by the bridge-tender. Next winter, however, the entire superstructure requires to be raised off the piers, and the latter rebuilt down to low water mark.

BECKETT'S LANDING BRIDGE.

No repairs were made to this bridge.

BURRITT'S RAPIDS LOCK STATION (1 Lock).

Extensive repairs were made here this winter to the south chamber wall and both upper wings of the lock, which were taken down and rebuilt—the lock having to be dammed above and below and pumped out for this purpose.

The lower gates were also renewed. A considerable stretch of the north side of the upper cut was faced with stone and filled up where it had been washed away—thus continuing the work commenced last year. Sundry small repairs were made to the station in general.

BURRITT'S RAPIDS BRIDGE.

The only repairs at this bridge consisted of pointing the masonry of the piers, which work is still in progress.

NICHOLSON'S LOCK STATION (2 Locks and 1 Swing Bridge).

Two pairs of lock gates were renewed, *i.e.*, the upper gates of the lower and upper locks respectively, and two new sluice frames were put in. The upper wing walls, upper sill and gate recesses of the upper lock, were taken down and rebuilt with new stone. The lower sill of the upper lock was repaired, concreted and planked, and the chamber walls grouted. The old timber waste weir at the head of the upper cut was taken out and a masonry weir built in its stead. Sundry small repairs were also made to the station in general.

CLOWES LOCK STATION (1 Lock).

Small repairs were made to the station generally, and some stumps were blasted out of the river above the lock, during the winter.

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MERRICKVILLE LOCK STATION (3 Locks, 2 Basins, 2 Bridges).

The north waste weir, which was slightly damaged by ice a year ago, has been repaired; as were also the stop-log piers at the head of the cut. Some new stop-logs were framed, and sundry small repairs were made to the station in general.

KILMARNOCK LOCK STATION (1 Lock and 1 Bridge).

The timber bulkhead was taken down and rebuilt during the winter, and repairs made to the back dam in the break ground. This dam is merely a pile of stones and cannot be made tight within a reasonable expenditure. A new dam should be built further up the river; and I intend making an examination of the river for this purpose during the coming summer.

EDMONDS LOCK STATION (1 Lock).

The by-wash was re-covered and planked. Two new swing bars were framed and placed on the lock gates. Some wire fencing was erected round the lock house, and sundry small repairs were made to the station generally.

OLD SLY'S LOCK STATION (2 Locks and 1 Bridge).

Sundry small repairs were made to the station in general.

SMITH'S FALLS COMBINED LOCK STATION (3 Locks, 1 Basin, 2 Bridges).

The old frame addition to the lock house was torn down and rebuilt, and the whole building re-shingled. A new flight of steps was built on the south side of the upper lock near the band stand to save the lock slopes. A new circular rest wall of concrete was laid under the heel of the swing bridge, and two new swing bars were framed for the lock gates. The work of filling up the south side of the basin was continued last year as usual, and now a large area of this useless stretch of water is filled up, and is proving a great saving in water, and also has reduced the leakage at that point. The work will be continued this year.

SMITH'S FALLS DETACHED LOCK STATION (1 Lock and 2 Bridges).

A new wharf was built at the head of the lock, which will prove of great value to the boats and also be the means of saving much of the water which has hitherto been required to fill the basin. This will not be required as much now as the boats need not go down into the basin, as they can stop at the new wharf. Our dredge excavated a small channel above the dam in the vicinity of the boat houses, in order to give the numerous motor boats a means of access to the main channel. The turntable of the swing bridge was repaired, and sundry small repairs were made to the station generally. The location of the Canadian Northern railway which was laid out along the dam and across the lock, having been objected to on account of being too close to our works, was changed, and is now located about 400 feet above the lock where it will not interfere in any way with navigation.

POONAMALIE LOCK STATION (1 Lock).

The upper lock gates were taken out and repaired, and small repairs were made to the upper sluices. The stop-log piers at the head of the upper cut were also rebuilt from low water line up. The foot of the long concrete dam was repaired where it has been damaged by ice and water, and sundry small repairs were made to the station generally.

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I may state that the lockages at this station have increased very largely during the last two seasons; the total number last year being 3,076, an increase of nearly 500 over 1908, and of nearly 900 over 1907.

BEVERIDGES LOCK STATION (2 Locks and 1 Bridge).

The back dam was repaired with clay. The swing bridge was re-planked with 3-inch plank, and some culverts in the cut were repaired. Repairs were made to the lock sluices, and the cribwork protection piers below the lower lock in Rideau lake, which had been heaved up by ice, were replaced and respiked and refilled with stone. Small repairs were made to the lock house and to the station generally.

PERTH BRANCH (Basin and 4 Bridges).

Gore Street bridge was painted. The culvert at Craig Street bridge was repaired, and the roadway from Beckwith street bridge to the Canadian Pacific railway car shops was graded and gravelled. About 900 feet of dry stone walling was built along the face of the canal to protect the clay banks, and sundry small repairs made to wharfs and basin. Bridge-tender Russell deserves the greatest credit for the improvements he has made to the basin and surroundings (which are in the heart of the town), in the shape of the grass lawns and flower beds which he has made and which beautify the spot, and which are much appreciated by the residents of Perth.

BOB'S LAKE RESERVOIR DAM.

No repairs were made last year to this dam, which feeds the Tay river, and which is situated about 24 miles above Perth.

OLIVER'S FERRY BRIDGE.

Sundry small repairs were made by the bridge-tender.

THE NARROWS LOCK STATION (1 Lock and 1 Bridge).

The old by-wash was taken out and a new one framed and put in. Sundry small repairs were made to the station generally.

NEWBORO LOCK STATION (1 Lock and 1 Bridge).

Both the upper wing walls of the lock, the gate recesses, and portions of the chamber walls, were taken down and rebuilt. For this work the lock had to be dammed above and below and pumped out. The work was delayed by the early freshet this year, which filled up the lock; but the dams were raised and strengthened, and the work completed after about ten days delay. Both the upper and lower mitre sills were re-bolted, concreted and planked. Repairs were made to the piers at the head of the cut, and also below the lock. Two small timber piers were built in the lake below the lock, to mark the shoals at Whitehall and Fingerboard islands respectively.

CHAFFEY'S LOCK STATION (1 Lock and 1 Bridge).

One pair of lock gates were renewed, and the swing bridge across the lock was rebuilt. Two new swing bars were framed. Sundry small repairs were made to the lockmaster and lock labourer's house.

DAVIS'S LOCK STATION (1 Lock).

The lay-by piers at the head of the lock were taken down and rebuilt, and the dam was protected in front of the storehouse by means of cribwork. Sundry small repairs were made to the station generally.

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JONES'S FALLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

Two of the lock recesses were concreted and repaired. The swing bridge across the upper lock was taken down and rebuilt. Considerable gravel and debris were cleaned out of the lower lock by our diver, who also repaired the lower mitre sill. A small wharf was built at the head of the upper lock for the accommodation of small boats. The two bridges were painted and sundry small repairs were made to the roads and to the dam, and to the station in general.

MORTON DAM.

Some gravel was placed in front of the dam, and small repairs were made to the planking and handrailing. .

BRASS' POINT BRIDGE.

No repairs were made to the bridge last year.

BREWER'S UPPER MILLS LOCK STATION (2 Locks, 1 Basin, 1 Bridge).

A considerable quantity of woven wire fencing was erected from the 'Roundtail' to the end of the reserve on the north side of the canal—a distance of over a mile. This was rendered necessary on account of long standing friction between the lock officials and the owner of the land adjoining—each side paying half the cost of the same. Sundry small repairs were made to the station in general.

BREWER'S LOWER MILLS LOCK STATION (1 Locks, 1 Bridge).

The old swing bridge across the lock was taken down and rebuilt; and sundry small repairs were made to the station in general.

KINGSTON MILLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

The long bridge across the waste water channel, which was built of timber on trestle bents, was taken down, and a fine structure of steel on concrete piers substituted therefor. The contract for the substructure, consisting of two concrete abutments, rip-rap, dry stone walling, roadway, fencing, &c., &c., was awarded by contract from the department to Messrs. Fallon Bros., of Cornwall, Ont., and the steel superstructure was awarded to the Hamilton Bridge Works. The old addition to the block-house was partly taken down and enlarged, and sundry small repairs were made to the other lock labourers' houses. Three hundred cubic yards of stone were quarried and placed where required on the embankments by contract with Mr. J. Keenan, of Kingston Mills. Small repairs were made to the sluice frames and to the station generally. The basin wall is showing signs of age and will require to be rebuilt next year.

GENERAL.

The usual spring repairs of pointing and grouting the lock masonry, painting of gates and bridges, &c., were made by our lock labourers. The stone for the repairs to the locks last winter was taken out and cut in Westport quarry, where we moved a year ago from Elgin, as the latter quarry was exhausted. The stone is of most excellent quality, and the quarry itself is much more conveniently situated with regard to shipping facilities and consequently the stone costs us far less than when procured at Elgin.

All our large supplies were furnished by tender, the various contracts being awarded by the department as follows:—

Lock gate and bridge timber (B.C. fir), to the Hurdman Lumber Company.

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Smaller dimension timber and plank to the Hurdman Lumber Company, the W. C. Edwards Company, Limited, the Ottawa Lumber Company, and the Stewarton Lumber Company.

The Portland cement required was awarded to the Lakefield Portland Cement Company.

The paint was awarded to Messrs. Brandram-Henderson, Limited, of Montreal; and the oil to McColl Bros. & Company, of Montreal.

DREDGING PLANT.

The dredge *Rideau* was employed all last summer in making a 50-foot channel through the drowned lands across Sawlog bay, and she has completed about half the distance. This cut when completed will save over one mile in distance from Poona-malie to Oliver's Ferry. The dredge also excavated a small channel in front of the boat houses at the head of the detached lock at Smith's Falls and wintered in one of the locks at Smith's Falls. A new swinging engine was purchased for her from Messrs. Beatty & Company, of Welland; and a new coal scow was built for her this winter at Ottawa. The tug *Loretta* was employed last season towing scows and delivering timber, stone, paint, oil, &c., along the canal; and also on inspection work.

She has been supplied with a Nash Century steam steering engine, which is not yet fitted up, although it is on board.

The following is a statement of the highest and lowest water on the lower mitre sills of the lower locks at Ottawa and Kingston Mills lock stations respectively, from April 1, 1909, to March 31, 1910:—

OTTAWA, LOCK NO. 1.				KINGSTON MILLS, LOCK NO. 47			
Highest.		Lowest.		Highest.		Lowest.	
Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Apr. 30.....	18 7	Apr. 1.....	9 6	Apr. 28-30.....	8 9	Apr. 1.....	8 2
May 28-29.....	26 10	May 1.....	18 7	May 31.....	9 0	May 11-18.....	8 8
June 1.....	26 2	June 30.....	15 5	June 1-5.....	9 0	June 29-30.....	8 9
July 1.....	15 2	July 23.....	11 7	July 1-2.....	8 9	July 26-29.....	8 6
Aug. 1.....	14 9	Aug. 30-31.....	10 0	Aug. 1-5.....	8 7	Aug. 22-31.....	8 4
Sept. 21-23.....	10 2	Sept. 3-6.....	9 9	Sept. 1.....	8 4	Sept. 23-30.....	7 8
Oct. 7-8.....	10 0	Oct. 18.....	9 0	Oct. 11-12.....	7 9	Oct. 28-31.....	7 4
Nov. 25-27.....	9 10	Nov. 7-8.....	9 1	Nov. 1-14.....	7 4	Nov. 15-30.....	7 3
Dec. 15.....	10 10	Dec. 9-13.....	9 8	Dec. 1-3.....	7 2	Dec. 24-31.....	6 11
Jan. 24-26.....	9 9	Jan. 20.....	8 10	Jan. 1-11.....	6 11	Jan. 28-31.....	6 8
Feb. 1.....	9 5	Feb. 27-28.....	8 1	Feb. 20-28.....	6 8	Feb. 7-10.....	6 6
Mar. 31.....	12 9	Mar. 1-3.....	8 2	Mar. 30-31.....	8 0	Mar 1.....	6 8

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.,

Acting Chief Engineer Canals.

Ottawa, Ont.

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TRENT CANAL.

SUPERINTENDENT'S OFFICE,

PETERBOROUGH, May 26, 1910.

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, 1909, to March 31, 1910.

The extent of the canal completed is the same as last year, viz., 160 miles.

Navigation opened and closed on the different stretches, as follows:—

Division extending from Lake Simcoe to Fenelon Falls, opened May 1, closed November 1.

Division extending from Fenelon Falls to Lakefield, opened April 21, closed November 20.

Division extending from Lakefield to Peterborough, opened May 10, closed November 15.

Division extending from Peterborough to Healey's Falls, opened April 17, closed November 27.

The following work was carried out during the year:—

HASTINGS.

The highway bridge was replanked.

RICE LAKE.

A new pier was built for the lighthouse at the mouth of the Otonabee river. The wharf at Hall's Landing was repaired.

OTONABEE RIVER.

Considerable dredging was done at Yankee Bonnet. There is now a splendid channel with nine feet of water at this point, which heretofore was the most dangerous place between Peterborough and Rice lake.

LOCK NO. 7, (PETERBOROUGH).

The lock and bridge were repainted. A small house was erected for the bridge-tender.

PETERBOROUGH HYDRAULIC LIFT LOCK.

The lift lock was repainted.

PETERBOROUGH TO LAKEFIELD.

The canal from the Peterborough lift lock to the golf grounds, a distance of one and one-half miles, was rip-rapped on both sides. From Nassau to Lakefield, a distance of about six miles, the east bank of the canal was rip-rapped. About three miles of fencing was built on this section. The lockhouses were repainted and considerable dredging and drilling were done at the entrance to the lock at Lakefield. A new slide and pier were built at No. 5 dam.

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LAKEFIELD.

A shelter 20 feet x 30 feet, for the accommodation of the public was built at the Lakefield dock. The lockmaster's house was repaired and repainted.

LAKEFIELD TO YOUNG'S POINT.

The booms separating the steamboat channel from the lumbermen's channel, between these two points, a distance of six miles, were repaired and new chains placed on the booms.

YOUNG'S POINT.

The office was rebuilt and painted. New arms were placed on the lockgates, and the grounds were levelled off.

STONY LAKE.

A number of private wharfs, that became submerged, by reason of the action of the government in raising the water level in Stony lake for navigation purposes, were raised proportionately. The steamboat channels in the lake were buoyed out.

BURLEIGH FALLS.

The bridge over Perry's creek was rebuilt, as well as the approaches thereto.

LOVESICK.

The lockmaster's house was rebuilt. The lockgates from the water up were rebuilt.

BUCKHORN.

The new concrete dam was taken over from the contractors. The government property was repainted.

BOBCAYGEON.

A new house for the lockmaster was built at Bobcaygeon, and certain minor repairs were done to the dam.

CHEMONG LAKE.

The booms were repaired. An addition to the swing bridge pier was built.

SCUGOG RIVER.

The Scugog river from Sturgeon lake to Lindsay has been kept in good condition for navigation purposes. All the lighthouses were painted and put in good order, a number of new buoys were placed in the river, and the sunken logs were removed from the steamboat channel.

LINDSAY.

The rest pier at the south Lindsay street bridge was repaired and the bridge was replanked.

FENELON FALLS.

A great deal of work was carried on at Fenelon Falls during the past year. A new concrete walk was put in at the lock, some sodding was done, and a water works

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system for watering the grass was installed. A concrete walk was laid in front of the lockmaster's house, and the grounds levelled up. The work of deepening the channel from Cameron lake to the lock was continued, and a turning basin was completed east of the railway bridge. This is 200 feet long by 175 feet wide. From the Grand Trunk railway bridge to Cameron lake, a distance of about 800 feet, there is a splendid channel. This is fifty feet wide at the railway bridge and about two hundred feet at the entrance to the lake, and has a depth of nine feet. The average depth of the material dredged was about five feet. The material was used to make a breakwater on the north side, from the railway bridge to the lake, and on the south side, from a point about 350 feet below, to the railway bridge and the end of the west entrance.

A storehouse and coal shed were built at Fenelon Falls.

The abutment pier at the south end of the dam from the water's edge was re-built. A new platform was built over the power canal or headgates to the Lindsay Light, Heat and Power Company's plant. A new set of stop logs was supplied here, and a new set of winches was placed in position.

BELOW FENELON FALLS.

In the river below Fenelon Falls, a pier 16 feet x 24 feet was re-built from the water's edge, four courses of timber, and filled with stone. This pier is also used for booming logs.

ROSEDALE.

Some minor repairs were done to the old lock. The bridge was re-planked.

COBOCONK.

The landing pier was repaired and filled in to the shore with stone.

BEAVERTON.

A lighthouse was erected at the entrance of the Beaverton harbour, and the channel to the entrance of the harbour was buoyed out.

LAKE SIMCOE.

The entrance to the canal was buoyed out and some minor repairs were done to the lighthouse.

LAKE SIMCOE TO LOCK NO. 4.

All flood wood and other debris was removed from the channel, some fencing was done on the north side near the Grand Trunk railway track, the high level bridge across the canal on the Grand Trunk railway was painted, the west gate at Lock 4 was repaired, and the roadway at Lock 5 was repaired. A new well was sunk at Lock 5 and a small piece of land sixteen and a half feet in width across Lot 10, immediately south of the Trent canal property was acquired by the department, in order to have sufficient land to construct a drain.

FROM LOCK 4 TO BOUNDARY ROAD BRIDGE.

The coping and rip-rapping on the south side of the canal near Lock 3 was repaired. The lockmaster's house at Lock 3 was painted. Four hundred and fifty feet of tile drain was dug up and made deeper, and the tile replaced, and one hundred feet of open drain made for an outlet westward near Dam 3. The iron bridge across the canal on the Portage Road near 'Keans' was replanked, and a wash-out at the end of the bridge on Trespass road was repaired. The channel immediately west of Lock 2 was

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deepened by excavating the bottom of the canal for a distance of sixty feet. About three hundred and sixty-five feet of rip-rapping was done on the north side of the canal near Dam 3, about four hundred and eighty feet near Dam 2, sixty feet at a point near Dam 3 and one hundred and thirty feet on the south side of the canal opposite the 'Kean' property. 1,670 feet of rip-rapping was done on the south side of the canal, and 500 feet on the north side of the canal, from Lock 2 to Lock 1. The gates at Lock 2 were repaired and a well sunk at this point.

BOUNDARY ROAD BRIDGE TO KIRKFIELD HYDRAULIC LIFT LOCK.

A great quantity of flood wood was taken out of the canal at this point. This flood wood comes down from the flooded reaches of the canal, and if not removed, would be a serious impediment to navigation. A washout near 'Bishop's' property at Bolsover was repaired, and a quantity of stone placed in same. A small wash-out, caused by the high water last spring, on the road north of the high level bridge on the Fourth Concession was repaired, and 400 feet of rip-rapping was done along this stretch.

KIRKFIELD HYDRAULIC LIFT LOCK.

Extensive improvements have been carried out at the Kirkfield hydraulic lift lock during the past year. New fences have been erected, a great deal of painting has been done, and a general plan of beautifying the grounds around the lift lock and lock-masters' houses have been adopted.

KIRKFIELD HYDRAULIC LIFT LOCK TO BALSAM LAKE.

One hundred and ninety-two rods of wire fencing was erected from the town line to the Grand Trunk railway, west of the canal, and three hundred and two rods of wire fencing was placed from the Grand Trunk tracks to the Portage road on Lot 49 west of the canal.

RESERVOIR WATERS.

There is in connection with the Trent canal, what is known as 'reservoir waters,' which consist of numerous rivers and streams, not on the route of, but tributary to the canal. Dams have been built at the outlet of many of the lakes on these streams, and the water is conserved until such times in the dry summer and fall season, as it may be required for navigation and power purposes. Considerable work was done on these waters during the past year, as the following will show:—

GULL RIVER.

Norland.—The dam at this point was repaired.

Elliott's Falls.—A new maple floor was placed in the slide at this dam, new stop-posts were provided and the dam put into first-class condition.

Moore's Falls.—New rollers were put in, and the dam generally repaired.

Horseshoe Dam.—A new concrete dam was built here. This dam will regulate the flow of the water in the Gull river. The present dam replaces an old wooden structure that had rotted away. The new dam is 16 feet high from the sill, and holds about 10 feet of water on Horseshoe lake, and backs the water up into Mountain lake. The dam has four 20 foot weirs, or sluices, and the piers are six feet wide. The abutment on the east side is 25 feet long at base. On the west side the abutment runs up stream for about 40 feet, so as to form a rest for a boom when running logs to the dam.

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Hall's Lake.—The dam between Hall's lake and Bushkong lake was repaired.

Hawk Lake.—The old dam at Hawk lake was repaired by placing in new stop-log posts and a new set of stop-logs. A new platform was also placed on the dam. This is a depot dam, there being a camp here for the caretaker of the Gull river works. This camp was repaired this year.

Redstone Lake.—The pile dam was repaired, but this dam will have to be rebuilt shortly.

Keneese Lake.—The dam was repaired and a stopping place was built to replace the one destroyed by fire in September, 1908.

Eagle Lake.—The dam was repaired, and installed new apparatus for handling stoplogs.

Oblong lake.—This dam was repaired and new rollers for handling stop-logs were installed.

Big Bob Dam, (Tp. of Anson).—This dam was repaired and new rollers installed.

MISSISSAGUA RIVER.

Scott's Dam.—The slide was repaired, some work was done on the platform, and new rollers were installed.

Gull Lake.—A new floor was put on the dam, and some new stop-logs provided. A set of winches was installed.

Bottle Lake Dam.—Some new stop-logs were provided, and the dam was repaired.

SQUAW RIVER.

Dams Nos. 1 and 2 south of the Bobcaygeon road were repaired. Maple floors were placed in the timber slides, new stop-logs were put in and new platform placed on the dam.

BURNT RIVER.

Cushog Lake, (Tp. of Snowden).—A new concrete dam was built here. The dam holds five feet of water on Cushog, Sawers, and Head lake, a distance of 12 miles.

GENERAL.

The plant was kept in first-class condition. The hull of the old dredge *Trent* was converted into a cookery house and blacksmith shop. Scows Nos. 2, 3 and 5 were repaired, and the tug *J. B. McColl* was rebuilt. The tug was formerly known as the *Empire*.

During the year we lost by death George Silverthorne, bridge-tender, Bolsover, and David Galloway, caretaker of the dam at Norland, on the Gull river.

No serious accidents occurred throughout the year and the traffic was the largest in the history of the canal.

The water was kept at a steady and uniform height throughout the entire year, and there were no complaints from navigation interests, the lumbermen or power companies.

I am, sir,

Your obedient servant,

J. H. McCLELLAN,

Superintendent.

W. A. BOWDEN, Esq., C.E.,

Chief Engineer, Department of Railways and Canals,
Ottawa, Ont.

TRENT CANAL.

SUPERINTENDING ENGINEER'S OFFICE.

PETERBOROUGH, May 23, 1910.

W. A. BOWDEN, Esq.,
Chief Engineer,
Department Railways and Canals,
Ottawa, Ont.

DEAR SIR,—I have the honour to submit my annual report for the fiscal year ended March 31, 1910, covering the work of construction chargeable to 'Capital,' Trent canal.

ONTARIO-RICE LAKE DIVISION.

This division embraces the fifty-six and a half miles of all river route between Trenton on Lake Ontario and Rice lake, which will comprise when completed nine and a half miles of canal, thirteen miles of submarine channel and thirty-four miles of deep river whose average width will be about 500 feet. The rise between extreme low water level of Lake Ontario and normal navigation level of Rice lake is 369 feet, which rise will be overcome by 18 locks ranging from 9 to 27 feet in height. Fourteen concrete dams, with stop-log sluices, will be required for the regulation of the river, and at them 75,000 h.p. gross may reasonably be developed at the low water stage of the river, but this quantity may be increased somewhat by a larger expenditure in tail race excavation. The normal navigation level of the natural reaches of the river and Rice lake will be that of ordinary summer level, so that practically no damage will be done by flooding the land along the river and lake shores. In the rapids the dams will hold the river at as high a level as practical, which, in the majority of cases, will be lower than the top of the river banks. The canals and channels with sides showing above water will have a minimum bottom width of 80 feet except in two cases of short canals above locks where the bottom width will be only 50 feet, and the submerged channels will have a minimum bottom width of 100 feet, which will be marked at frequent intervals by small piers. The canals and submarine channels will have a depth of 9 feet.

There will be sixteen bridges, ten of which will be for highways and six for railways. They will be all swing or bascule spans, except that for the main line of the Grand Trunk railway at Trenton Junction, which will be a high level fixed bridge, under which there will be a clear head room of 27 feet at a stage of high water in Lake Ontario.

The locks will be of concrete and will have 8 feet 4 inches of water on the sills, with chambers 33 feet wide by 175 feet long between hollow quoins. They will accommodate barges of 1,000 tons, whose size will be about 150 feet long by 30 feet beam, and drawing 8 feet of water. Entrance piers of not less than 150 feet in length will be provided above and below each lock. The locks will be filled through culverts 4 feet wide by 5 feet high in the side walls, which will be equipped with 'wagon' valves for controlling the water. The lock gates will be of the solid timber type and the upper gates in all cases will be set on the top of lift walls. They will be operated by struts or bars working in hand power winches set in recesses, which will be formed in the lock walls.

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The total cost of the improvement of this part of the 'Trent Navigation' will amount to about \$6,750,000, the first vote for which was made by parliament during the session of 1907. The project involves the removal of about one and a half million cubic yards of earth, one and a quarter million cubic yards of loose and solid rock, and the building of about four hundred thousand cubic yards of concrete.

For construction purposes the division has been divided into seven sections, five of which are under contract, and tenders for the other two have been received. Of the total estimated cost of the division, about 75 per cent of the amount will be covered by the main contracts for the seven sections on which were expended for work done and materials delivered up to March 31, 1910, \$1,285,092.40. Locks Nos. 2, 3, 6, 7 and 14 and dams Nos. 2, 3, 6, 7, 11 and 12 are built.

The following tables give the location of the locks and dams with their respective lifts and hydraulic power:—

LOCKS.

No. of Section.	No. of Lock.	Miles from Trenton	Locality of Lock.	Lift of Lock.	WATER LEVELS.		Remarks.
					Lower Reach.	Upper Reach.	
1	1	1.8	Trenton Junct'n.	20 ft.	241.0	261.0	Elev. 241.0 is approx. extreme low water level of Lake Ontario, fall of 1895.
1	2	2.4	.....	20 "	261.0	281.0	
1	3	3.9	Glen Miller.....	27 "	281.0	308.0	
2	4	5.2	.....	18 "	308.0	326.0	
2	5	6.4	.....	18 "	326.0	344.0	
2	6	7.3	Frankford.....	16 "	344.0	369.0	
3	7	13.9	Glen Ross.....	9 "	360.0	369.0	
4	8	25.2	Percy Landing..	20 "	369.0	389.0	
4	9	26.4	.....	16 "	389.0	405.0	
4	10	27.9	.....	24 "	405.0	429.0	
4	11	29.6	Ranney Falls...	24 "	429.0	453.0	Nos. 11 and 12 are in flight.
4	12	29.6	".....	24 "	453.0	477.0	
5	13	32.1	Campbellford..	23 "	477.0	500.0	
5	14	33.6	Middle Falls...	25 "	500.0	525.0	
6	15	36.1	Crow Bay.....	22 "	525.0	547.0	
6	16	36.5	Heeley Falls...	27 "	547.0	574.0	Nos. 16 and 17 are in flight.
6	17	36.5	.....	27 "	574.0	601.0	
7	18	51.0	Hastings.....	9 "	601.0	610.0	Elev. 610.0 is normal level of Rice Lake.

Total rise, 369 feet.

DAMS.

No. of section.	No. of dam.	Miles from Trenton bridge.	Locality of dam.	WATER LEVELS.		WATER POWER.			Remarks.
				Upper.	Lower.	Available head in feet.	Low water flow cubic feet per second.	Gross horse-power.	
1	1	1.7	Trenton Junct'n.	261.0	243.5	17.5	2,000	3,977	At extreme low water level, elevation 241.0; of Lake Ontario a head of 20.0 feet can be obtained.
1	2	2.4	.....	281.0	261.0	20.0	2,000	4,545	A head of 27 feet can only be developed here with the consent and in conjunction with the Miller Bros., Ltd., who are now using a head of 9 feet here. In the event of their not consenting a head of only 15 feet can be obtained at dam No. 3.
1	3	4.6	Glen Miller.....	308.0	281.0	27.0	2,000	6,137	
2	4	5.2	.....	326.0	308.0	18.0	2,000	4,090	The water-power at this point is owned by the Trent River Paper Co., who have developed part of it. During high water in the spring the head of 16 feet will be reduced some.
2	5	6.6	.....	344.0	326.0	18.0	2,000	4,090	
2	6	8.1	Frankford.....	360.0	344.0	16.0	2,000	3,636	
3	7	14.2	Glen Ross.....	369.0	364.0	5.0	2,000	1,136	By a large expenditure of money a head of 9 feet could be obtained here. During high water the head of 5 feet at the dam may be reduced some.
4	8	26.4	Foot of Myers Island.	405.0	375.0	30.0	2,000	6,817	Thirty feet head requires about 25,000 cu. yds. of rock excavation for tailrace. Twenty-five feet head available with no tailrace excavation. Thirty-six feet head can be obtained at great cost for tailrace excavation in rock.
4	9	28.7	Head of Myers Island.	429.0	405.0	24	2,000	5,454	Considerable tailrace excavation required to get 24 feet head. About 21 feet head available with no tailrace excavation.
4	10	30.6	Ranney Falls...	477.0	429.0	48	2,000	10,908	The power on the river at this point is owned and controlled by various parties whose united consent would have to be obtained in order to develop the 48 feet head in the vicinity of lock No. 12. Otherwise only 15.5 feet head can be obtained at dam No. 10. The balance, 32.5 feet, would have to be developed by a second dam built by private enterprise.
5	11	32.5	Stephens Rapids, Campbellford.	500.0	477.0	23	2,000	5,227	Developed by the Seymour Power and Electric Co.
5	12	33.6	Middle Falls....	525.0	500.0	25	2,000	5,681	Developed by the Municipality of Campbellford.
6	13	36.8	Heeley Falls....	601.0	535.0	66	1,500	11,250	A head of 76 feet could be obtained at considerable expense for tailrace excavation.
7	14	51.0	Hastings.....	610.0	601.0	9	1,500	1,534	In high water the nine feet head will be reduced by backwater.

Total horse-power, 74,482.

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Section No. 1.—This section extends from Trenton to Glen Miller, a distance of about $4\frac{1}{2}$ miles, on which length of river there are three locks and dams.

A contract for the work was entered into with Messrs. Larkin & Sangster on March 10, 1908, and the total value of work done and materials delivered up to March 31, 1910, amounted to \$567,325.39 or about 60 per cent of the value of the contract. The principal items of work done are: 205,527 cubic yards earth, 156,270 cubic yards solid rock, and 42,425 cubic yards concrete. Locks and dams Nos. 2 and 3 are finished. The short canals leading into and out of these locks are partly excavated and their entrance piers are in course of construction. The pit for Lock No. 1 is being taken out, and the excavation for the canal below the lock is nearly finished.

One of the fixed spans at the east end of the Glen Miller highway bridge has been taken out, and a swing bridge built in place of it, which was opened for traffic at the end of February, 1909.

The Contractors have constantly maintained a good force and equipment on the works, which have been carried on by them in an energetic and workmanlike manner, and the close of this season will probably see the works of Section No. 1 completely finished at and north of the Grand Trunk Railway, Trenton Junction.

Grand Trunk Railway Bridge, Trenton Junction.—An agreement was entered into on June 9, 1909, with the Grand Trunk railway system for the construction of a bridge to carry the tracks of their main line over the canal at Trenton Junction.

Lock No. 1 is located immediately north of the railway embankment, and its lower walls are extended to the south side of the railway, which design permits of a high level fixed bridge being used for carrying the railway over the canal. The bridge is designed for three tracks, and also provides for raising them in the future at least seven feet. For the present the clear head room under the bridge at a stage of high water in Lake Ontario will be 27 feet, but when it is raised, the clearance may be 34 feet.

Owing to lack of funds, no work was done on the bridge during the fiscal year 1909-10, but construction was begun by the railway company last month, as the bridge must be built and finished before Messrs. Larkin and Sangster can complete the lower entrance piers and channel of lock No. 1.

Section No. 2.—This section extends from Glen Miller to Frankford, a distance of about $4\frac{1}{2}$ miles, on which stretch of river there are three locks and dams.

A contract for the work was entered into with Messrs. Dennon and Rogers on May 30, 1908, and the total value of work done and materials delivered up to March 31, 1910, amounted to \$159,952.39, or about 26 per cent of the value of the contract. The principal items of work done are: 38,709 cubic yards earth, 29,387 cubic yards solid rock, and 18,363 cubic yards concrete. Dam No. 6 is finished except the bridge across it and lock No. 6 is also finished except its lower entrance piers. Some excavation and part of the core walls for the short canal connecting lock and dam No. 6 have been done. The pivot piers and abutments or the swing bridge across the canal on Bridge street, Frankford, have been built, and the Hamilton Bridge Co., are now erecting the superstructure. A little excavation has been done at the sites of Locks Nos. 4 and 5, but no work has been done at dams Nos. 4 and 5.

The work on this section is proceeding very slowly and if the structures on it are to be finished concurrently with those on the other sections of the division, the contractors will have to provide more plant and maintain constantly a much larger force of men and teams than they have at present.

Section No. 3.—This section extends from Frankford to a point three miles west of Glen Ross, a distance of $7\frac{1}{2}$ miles. At Glen Ross there are a lock and dam, and two bridges.

A contract for the work was entered into with the Canadian General Development Co., Ltd., on April 24, 1908, and the total value of work done and materials

delivered up to March 31, 1910, amounted to \$151,042.32, or about 63 per cent of the value of the contract. The principal items of work done are:—10,948 cubic yards earth, 74,669 cubic yards solid rock, and 10,226 cubic yards concrete. Lock and Dam No. 7 at Glen Ross, and the short canal above and below the lock are finished. The bridges across the canal above the lock for the Frankford highway and the Central Ontario railway are also finished and in use. The Central Ontario railway bridge was placed in commission on April 29, 1909.

The whole of the work on this section is finished except the dredging in the river, which has not been touched, as the contractors have no dredging fleet on the ground, and may wait until they can bring one in from Lake Ontario.

Section No. 4.—This section extends from Adams landing, a point three miles west of Glen Ross to Campbellford, a distance of about 14 miles. There are between Bradley bay and Campbellford five locks, three dams and four bridges; and $1\frac{1}{4}$ miles of concrete retaining wall for enclosing the river through the town of Campbellford, together with a large quantity of earth and rock excavation. During the past two years the route of the canal through Campbellford was very carefully studied and the plans and specifications for letting the work were finally completed last winter and the work advertised, tenders for which were received on the 5th instant.

Section No. 5.—This section extends from Campbellford to Crow bay, a distance of 3 miles. On the section are two locks and dams.

A contract for the work was entered into with Messrs. Brown & Aylmer on September 28, 1907, and the total value of work done and materials delivered up to March 31, 1910, amounted to \$342,722.90, or about 62 per cent of the value of the contract. The principal items of work done are, 65,380 cubic yards earth, 39,248 cubic yards solid rock, and 31,552 cubic yards concrete. Dam No. 11 (Stephen's rapids), dam No. 12 and lock No. 14 at Middle Falls are entirely finished. The only structure on this section yet to build is lock No. 13 at Stephen's rapids, which will be built this season. The channel leading from Crow Bay to lock No. 14 will be finished early this summer, when the contractors intend moving their Lobnitz rock breaker and dredge down on to the reach between locks 13 and 14. The dredging fleet was built on Crow bay during the winter of 1907-8, and has since been employed on the bay.

At Middle Falls the municipality of Campbellford have built a hydro-electric plant between the river shore and lock 14, which they are operating under the terms of lease No. 18115. A development of 5,700 h.p. gross under a head of 25 feet may be obtained at this point during the low water stage of the river. The works comprise a forebay about 600 feet long, 11 feet deep and 50 feet wide cut out of solid rock; and a small power house built of rock faced ashlar, with a concrete pressure chamber in front of it divided into three separate compartments. No work was required to be done for a tail race. There are installed at present one 1,470 h.p. double runner turbine direct connected on a horizontal shaft to a 750 k.w. alternating current generator. Also one 80 h.p. turbine connected to a 55 k.w. direct current exciter. There are also switch boards, line instruments, lightning arresters, a hand power travelling crane, and a type N Lombard governor which maintains the speed within $\frac{1}{2}$ per cent normal. The three phase, 60 cycle current is generated and transmitted at 2,400 volts. The station is connected with the town by $2\frac{1}{2}$ miles of cedar pole transmission line, the conductors being plain bare copper wire No. 000. Within the corporation limits there are 15 miles of distribution line. Their lighting load at present is about 260 k.w. and they have to date sold to different parties in the town 140 h.p. The corporation have recently entered into an agreement with the Seymour Power Company by which it agrees to supply the company with 1,000 k.w. for a period of five years, and in pursuance of the above are proceeding to install a 1,950 h.p. turbine and a 1,000 k.w. generator. The hydraulic machinery was supplied by S. Morgan Smith, and the electric apparatus by the Allis-Chalmers-Bullock, Ltd., except the 1,000 k.w. generator

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which will be supplied by the Swedish General Electric Co. The corporation has at present a surplus power which it hopes will soon be taken up, when this is done, they intend to proceed with the full development of the minimum flow of the river at their power station. The plant was placed in commission on September 18, 1909.

At dam No. 11 (Stephen's rapids) the Seymour Power and Electric Company have built a hydro-electric plant on the east side of the river, about 1,000 feet below the dam. This plant is operated under the terms of lease No. 17829 granted to Mr. J. G. G. Kerry, and will develop under a 23 feet head at the low water stage of the river about 5,300 h.p. gross. The works consist of a forebay about 150 feet wide by 1,060 feet long contained between concrete walls, a concrete power house and a short tail-race. The superstructure of the building, which will be fully finished this summer, is of ashlar faced block. The equipment will consist of five double runner vertical shaft turbines of 870 h.p. each, installed in separate wheel pits built of reinforced concrete. Their operation is controlled by governors of the Monerett type, which are designed to automatically, and completely close the turbine gates in four seconds of time in case any accident occurs to the machinery. The alternating current generators are of the vertical shaft umbrella type with a rated capacity of 750 k.v.a. The house is equipped with both turbine driven and motor driven exciter set for maintaining the fields of the generators. It is also provided with an electric overhead crane furnished by the Advance Machine Works, Walkerville, Ont. There is a full switch board of modern type, oil switches, choke coils, lightning arresters, &c. The three phase 60 cycle current is generated at 2,400 volts and is stepped up to a transmission voltage of 44,000 volts. The hydraulic machinery was supplied by Messrs. Wm. Kennedy & Sons, Owen Sound, Ont., and the electric equipment by the Canadian Electric Company, Peterborough, Ont. The company have built an extensive system of cedar pole transmission line; the conductors used are aluminum cable of 7 strand No. 2, B.W.G., which is now so far advanced that power can be delivered to Marmora, Deloro, Madoc, Tweed, Sulphide, Stirling, Belleville and adjoining places. The completion of the plant was far enough advanced last fall for the company to begin the delivery of power, which they began delivering to Deloro mines on December 5, 1909. Since that date the plant has been in constant operation.

Section No. 6.—This section extends from the lower end of Crow bay to 1,000 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 14 miles of river reach between Heeley Falls and Hastings. The plans and specification for this section were finished last year and the work advertised this spring, tenders for which were received on April 26, 1910, and the contract for the construction of the section has been awarded to Messrs. Haney, Quinlan and Robertson.

Section No. 7.—This section extends from Heeley Falls to Rice lake, a distance of about 19½ miles. The principal works consist of a large quantity of earth and rock dredging in the river, a new lock and dam at Hastings, a new swing bridge at Trent bridge and new guide piers at the Grand Trunk railway bridge, Hastings.

A contract for the work was entered into with the Randolph Macdonald Company, Ltd., on January 4, 1909, but owing to the lack of funds only \$34,049.40 worth of work, chiefly dredging, and materials delivered were done by March 31, 1910. The company last year built a dredge, tug, scows and a drill boat. Last fall they built a coffer-dam around the pit for the new lock, and are now preparing to unwater it and proceed with the excavation of the foundation and construction of the lock, which will be finished this season. The new lock is located far enough below the highway swing bridge so as to permit the use of extension walls for the bridge to swing over instead of over the chamber as was the case with the old

lock, which was put out of commission on April 15, 1910, when its gates were unstepped and the dam surrounding the pit for the new one was closed.

BURLEIGH FALLS DAM.

During the fall of 1908 a survey of Lovesick lake was made with the object of ascertaining whether the level of the lake, which is about four feet lower than Deer bay, could not be raised up to the level of the latter and thereby drown out the lock and dams at Lovesick. The survey clearly demonstrated that this could be very readily and economically done, and the plans for the new concrete dam at Burleigh Falls to replace the present dilapidated wooden structure, originally built in 1888, were prepared accordingly. This scheme involves at a future date the construction of a single lock at Burleigh Falls of about 27 feet lift to replace the present flight lock at this point and the four feet lift at Lovesick.

A contract for the new dam, which will be located about 50 feet below the present one, was entered into with Messrs. Bishop & Buchannan on December 14, 1909. The work done and materials delivered up to March 31, 1910, amounted to \$2,194.76. The contractors have delivered some gravel, timber, &c., and will proceed with the execution of the work this season.

LINDSAY SECTION.

During the summer of 1908 a survey of the Scugog river at Lindsay was made, preliminary to the preparation of plans and specifications for a new lock, and dam at Lindsay, and a new bridge at Wellington street. A contract for the work was entered into with Messrs. John Ritchie & Co., on January 20, 1909.

The total value of work done and materials delivered up to March 31, 1910, was \$31,700.13. The work embraced in this contract will be completed early this summer. The lock is finished, and the gates built at Rosedale by this office last year will be stepped this month and the lock put in commission. The dam was finished last fall and its sluices materially assisted in maintaining a more uniform level of the river this spring than ever obtained before, and in the future no further trouble should be experienced by excessive and long continued high water on the river above Lindsay as has obtained every spring in past years.

The present lock and dam are built on the site of the original structures whose construction was begun by the province of Upper Canada in 1837 and finished in the fall of 1843. The 1843 lock would appear to have remained in commission up to 1859, when it was converted into a timber slide and remained as such until 1870, when it was rebuilt by the province of Ontario, which entered into a contract with Thomas Walters on February 3, 1870, for rebuilding it in timber, when it was again placed in commission in the spring of 1871. The walls were rebuilt on the old foundations without disturbing the mitre sills, and were again renewed in 1885.

When the lock was finished in 1843, or sometime afterwards a highway bridge was built across it, which remained in existence until after 1860 when it was replaced by a bridge on the line of Lindsay street below the lock.

The original dam was built about 246 feet long, but for some years past was only 167 feet long. In 1882 a canoe slide and platform was built over the end of it next the lock, which accounts in part for the shorter length of the dam in recent years. The difference in height between the sills of the lock and the crest of the dam as finished in 1843 would appear to have been 12 feet, which agrees exactly with the actual difference in height between the sills of the old lock and the highest point of the crest of the old dam as determined by us before they were removed last year. Considering the top of the stop-logs of the sluices of the new dam as part of the crest, the total length of crest of the new structure is 167 feet, or the same length as the old one, and its elevation is 46.6, or the same level as the highest point of the old crest. The new dam has

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two stop-log sluices each 15 feet long by five feet deep for the purpose of providing free discharge for spring or other floods.

	Distance from centre line of Lindsay St. bridge to upper H. Quoins.	Length of lock between H. Quoins.	Coping of lock.	Upper mitre sill.	Lower mitre sill.	Upper stop-log sill.
	Feet.	Feet.		Elevations. Construction datum of new lock.		
Old lock.....	191.4	133	49.6	34.6	34.5	39.5
New lock.....	202.9	142	49.6	36.77	33.0	38.27

The centre line of the old and new locks is the same. Normal water level above the lock is elevation 46.6, and below it elevation 40.0.

On April 6, 1910, a contract was entered into with the Hamilton Bridge Works Company, Ltd., for the superstructure of the new Wellington street bridge, which is to be a Strauss Trunnion Bascule bridge, embracing a 73-foot deck plate girder movable span, which will be operated by electricity. The electrical equipment will be provided by the Canadian General Electric Company, the whole of which is to be finished and ready for operation by September 1, 1910.

ROSEDALE SECTION.

The works of this section consist of a canal across the narrow peninsula between Cameron and Balsam lakes, a lock, dam and dredging in the Gull river between its confluence with the canal and deep water in Balsam lake. The lock is the same size as those of the Ontario-Rice lake division, and the canal and river channel will be 100 feet wide on the bottom with a depth of 9 feet at normal lake levels. The distance via the new canal between the 9 feet contours in Cameron and Balsam lakes is 1.8 miles, or 1.2 miles shorter than via the Gull river and the old lock.

A contract for the construction of this section was entered into with the Randolph Macdonald, Company, Ltd., on February 24, 1908, and the total value of work done and materials delivered up to March 31, 1910, amounted to \$134,919.74. The principal items of work done are: 195,000 cubic yards earth, 4,600 cubic yards solid rock, and 7,740 cubic yards concrete. The lock and its entrance piers are finished, and also the excavation for the canal, and some dredging has been done in the Cameron lake channel and in the Gull river. The gates for the lock were built on the ground by this office last year and stepped early this month, and upon removal of the cofferdam at the head of the canal this week, the new lock will be placed in commission and the old one closed to navigation. The dam which is located 1,500 feet higher up the river than the old one will be built this summer, and it is expected that the whole of the works will be completed this season except the dredging.

The improvements now in progress will replace the old wooden lock and dam built by Mr. Wm. Whiteside who in 1869 entered into a contract with the provincial government for their construction. The lock was not finally completed and placed in commission until late in 1873. His contract also included the building of a swing bridge across the river at this point, which was replaced by the Dominion government in 1897 by a steel swing span erected on a concrete substructure. In 1897 the Dominion government also completed the excavation of a channel 90 feet wide by 7 feet

deep in the river between the old lock and Balsam lake, which channel up to then was only about $3\frac{1}{2}$ feet deep.

HOLLAND RIVER DIVISION.

This division is divided into two sections. Section No. 1 extends from Cook's bay, Lake Simcoe, to Holland landing, on the east branch of the Holland river, a distance of $8\frac{1}{2}$ miles. Section No. 2 extends from Holland landing to Newmarket, a distance of $4\frac{1}{2}$ miles. The whole of section No. 1 is on the Lake Simcoe level, and the total rise between Holland Landing and Newmarket is 43 feet, which will be overcome by three locks.

Section No. 1.—A contract for the construction of this section, chiefly dredging, was entered into with the Lake Simcoe Dredging Co., on August 30, 1906.

The company had only dredged 12,392 cubic yards of material at the close of the season 1907 when they abandoned the work, and the department took it out of their hands in May, 1908.

A final estimate in favour of the Lake Simcoe Dredging Co. amounting to \$2,465.20 for the work done was sent into the department in October, 1908.

This section has not been re-let.

Section No. 2.—A contract for the construction of this section which consists of three locks, three dams, four highway bridges, one dock and a large quantity of earth excavation, stone protection, lining, &c., was entered into with Mr. John Riley on February 12, 1908, and assigned by him to Messrs. Russell, Dill and Lothian, on February 19, 1908, and by them to the York Construction Co., Ltd., on April 3, 1908, who are carrying on the work.

The total value of the work done and materials delivered up to March 31, 1910, amounted to \$225,062.32, or about 37 per cent of the value of the contract. The principal items of work done are: 420,000 cubic yards earth, 10,050 cubic yards concrete, 13,150 lineal feet of piles driven, 4,600 cubic yards stone protection in place, and 12,740 cubic yards puddle. There are delivered on the work ready for placing 4,590 cubic yards stone protection, all the steel reinforcing required for dams, timber for stop-logs, hollow quoin casings for Locks 1 and 2, &c. Lock and Dam No. 3 located about one mile below Huron street, Newmarket, are finished, except the lower entrance piers of the lock and the foot bridge across the dam. The Newmarket dock is half built, which will be finished this season, together with lock and Dam No. 3, and the mile of canal between them. About 52 per cent of the excavation on the section has been done, and it is the contractors' intention to devote most of their energies to completing this part of the work this season, for which purpose the steam shovel has been moved down to reach 1-2; and reaches 2-3, and Newmarket will be finished by scraper teams, and the Lake Simcoe reach below Lock No. 1 will be excavated by a cableway erected last year for this purpose. Green Lane bridge situated half a mile below Lock No. 3 is finished and in commission. No work has been done on Locks 1 and 2 and their highway bridges, nor at the high level bridge for the Bradford road.

Queensville Road Bridge.—This bridge crosses the east branch of the Holland river, about two miles north of Bradford road, Holland landing. A contract for the substructure of the bridge was entered into with Messrs. D. Couroy & Sons on December 1, 1906, and was finally completed by them in June 1908. A final estimate for the work amounting to \$18,212 was sent in to the department in January, 1909.

A contract for the superstructure of the bridge was entered into with the Dominion Bridge Co., on October 12, 1906, for \$4,872, which they finally completed on August 21, 1907, and the bridge was placed in commission that fall.

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Water Supply.—Last year the whole of the valley between Newmarket and Aurora was surveyed and cross-sectioned for the purpose of determining the location and size of the reservoir dams required for supplying the canal with water between Newmarket and Holland landing. Plans for this purpose are now being prepared. Last June concrete measuring weirs were built on the river south of Newmarket and also on the Bogartown branch of the river, at which tri-weekly readings and oftener during rainy weather have since been taken for the purpose of accurately and positively determining the run off of the valley. These readings will be continued until the reservoirs have been built and finished.

BRIDGES.

A contract was entered into with the Hamilton Bridge Works Co., Ltd., on October 10, 1908, for the manufacture and erection of six highway swing bridges and one railway swing bridge.

The highway swing bridges at Glen Millar, Glen Ross and Green Lane are finished and in commission. The swing span for the Central Ontario Railway at Glen Ross has also been finished and placed in commission. The highway bridge at Frankford has been erected, but will not be in commission until the approaches to it are finished by the contractors for the substructure. The highway spans for Yonge street, Holland landing and second concession road, section 2, Holland river division are fabricated, and stored in the company's yards at Hamilton ready for shipping.

On April 6, 1910, a contract was entered into with the Hamilton Bridge Works Co., Ltd., for the manufacture and erection of a Strauss Trunnion Baseule highway bridge for Wellington street, Lindsay, according to the plans and specifications prepared by the Strauss Baseule and Concrete Bridge Co., Chicago. This bridge will have a 73 feet movable leaf and is to be ready for operation on September 1 next. It will in all probability be the first bridge of the kind erected and finished in Canada.

WAGON VALVE FOR LOCKS.

A contract for the manufacture and erection of the wagon valves required for the filling culverts of the new locks and regulating sluices of the canal was entered into with the Dominion Bridge Co., Ltd., on October 5, 1908. Since that date the valves for Locks 7 and 14 of the Ontario-Rice Lake division and those for the Rosedale lock have been installed, and the company are at present installing those for Locks 2, 3 and 6 of the Ontario-Rice Lake division. A large part of the metal for the balance of the valves is fabricated and stored in the company's yards at Dominion, Que., ready for shipping.

The 'wagon' valve is a modified type of the 'stone' valve. It may be described as a counterweighted iron gate mounted on two pairs of large wheels, which travel upon rails bolted to a rigid steel frame embedded in the side walls of the wells formed over the culverts in the concrete walls of the locks. The counterweights move in guides and follow the motion of the valves. The characteristics of the valve are:—that the bearing is always on the rails through the wheels; and that the vertical and upper horizontal water seals of the valve are made by adjustable bronze plates which make a planed surface contact with the faced sides of the steel cast guide rails and upper seating on valve frames respectively. The seals do not make the valve absolutely water tight. The valves are erected on the down stream side of their respective wells, and the valves with their water seals can be adjusted, or taken out for repairs and replaced, without the aid of a diver, or disturbing their operating winches at the top of the wells. The valve openings are 4 feet wide by 5 feet high and the valves are designed to work under heads varying from 4 to 40 feet.

On March 5, 1909, the Dominion Bridge Company made a series of tests to find the tractive effort required for working the valves. A set of rails were placed hori-

zontally and the tests were all made with dry bearings. With the valve alone, weighing 2,300 pounds and no external load, the total tractive effort required to move it was 65 pounds. A load of 40,000 pounds was then placed on the back of the valve and the total tractive effort required to move it was 1,500 pounds, on repeating the test on the unloaded valve at conclusion of tests the total tractive effort required was found to be reduced to 55 pounds. A dynamometer was used for measuring the pull in each case. The tractive effort required to move the valve was less than 4 per cent of the total load throughout the tests.

When the valves were installed at the Middle Falls lock, an opportunity was afforded of testing them under a head of 11 feet. Two men easily and fully opened the valve (5 feet rise) in thirty seconds, and one man in 45 to 75 seconds. The valve opens easily for the first 12 to 15 inches, when a decided increase in load occurs for a few seconds only and which rapidly eases off as the valve rises. In no case did the load tend to re-act on the horizontal levers (4 feet radius) of the winches, and the grip at the levers could be released at any time under any condition of load without the winch running back on the operator, the load being held steadily by the mechanical brake with which the winches are equipped. Whenever the operators let go the levers, the reverse action at the handles was only from 2 to 3 inches in extent at the most, when releasing the grip.

The following tests were made in the Dominion Bridge Co.'s shops at Dominion on one of the above mechanical brakes on February 5, 1909.

A lever of 96 inches effective length was attached to the brake gear wheel, and a similar lever to the brake shaft below the brake discs. Hand power was applied to the lever to raise a load carried on a platform and suspended by a rope over a pulley, thence to the second lever below the brake disc. A load producing a torque of 6,970 inch pounds on the brake shaft was readily raised, and completely controlled by one man. A load producing a torque of 14,440 inch pounds on the brake shaft was readily raised, and completely controlled by two men. A load producing a torque of 25,100 inch pounds on the brake shaft was readily raised, and completely controlled by four men. In all cases one man alone completely controlled the lowering, and the brake automatically held the load on releasing the handles, only a few inches fly back at the end of the hand lever was observed on relasing it at any time during the tests.

A provision for 9,800 pounds as a maximum load on the valve chain was the basis of strength, with a counterweight of 1,800 pounds, leaving a net load of 8,000 pounds to be dealt with by the winch. The brake shaft torque required to deal with this load, that is to say, to sustain it, was estimated at 16,000 inch pounds.

It was now decided to test the limit of usefulness of the brake and a load producing a torque of 46,600 inch pounds on the brake shaft was applied; no attempt was made to raise the load by handpower, but the lowering was readily controlled by one man exercising ordinary care. The brake began to slip with this load, which may be taken as its useful limit. No sign of weakness could be found on examining the brake, during or after the application of this load.

LOCK GATE OPERATING MACHINES.

A contract was entered into with Mr. Herbert B. Collier on May 7, 1909, for the supply and delivery of the operating machines, anchorage fittings and pivots required for the lock gates of the new locks along the canal.

The operating machines, anchorage fittings and pivots for the Rosedale and Lindsay locks have been installed, and those for Lock No. 3, Holland river division, and for Locks 2, 3 6, 7 and 14, Ontario-Rice Lake Division, have been delivered and partly installed.

The contractor has also finished and stored ready for shipping when required, in the Wm. Hamilton Co.'s shops, Peterborough, a large part of the machines, anchorage fittings and pivots required for the other locks embraced in his contract.

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GENERAL.

Cement.—About 81,500 barrels of Portland cement were used on the works during the year. It was supplied and delivered under contract by the Lakefield Portland Cement Company.

Lock gates.—The lock gates for the Rosedale and Lindsay locks were built by this office at Rosedale last year. Mr. Jas. A. Hadcock had immediate charge of the work and carried it out in a first class and workmanlike manner. The gates are of the solid timber type and are built of British Columbia fir, which was supplied by Messrs. Mason, Gordon & Co., Montreal, and the metal work was fabricated and delivered by the William Hamilton Co., Peterborough.

The gates for the Rosedale lock were stepped last week, and those for the Lindsay lock are being delivered and will be stepped this week.

Lake surveys.—No charts of the chain of lakes which form part of the Trent navigation have ever been made, and with the object of making a complete and reliable set of charts of these inland waters, hydrographic surveys of the lakes were begun two years ago, which have since been intermittently carried on. The field work for the surveys of Rice, Lovesick, Sturgeon, Cameron and Balsam lakes and the Otonabee river are practically finished and next winter the surveys of Katchewanoe, Clear, Stoney, Deer, Buckhorn and Pigeon lakes will be proceeded with. Very little office work in connection with the charts has yet been done.

In the fall of 1908 the Geodetic branch of the Public Works Department ran a line of precise levels from a Lake Ontario gauge at Brighton to Orillia, *via* the Grand Trunk railway to Trenton, and thence by the C. O. railway to Anson Junction, and thence *via* the Midland division of the Grand Trunk railway to Orillia where they connected with their Toronto-North Bay line of levels ran some years before in connection with the Georgian Bay canal survey. Since then this office has run branch lines from the above line of levels between Peterborough and Lindsay *via* the lakes and between Lindsay and Rosedale; in order that the hydrographic surveys of the lakes and all work thereon in future could be referred to a common datum, *viz.*, mean sea level, New York.

I am, sir,

Your obedient servant,

ALEX. J. GRANT,

Superintending Engineer.

SAULT STE. MARIE CANAL.

ENGINEER'S OFFICE,

SAULT STE. MARIE, ONT., April 1, 1910.

SIR,—I have the honour to submit my annual report on the improvements in progress to the upper entrance of the Sault Ste. Marie canal for the fiscal year ending March 31, 1910.

DREDGING UPPER ENTRANCE.

The contract entered into with Mr. C. S. Boone for the deepening and widening through the Vidal shoals situated about two miles above the lock, was brought to a satisfactory completion November 12, 1909, which provided for a channelway of 500 feet in width and a depth of 21 feet, 5 inches at low water stage.

A contract was entered into with Mr. J. J. Collins for the widening of the channelway on the north side from the westerly end of the north pier (under construction) and on line with same extending westerly to intersect with a production of the northerly limit of the channel as defined passing through the Vidal shoals. The depth to be secured to be on a plane of 21 feet 5 inches below the lowest recorded water line. Work was started on this contract October 27, 1909, but owing to the lateness in the season very little progress was made.

RANGE BEACON—UPPER ENTRANCE.

During the coming season, it is proposed to remove the Beacon range and a small shoal in the vicinity of same. The Beacon stands within the limits of the improved channel and is much in the way of vessels turning between the upper channel and canal lock reach. The Department of Marine will put in place a permanent range for the upper channel outside the channel limits.

STUDIES FOR A POSSIBLE ADDITIONAL LOCK AT THE SOO.

During the latter part of the year preliminary surveys were started for a proposed new ship canal. Three lines were laid down over which levels have been taken, one to the north of the present canal and two to the south. From the information obtained the line farthest south is looked upon the most favorably. The surveys so far have been of a very preliminary nature and much data must be obtained before the most favorable location for a new canal can be determined. This coming season it is proposed to sound the possible approaches and gather such data as will be necessary to form an approximate estimate of the cost of a lock that will meet the requirements of the estimated increase and development of lake commerce.

A study of the requirements of so important an undertaking must receive the most careful attention of those entrusted with its development, and should not be hampered by time which is so often the case in large public works which are started sometimes before the designs have been worked out.

I desire to draw attention to a few facts that have come before my attention and which lead me to believe that the time is now opportune for a serious consideration of the requirement of a new lock and canal in the near future on the Canadian side of the St. Mary's Falls.

At the present time the United States government have undertaken the construction of a new lock to be known as the 'Davis lock,' and have under consideration

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another lock of like dimensions to the Davis lock which is to be 1,350 feet long by 80 feet wide in the chamber, with a depth of 25 feet at low water stage on the mitre sill. Work has already been started and it is contemplated the new Davis lock will be put in commission in the year 1914.

The immediate need of this new undertaking has been forcibly demonstrated during the past season of navigation. Serious accidents have happened to both the Canadian and Poe locks which might be termed unavoidable, with the result that for days at a time, while repairs were being hurried forward to put the lock in commission, expensive delays were necessitated to lake traffic. On one occasion the number of vessels awaiting lockage and at anchor reached the enormous number of eighty, representing about 450,00 tons of freight delayed in transmission. The delay to some of the boats on this occasion reached three days. Outside the feature of accidents, it is frequently noted that a slight congestion in traffic will mean the loss of as much as six hours and more which should the same conditions occur frequently would amount to the value of an extra trip or more to the vessels so detained.

The channels between the lakes have been deepened to provide a greater draft than the present locks at Sault Ste. Marie will allow, and with the opening of the new Davis lock an increase of two feet in draft will be provided with a further allowance of four feet to make easier the passage of vessels in and out of the lock.

The depth of the channels connecting the lakes has been increased since the opening of the Canadian and Poe locks $4\frac{1}{2}$ feet, and in the lower approach to the Canadian lock the channel was deepened 3 feet in the same period. From the above it may be deducted that there is $1\frac{1}{2}$ feet more water provided than in the Canadian canal approach at the lower entrance. Which means that there are two feet nine inches more than there is on the floor of the lock chamber of the Canadian lock.

This additional depth of $4\frac{1}{2}$ feet provided in the channels connecting the lakes secures a depth of 21 feet when Lake Huron stands at low water stage (elevation, 579.00) which means a draft for loading of twenty feet at extreme low stage which will increase to 22 feet during the season of navigation.

It is not contemplated that a greater depth than 21 feet will be provided in the channels between the lakes, although the new Davis lock when completed will pass through a draft of 24 feet, but to insure that draft in the channels would mean a tremendous amount of work at a very great outlay.

With the depth now available careful watch is kept of the stage of water and advantage is taken of any increase to load the vessels deeper. A recommended draft is issued from the canal offices which is obtained from the mean stage as recorded by the water gauges.

During the past season the recommended draft of the Canadian lock for up bound was in excess of six inches of that of the American lock due to the difference in the controlling elevations of the locks, and for down bound, with the same controlling elevations, an additional draft was obtained by opening the filling valves and raising the water in the lock chamber, which could not be done to the same extent in the Poe lock chamber owing to the additional width of forty feet over the Canadian lock.

The result of this additional draft provided at the Canadian lock is marked by the great increase in tonnage this past season. Vessels were loaded at the ore docks for the lock to be used in transit and as many used the lock of greater draft as it was possible to accommodate at the time of passage.

The opening of part of the improved channelway at the upper entrance made it possible for vessels to use the full draft of the Canadian lock this season.

The deepening of the upper approach to the Canadian canal has provided 21 feet, 5 inches at extreme low water level, and 24 feet 5 inches at the regulated stage to be maintained.

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Vessels navigating the lakes have increased to a length of 607 feet and 60 feet beam and can draw over 21 feet of water. With the coming of these large vessels, the time taken up in approaching, locking, and clearing has increased.

A notable increase in the Canadian tonnage has been made in the past five years. The statistics show that the Canadian registered tonnage, relative to the Canadian canal, increased from 1,557,337 tons in 1904, to 2,912,586 tons in 1909.

The reasons for proposing a new canal at Sault Ste. Marie are: First, to keep pace with the rapid increase in Canadian tonnage with the development of the west. Secondly, to provide a lock of a width that will accommodate boats now plying on the lakes and being built of greater beam than the present lock will pass through. Thirdly, to provide additional draft both in the lock and approaches so that vessels may load to pass through the Canadian canal drawing as much water as will be provided by the new canal now under construction by the United States government.

I have the honour to be,

Your obedient servant,

F. B. FRIPP,

Engineer in Charge.

W. A. BOWDEN, Esq.,
Acting Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

ST. PETER'S CANAL.

March 31, 1910.

SIR,—I have the honour to submit my annual report of work and operation St. Peter's canal, under my charge during the fiscal year ending March 31, 1910.

The only repairs done to canal the past year was the placing of six new mooring posts, the hanging of 7 fenders, reaving 5 new chains.

The canal lock is still in a bad condition. We had to get the marine diver on two occasions last fall to clear away foul chains and shimmer up track, &c. The operating of gates is very heavy, particularly at low tide; when the tide is high they are more or less buoyant and come easier. You will find report of Mr. Sargent, C.E., inspecting engineer, September, 1908, which will give you an idea of conditions and the necessary repairs and improvements required on lock and canal. However, barring accidents, I think we can manage the operating for at least the coming season. Captains and crews of steamers and vessels are very off-handed in helping to move the gates, and it would not surprise me that at the opening of navigation this spring, I will require one or two more men on the canal staff.

Navigation opened on April 12, 1909, and closed January 11, 1910; during that time, 1,304 steamers and vessels passed up and down canal.

There is one tidal lock and four pairs of gates on St. Peter's canal.

Meantime, I have the honour to be,

Your obedient servant,

JOHN H. DEVEREUX,

Lockmaster.

W. A. BOWDEN, Esq.,
Acting Chief Engineer,
Railways and Canals,
Ottawa.

PART VIII.—MISCELLANEOUS.

Table of distances, Intercolonial and Prince Edward Island Railways.

INTERCOLONIAL RAILWAY.

Expenses, earnings, freight tonnage and passengers 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.
 Ocean-borne goods 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 passenger business at Halifax for fiscal year 1909-10.
 Ocean-borne passenger business at St. John for the fiscal year 1909-10.
 Ocean-borne passenger business at Quebec for fiscal year 1909-10.
 Ocean-borne freight traffic via Halifax for fiscal year 1909-10.
 Ocean-borne freight traffic via St. John for fiscal year 1909-10.

WINDSOR BRANCH.

Earnings, expenses and profits or losses, yearly from 1880.

PRINCE EDWARD ISLAND RAILWAY.

Expenses, earnings, freight and passenger traffic, 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.
 Dates of opening and closing of canals for the season of 1909.
 Freight traffic in 1908 and 1909.
 Diagrams showing dimensions of smallest lock on each canal, &c.
 Dimensions and other features of the several canal works, and descriptions 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. Peters Canal.

INTERCOLONIAL RAILWAY.

The Intercolonial railway touches six Atlantic ocean ports, namely, Point du Chêne, Pieton, 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, 1910, was 1,447.13 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.

(As remeasured in 1908.)

	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.	13.45
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
Pictou to Oxford Junction.	69.39
Brown's Point to Stellarton.	11.90
Junction near New Glasgow to Pictou 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.	124.80

1,406.83

LEASED.

Length of main line from Pointe Lévis to Hadlow.	1.48	
Chaudière Curve to Chaudière.	1.19	
Ste. Rosalie Junction to Montreal.	37.63	40.30

Total miles. 1,447.13

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
Courtney 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
Blackville to Indiantown.	8.50
Fort Lawrence Spur	1.18
Wallace Spur.	2.00
Petit Rocher Spur to wharf.	1.35
	43.54

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.

LENGTH OF LINE.

	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
	267.5

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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 since July 1, 1876.

Year.	Average Miles in Operation.	Working Expenses.		Gross Earnings.		Profit.		Loss.		Tons of Freight carried.	No. of Passengers carried.
		\$	cts.	\$	cts.	\$	cts.	\$	cts.		
1876-77	714	1,661,673	55	1,154,445	33			507,228	22	421,327	613,420
1877-78	714	1,816,273	56	1,378,946	78			432,326	78	522,710	618,957
1878-79	714	2,010,183	22	1,294,009	69			716,083	53	510,861	640,101
1879-80	829	1,603,429	71	1,506,298	48			97,131	23	561,924	581,483
1880-81	840	1,759,851	27	1,760,393	92		542		65	725,777	631,245
1881-82	840	2,069,657	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	2,583,999	67	2,450,093	88			133,905	79	1,023,788	932,880
1886-87	977	2,922,369	62	2,600,116	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	1,094	3,662,341	94	2,977,395	38			684,946	56	1,304,534	1,298,304
1891-92	1,142	3,439,377	00	2,945,441	97			493,935	03	1,264,575	1,297,732
1892-93	1,142	3,045,317	50	3,065,499	09		20,181		59	1,388,080	1,292,878
1893-94	1,142	2,981,671	98	2,987,510	27		5,838		29	1,342,710	1,301,062
1894-95	1,142	2,936,902	74	2,940,717	95		3,815		21	1,276,816	1,352,667
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	5,460,422	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	6,196,633	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	7,581,914	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	9,328,021	55	8,527,069	46			800,952	09	3,573,972	2,907,287
1909-10	1,447	8,645,070	33	9,268,234	99		623,164		66	3,927,240	3,122,324

† The year 1906-07 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.

1 GEORGE V., A. 1911

INTERCOLONIAL RAILWAY.

STATEMENT of Earnings, yearly, from July 1, 1876, to March 31, 1910.

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	651,296	94	1,303,496	00	124,470	72	2,079,262	66
1882-3.....	840	741,992	72	1,487,601	98	141,326	40	2,379,910	10
1883-4.....	887	775,783	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	884,448	07	1,932,877	85	166,010	13	2,983,336	95
1888-9.....	971	906,246	47	1,909,094	44	152,460	09	2,967,801	00
1889-90.....	971	895,094	53	1,964,646	86	152,993	48	3,012,739	87
1890-1.....	1,094	962,316	88	1,854,629	88	160,448	62	2,977,395	38
1891-2.....	1,142	961,427	94	1,803,529	03	180,485	00	2,945,441	97
1892-3.....	1,142	1,002,912	74	1,868,853	84	184,468	80	3,063,499	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	4,128,256	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	83
1905-6.....	1,446	2,297,716	52	5,019,803	53	326,307	85	7,643,829	90
1906-7.....	1,448	1,952,438	88	4,032,745	00	263,127	12	*6,248,311	00
1907-8.....	1,448	2,711,416	98	6,054,493	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

* As remeasured in this year. † 1906-07, 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, 1910.

Year.	Miles in Operation.	Local Freight.	Through Freight.	Total.
1876-7.	714	The information for these years was destroyed when the general offices in Moncton were burned.		421,327
1877-8.	714			522,710
1878-9.	714			510,861
1879-80.	829			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	424,656	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	3,227,435	906,629	4,134,064
1908-9.	†1,447 13	2,742,454	831,518	3,573,972
1909-10.	1,447 13	2,958,642	968,598	3,927,240

* 1906-07 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, 1910.

Year.	Miles in Operation.	Number of Local Passengers.	Number of Through Passengers.	Total.
1876-7.	714	The information for these years was destroyed when the general offices in Moncton were burned.		613,420
1877-8.	714			619,957
1878-9.	714			640,101
1879-80.	829			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	944,636
1884-5.	941	812,028	145,200	957,228
1885-6.	946	784,817	148,063	932,880
1886-7.	977	814,032	128,732	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	1,112,695	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	1,603,095
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	2,255,013	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	2,044,847
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

* 1906-07 nine months only.

† As remeasured in this year.

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The following table shows the number of Tons of Coal carried over the Intercolonial 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	453,585
1887-8.....		183,704	36,228	309,727	529,659
1888-9.....		160,026	27,923	338,538	526,487
1889-0.....		164,453	25,126	366,967	554,546
1890-1.....		113,996	69,213	344,829	498,038
1891-2.....		35,447	5,918	392,441	433,806
1892-3.....		136,868	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
1898-99.....		4,644	5,399	484,163	494,206
1899-1900.....		3,495		599,714	603,289
1900-1.....	136			506,454	506,590
1901-2.....	1,131	5,763	3,640	546,986	557,520
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

*1906-07 nine months only.

1 GEORGE V., A. 1911

TABLE showing the number of Bushels of Grain carried during each year over the Interecolonial railway for shipment since July 1, 1876.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-77				1893-94	Nil	8,026	8,026
1877-78				1894-95	"	Nil.	Nil.
1878-79				1895-96	"	"	"
1879-80				1896-97	"	"	"
1880-81				1897-98	8,000	"	8,000
1881-82				1898-99	30,000	"	30,000
1882-83	31,011		31,011	1899-1900	13,239	"	13,239
1883-84	73,389		73,389	1900-01	147	"	147
1884-85	300,901		300,901	1901-02	Nil.	"	Nil.
1885-86	389,122		389,122	1902-03	"	"	"
1886-87	575,880		575,880	1903-04	147,438	"	147,438
1887-88	69,021		69,021	1904-05	Nil	"	Nil.
1888-89	129,725		129,725	1905-06	*170,000		170,000
1889-90	502,012		502,012	1906-07			Nil.
1890-91	148,803	59,543	218,337	1907-08			"
1891-92	845,997	519,500	1,265,497	1908-09			"
1892-93	156,306	197,666	352,975	1909-10			"

* Via Montreal. 1906-1907 nine months only.

TABLE showing the number of Barrels of Flour and Meal carried during each year over the Interecolonial railway since July 1, 1876.

Year.	Barrels.	Year.	Barrels.
1876-77	254,710	1893-94	944,967
1877-78	557,778	1894-95	938,351
1878-79	630,329	1895-96	822,097
1879-80	535,248	1896-97	847,701
1880-81	672,310	1897-98	987,408
1881-82	692,095	1898-99	1,157,250
1882-83	983,916	1899-1900	1,234,077
1883-84	817,134	1900-01	1,292,106
1884-85	935,977	1901-02	1,311,707
1885-86	761,127	1902-03	1,521,540
1886-87	763,894	1903-04	1,607,050
1887-88	871,838	1904-05	1,769,450
1888-89	948,514	1905-06	1,882,630
1889-90	1,116,050	1906-07	1,531,140
1890-91	1,013,129	1907-08	1,528,620
1891-92	954,015	1908-09	1,466,920
1892-93	856,913	1909-10	1,608,170

1906-07, nine months only.

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TABLE showing the number of Bushels of Grain carried during each year over the Inter-colonial railway since July 1, 1876.

Year.	Bushels.	Year.	Bushels.
1876-77.....	292,852	1893-94.....	1,304,684
1877-78.....	331,170	1894-95.....	1,036,384
1878-79.....	302,921	1895-96.....	1,064,385
1879-80.....	534,021	1896-97.....	1,093,499
1880-81.....	505,678	1897-98.....	1,551,372
1881-82.....	560,253	1898-99.....	2,595,353
1882-83.....	1,195,601	1899-1900.....	2,720,453
1883-84.....	654,673	1900-1901.....	3,535,364
1884-85.....	734,902	1901-02.....	2,959,761
1885-86.....	849,800	1902-03.....	3,392,252
1886-87.....	1,018,395	1903-04.....	2,788,772
1887-88.....	1,219,035	1904-05.....	3,317,910
1888-89.....	1,256,158	1905-06.....	2,924,226
1889-90.....	2,610,202	1906-07.....	2,231,864
1890-91.....	2,890,921	1907-08.....	4,567,245
1891-92.....	3,776,677	1908-09.....	4,727,268
1892-93.....	1,514,619	1909-10.....	7,074,042

1906-07 nine months only.

TABLE showing the quantity of lumber in feet carried during each year over the Inter-colonial railway since July 1, 1876.

Year.	Feet.	Year.	Feet.
1876-77.....	50,096,474	1893-94.....	200,507,949
1877-78.....	56,626,547	1894-95.....	202,247,269
1878-79.....	55,626,696	1895-96.....	226,332,715
1879-80.....	55,462,654	1896-97.....	243,355,725
1880-81.....	72,841,388	1897-98.....	354,093,816
1881-82.....	78,356,418	1898-99.....	306,554,031
1882-83.....	104,633,417	1899-1900.....	379,350,074
1883-84.....	131,120,948	1900-1901.....	396,858,964
1884-85.....	138,493,675	1901-02.....	428,051,029
1885-86.....	117,186,512	1902-03.....	459,231,589
1886-87.....	161,801,763	1903-04.....	465,379,803
1887-88.....	197,755,272	1904-05.....	518,434,310
1888-89.....	199,507,777	1905-06.....	572,878,600
1889-90.....	210,886,071	1906-07.....	452,602,703
1890-91.....	184,188,324	1907-08.....	754,759,383
1891-92.....	175,474,340	1908-09.....	571,395,101
1892-93.....	181,211,013	1909-10.....	677,805,611

1906-07 nine months only.

1 GEORGE V., A. 1911

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	1893-94.....	79,203
1877-78.....	46,498	1894-95.....	72,106
1878-79.....	47,584	1895-96.....	64,051
1879-80.....	70,990	1896-97.....	72,082
1880-81.....	61,574	1897-98.....	89,301
1881-82.....	73,479	1898-99.....	109,821
1882-83.....	68,338	1899-1900.....	92,813
1883-84.....	60,090	1900-01.....	95,923
1884-85.....	70,785	1901-02.....	98,495
1885-86.....	74,498	1902-03.....	127,060
1886-87.....	82,896	1903-04.....	113,006
1887-88.....	98,302	1904-05.....	110,670
1888-89.....	85,960	1905-06.....	106,589
1889-90.....	80,771	1906-07.....	97,381
1890-91.....	95,529	1907-08.....	99,824
1891-92.....	87,889	1908-09.....	104,165
1892-93.....	93,369	1909-10.....	106,712

1906-07 nine months.

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 Mont- real 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.....		9,719		23,835	33,571
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	3,687	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

1906-07 nine months only.

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TABLE showing the number of Tons of Raw and Refined Sugar carried over the Inter-colonial Railway during each year since 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			13,872		4,022		2,902	6,924
1881-82.....		14,256		1,290	15,546		7,146		3,607	10,753
1882-83.....		9,465		508	9,973		11,126		5,497	16,623
1883-84.....		13,778		3,068	16,846		14,543		7,265	21,808
1884-85.....		10,381		3,661	14,042		18,024		8,445	26,469
1885-86.....		4,394		3,998	8,392		7,674		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.....		7,390		8,913	16,303		6,778		6,125	12,903
1890-91.....		5,088	4,670	8,215	17,973		10,130	468	5,996	16,594
1891-92.....		7,142	3,960	10,535	21,637		12,633	7,647	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	2,193	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	6,831	861	18,839	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	509	78	1,495	15,684	1,446	7,107	224	22,937	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

1906-07—nine months only.

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 Mont-real.	Via St. John	To Local Stations	Total.	Via Ste. Rosalie.	Via Mont-real.	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	3,347
1878-79.....		471	1,336	817	2,624		988	1,038	1,048	2,974
1879-80.....		519	1,362	453	2,334		1,612	2,238	959	4,809
1880-81.....		498	1,879	920	3,297		2,418	937	1,051	4,406
1881-82.....		475	1,619	957	3,051		4,031	1,066	2,487	7,584
1882-83.....		542	384	393	1,319		3,229	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	1,645	902	4,216		1,689	2,047	3,376	7,103
1886-87.....		1,278	1,572	2,008	4,858		3,236	569	1,747	5,552
1887-88.....		1,533	1,477	1,031	4,041		2,617	476	1,099	4,193
1888-89.....		2,474	2,000	1,870	6,344		3,070	7,746	2,994	13,810
1889-90.....		2,235	1,787	2,111	6,223		2,449	847	3,288	6,584
1890-91.....		2,029	2,788	1,848	6,665		1,953	1,917	3,286	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	1,319	6,344		1,863	1,087	2,791	5,741
1896-97.....		3,307	3,115	1,286	7,708		2,168	1,176	2,536	5,880
1897-98.....		3,575	3,703	1,052	8,330		1,729	1,066	2,210	5,005
1898-99.....		1,210	2,070	3,305	6,583		1,651	1,198	3,625	5,474
1899-1900.....		2,547	2,706	3,686	8,939		2,421	1,563	2,659	6,643
1900-01.....	37	2,009	3,207	4,125	9,393	360	3,419	1,346	4,643	9,768
1901-02.....	219	3,013	4,373	5,477	13,082	283	3,150	1,413	5,196	10,042
1902-03.....	140	2,269	3,040	4,842	10,289	493	2,808	1,615	6,579	11,495
1903-04.....	539	1,939	3,588	5,002	11,068	225	2,359	564	5,848	8,996
1904-05.....	779	1,902	3,674	5,516	11,871	433	2,673	272	6,759	10,137
1905-06.....	234	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	3,156	416	6,348	10,227
1907-08.....	199	3,288	1,353	6,224	11,064	661	2,856	1,976	7,034	12,527
1908-09.....	312	2,965	2,794	6,946	13,017	668	4,078	1,682	4,866	11,244
1909-10.....	547	3,965	2,616	6,525	13,653	697	3,759	806	9,606	14,868

1906-07—nine months only

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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 retain two-thirds of the gross earnings, and the government receive one-third of the gross earnings, for maintaining the way and works.

Year.	Miles in operation.	One-third gross earnings.	Proportion credited to line Windsor Junction to Halifax.	Proportion credited to the Windsor Branch.	Maintenance expenses.	Profit.	Loss.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1880-81..	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	
1881-82..	32	28,461 07	7,407 88	21,052 19	13,099 55	7,953 64	
1882-83..	32	31,199 77	8,085 88	24,113 89	23,103 93	1,009 96	
1883-84..	32	30,428 39	7,409 46	23,018 93	22,140 86	878 07	
1884-85..	32	32,246 30	7,794 95	24,451 35	18,751 96	5,699 39	
1885-86..	32	31,185 63	7,527 52	23,658 11	19,229 49	4,428 62	
1886-87..	32	33,564 58	8,237 00	25,327 58	26,042 33		714 75
1887-88..	32	32,242 85	6,689 30	24,553 55	24,040 33	513 22	
1888-89..	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61	
1889-90..	32	39,544 19	9,381 73	30,162 46	18,982 82	11,179 64	
1890-91..	32	39,519 56	9,284 48	33,508 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	8,859 23	32,975 47	17,645 09	15,330 38	
1894-95..	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	
1895-96..	32	47,456 74	10,894 91	36,561 83	16,476 46	20,985 37	
1896-97..	32	54,208 81	13,605 58	46,603 23	10,821 04	29,782 19	
1897-98..	32	48,892 21	11,665 57	37,226 64	18,181 09	14,045 01	
1898-99..	32	56,314 51	13,840 48	42,474 04	12,873 06	29,600 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 31	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 80	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	

1906-07 — nine months only.

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.	
		§	cts.	§	cts.				§
1875-76	199	214,930	43	118,060	96	96,869	47	28,358	93,964
1876-77	199	228,595	25	130,664	92	97,930	33	41,039	93,478
1877-78	199	221,599	49	135,899	60	85,699	89	38,668	111,428
1878-79	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	203,122	88	131,131	43	71,991	45	45,336	102,937
1881-82	199	228,259	97	137,267	54	90,922	43	48,315	118,436
1882-83	199	252,808	41	146,170	42	106,637	99	51,920	117,162
1883-84	199	236,428	13	144,504	12	91,924	01	51,841	118,988
1884-85	211	211,207	01	158,588	06	52,618	95	57,346	130,423
1885-86	211	216,744	34	155,584	36	61,159	98	57,913	120,374
1886-87	211	204,237	37	155,363	37	48,984	00	63,589	103,067
1887-88	211	229,639	95	158,365	62	71,276	33	59,603	131,246
1888-89	211	247,559	44	171,369	56	76,189	89	55,682	152,780
1889-90	211	266,485	85	160,971	78	105,514	07	51,604	133,099
1890-91	211	257,990	08	174,258	05	83,732	03	59,511	145,508
1891-92	211	289,706	38	157,442	69	132,263	69	51,065	139,389
1892-93	211	226,422	17	162,690	42	63,731	75	56,718	132,111
1893-94	211	226,891	06	158,533	83	68,257	23	53,577	123,727
1894-95	211	232,105	19	149,654	71	83,250	41	48,325	125,089
1895-96	211	225,138	56	146,476	54	78,662	02	46,395	122,586
1896-97	211	240,489	90	153,443	13	87,946	77	52,151	121,498
1897-98	211	231,418	74	158,950	61	72,468	13	57,539	126,510
1898-99	211	218,053	01	165,021	03	53,040	98	57,958	129,667
1899-1900	211	220,931	81	174,738	73	46,193	08	62,227	147,471
1900-01	211	261,766	24	193,833	48	67,883	76	73,696	157,793
1901-02	210	270,159	97	197,999	97	72,160	00	75,3-1	184,748
1902-03	209	259,637	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	257,270	57	36,982	59	87,162	256,092
1906-07	267	283,148	50	215,434	97	67,713	53	67,144	232,371
1907-08	267	399,947	79	304,579	83	95,367	96	97,250	317,828
1908-09	267·5	400,330	00	311,319	63	89,010	78	106,090	332,758
1909-10	267·5	427,283	73	319,074	74	108,208	99	105,741	351,038

1906-07—nine months only.

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CANALS.

STATEMENT showing the total cost of the individual Dominion canal works and connecting waters, up to March 31, 1910.

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	9,786,178	93			12,375,711	78
Lake St. Louis					298,176	11	298,176	11
Soulanges Canal	7,126,135	61					7,126,135	61
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	5,289,142	41			7,234,767	14
Williamsburg Canal	1,320,655	54	10,696	26			1,331,351	80
Farran's Point Canal			877,090	57			877,090	57
Rapide Plat Canal			2,158,242	00			2,158,242	00
Galops Canal			6,120,985	18			6,120,985	18
Galops Rapids					1,072,227	11	1,072,227	11
St. Lawrence River and Reaches					711,238	93	711,238	93
North Channel					1,684,389	51	1,684,389	51
Murray Canal	1,248,946	71					1,248,946	71
Welland Canal	7,693,824	03	20,813,039	16			28,506,863	19
Sault. Ste. Marie Canal	4,868,532	60					4,868,532	60
	28,429,942	33	45,055,374	51	3,841,938	37	77,327,255	21

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	63,053	64	4,119,039	32	4,182,092	96
Culbute Canal (superseded)	382,776	46			382,776	46
Total	580,286	61	5,154,798	44	5,735,085	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	4,085,889	21			4,085,889	21
Tay Canal	489,599	23			489,599	23
Total	4,575,488	44			4,575,488	44

1 GEORGE V., A. 1911

Route from St. Johns, P.Q., to Sorel.

	Original Construction.	Enlargement.	Total.
	§ cts.	§ cts.	§ cts.
Chambly Canal.....	637,056 76	43,944 33	681,001 09
St. Ours Lock	121,537 65	.....	121,537 65
Total.....	758,594 41	43,944 33	802,538 74

Route from Lake Ontario to Georgian Bay.

	Original Construction.	Enlargement.	Total.
	§ cts.	§ cts.	§ cts.
Trent Canal	7,873,501 09	.....	7,873,501 09
Total.....	7,873,501 09	.....	7,873,501 09

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

TABLE showing the dates of opening and closing of the canals for the season of 1909.

Name of Canal.	Navigation Opened 1909.	Navigation Closed 1909.
Lachine	May 1	December 3.
Soulanges	"	" 4.
Grenville.....	"	November 30.
Carillon.....	"	" 30.
Chambly.....	"	" 30.
Ste. Anne's.....	April 30.....	" 30.
St. Ours	" 20.....	" 30.
Cornwall.....	May 3.....	December 6.
Williamsburg... { Farran's Point.....	" 1.....	" 8.
{ Rapide Plat.....	" 1.....	" 8.
{ Galops.....	" 1.....	" 8.
Murray.....	April 12	" 7.
Welland.....	" 15.....	" 20.
Sault Ste. Marie.....	" 21.....	" 16.
Rideau... { At Ottawa.....	May 1.....	November 30.
{ At Kingston Mills.....	" 1.....	" 29.
{ Lake Simcoe to Fenelon Falls.....	" 1.....	" 1.
Trent... { Fenelon Falls to Lakefield.....	April 21.....	" 20.
{ Lakefield to Peterborough.....	May 10.....	" 15.
{ Peterborough to Healey Falls.....	April 17.....	" 27.
St. Peter's.....	" 12.....	January 11, 1910.

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COMPARATIVE STATEMENT of Tons of Freight which passed through the canals in seasons of 1908 and 1909.

Name of Canal.	Season of 1908.	Season of 1909.	Number of trips of vessels.	
			Season of 1908.	Season of 1909.
	Tons.	Tons.		
Welland Canal.....	1,703,453	2,025,951	2,351	2,433
St. Lawrence Canals.....	2,009,102	2,410,629	8,025	9,271
Chambly Canal.....	503,276	752,117	3,594	4,725
Ottawa River Canals.....	258,527	336,939	1,882	2,181
Rideau Canal.....	89,640	91,774	7,981	2,236
St. Peter's Canal.....	72,015	79,850	1,380	1,439
Trent Canal.....	81,690	59,952	5,025	3,730
Murray Canal.....	25,901	102,291	998	957
Sault Ste. Marie Canal.....	12,759,216	27,861,245	5,293	6,331
Total.....	17,502,820	33,720,748	36,529	33,303

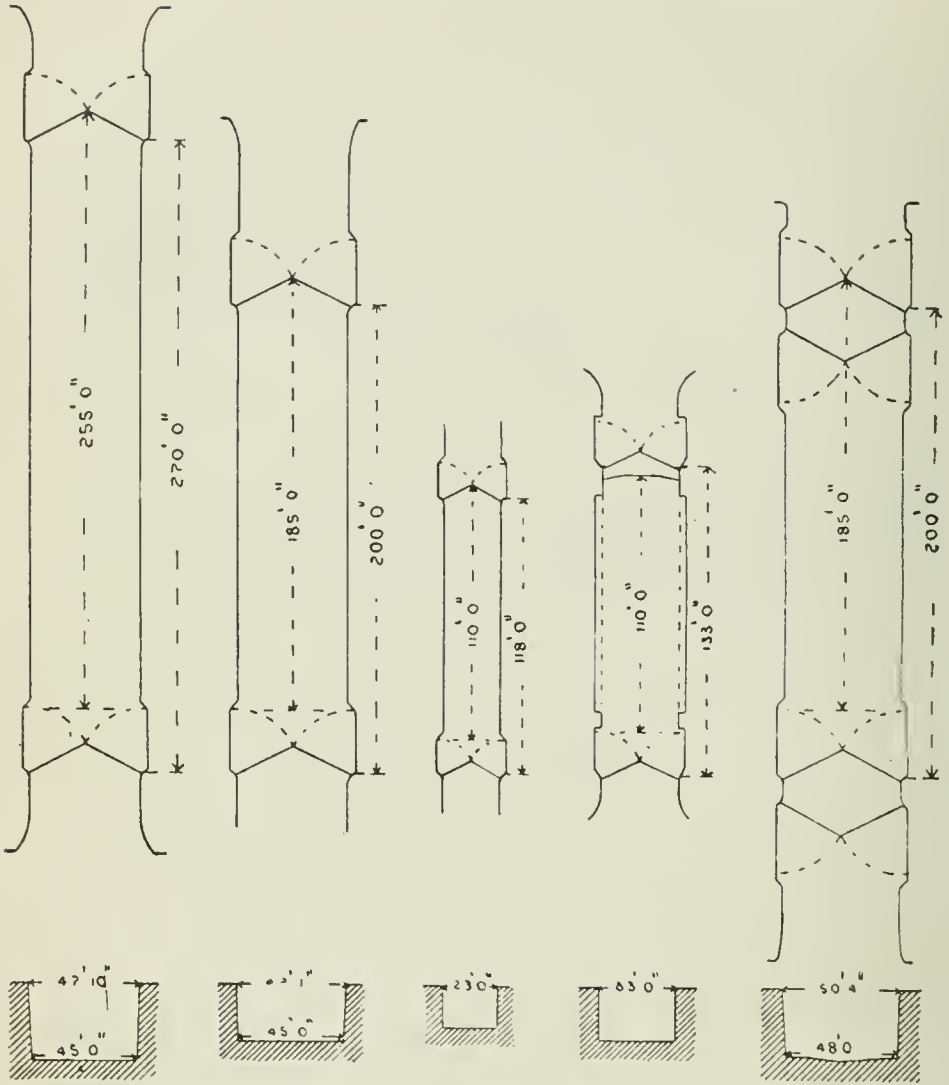
CANALS

DIAGRAM SHOWING DIMENSIONS OF THE SMALLEST LOCK ON EACH
CANAL. LENGTHS AND LOCATIONS OF THE DOMINION
CANALS AND THE INTERMEDIATE WATERS

WITH

DIMENSIONS OF LOCKS.

Plans and Sections showing Dimensions of the Smallest Lock on each



Lachine

St Anne,
St Ours,
Carillon,
& Grenville.

Chambly

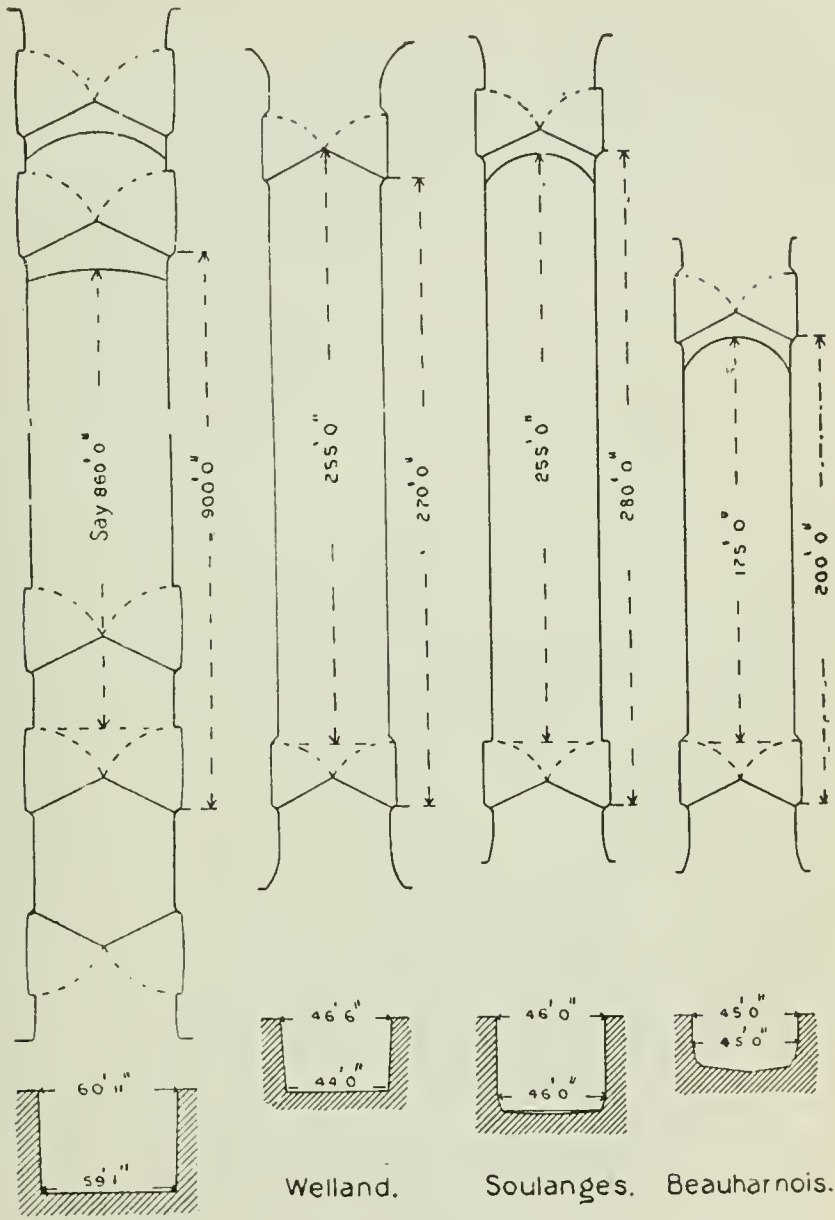
Rideau

St Peter's

There are no locks on the through route between Lake Superior and

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of the Canadian Canal Systems except the Trent Canal, which is uncompleted.



Sault Ste Marie.

Welland.

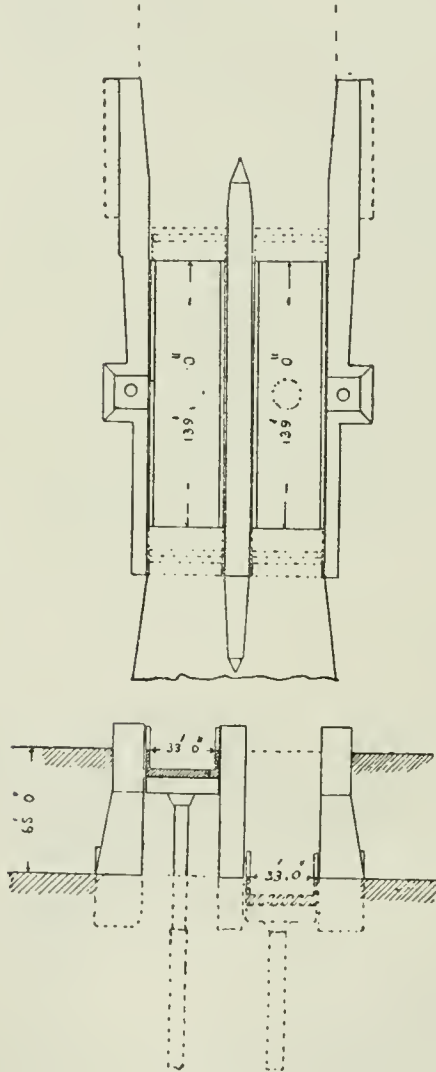
Soulanges.

Beauharnois.

Montreal of less dimension than those of the Welland Canal Locks.

TRENT CANAL

Hydraulic Lift-Lock at Peterborough
65 Feet Lift



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.	33
3. Cornwall Canal.	11
River St. Lawrence	5
4. Farran's Point Canal.	1¼
River St. Lawrence.	10
5. Rapide Plat Canal	3¾
River St. Lawrence.	4
6. Galops Canal.	7¾
River St. Lawrence and Lake Ontario.	236
7. Welland Canal.	26¾
Lake Erie, Detroit River, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie Canal.	1¼
Lake Superior to Port Arthur or to Fort William.	273
Total.	1,230¼
To Duluth.	1,354
Chicago.	1,286

Second—Ottawa to Lake Champlain.

1. Grenville. 2. Carillon. 3. Ste. Anne's. 4. Chambly. 5. St. Ours Lock.

Third.—Ottawa to Kingston and Perth.

1. Rideau canal.

Fourth.—Lake Ontario at Trenton to Lake Huron.

1. Trent canal (not completed).

Fifth.—Atlantic Ocean to the Bras d'Or Lakes, Cape Breton.

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, or Fort William on the west coast of Lake Superior, a distance of 2,233 statute miles. The distance to Duluth is 2,357 miles. The distance to Chicago, 2,289 miles.

1 GEORGE V., A. 1911

From the Straits 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. 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 10 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 Department of Marine and Fisheries. The channel has a depth of 30 feet at extreme low water, and a minimum width of 450 feet, extending to 600 feet at points of curvature. The channel is lighted and buoyed. A 35 foot deep channel was commenced in 1907.

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 the 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 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior, is 48. The Soulanges canal takes the place of the Beauharnois canal, 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 canals, situated on the United States side of the River St. Mary.

Improvements of the United States channels in St. Mary's river through Hay lake, east of the 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.

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 the vessels to be accommodated is limited to 255 feet. At Farran's, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

LACHINE CANAL.

Length of canal.	8½ statute miles
Number of locks.	5
Dimensions of locks	270 feet by 45 feet
Total rise or lockage.	45 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 "

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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 16½ 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 Straits 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 the distance is sixteen miles.

CORNWALL CANAL.

Length of canal	11 statute miles
Number of locks	6
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	100 “
Breadth of canal at water surface.	164 “

The old lift locks, 200 feet by 50 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 33 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 Farran's Point, Rapide Plat and Galops canals are collectively known as the Williamsburg canals.

FARRAN'S POINT CANAL.

Length of canal	1¼ mile
Number of locks	1
New lock	800 feet by 45 feet
Old lock	200 "
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 "

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.

Length of canal	3⅓ miles
Number of locks	2
Dimensions of locks	270 feet by 45 feet
Total rise or lockage	11½ 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 Farran's Point canal to the foot of Rapide Plat canal, there is a navigable stretch of 10½ 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	7½ miles
Number of locks	3
Dimensions of locks, one of which is a guard-lock	1-800 by 45
	1-270 by 45
	1-285 by 45
Total rise or lockage	15½ 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 4½ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Port Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western piers	5½ miles
Breadth at bottom	80 feet
Breadth at water surface	120 "
Depth below lowest known lake level	11 "
No locks.	

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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)		1						
Number of locks. } guard	1	1						
	lift.	25						
Dimensions	<table border="0"> <tr> <td rowspan="4" style="font-size: 3em; vertical-align: middle;">}</td> <td>1 (tidal) 230 x 45</td> <td rowspan="4" style="vertical-align: middle;">270 feet x 45 feet.</td> </tr> <tr> <td>1 lock 200 x 45</td> </tr> <tr> <td>1 lock 200 x 45</td> </tr> <tr> <td>24 locks 150 x 45</td> </tr> </table>		}	1 (tidal) 230 x 45	270 feet x 45 feet.	1 lock 200 x 45	1 lock 200 x 45	24 locks 150 x 45
}	1 (tidal) 230 x 45	270 feet x 45 feet.						
	1 lock 200 x 45							
	1 lock 200 x 45							
	24 locks 150 x 45							
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	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	<table border="0"> <tr> <td rowspan="2" style="font-size: 3em; vertical-align: middle;">}</td> <td>1 of 150 by 26½ ft.</td> </tr> <tr> <td>1 of 200 by 45 ft.</td> </tr> </table>	}	1 of 150 by 26½ ft.	1 of 200 by 45 ft.
}	1 of 150 by 26½ ft.			
	1 of 200 by 45 ft.			
Total rise or lockage	7 to 8 feet.			
Depth of water on sills	9 feet.			

PORT MAITLAND BRANCH.

Length of canal	1¾ miles
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Depth of water on sills	7½ feet.
Total rise or lockage	7 to 8 feet.

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, 11¾ 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
Dimensions 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.)	19 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 $\frac{1}{2}$ 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 $\frac{1}{2}$	23 $\frac{1}{2}$
Ste. Anne's Lock and piers.	$\frac{1}{2}$	23 $\frac{3}{4}$
Ste. Anne's Lock to Carillon Canal	27	50 $\frac{3}{4}$
The Carillon Canal.	$\frac{3}{4}$	51 $\frac{1}{2}$
From Carillon to Grenville Canal.	6 $\frac{1}{2}$	57 $\frac{3}{4}$
The Grenville Canal	5 $\frac{3}{4}$	63 $\frac{3}{4}$
From the Grenville Canal to entrance of Rideau Navigation.	56	119 $\frac{3}{4}$
Rideau Navigation ending at Kingston.	126 $\frac{1}{2}$	245 $\frac{5}{8}$

STE. ANNE'S LOCK.

	New Lock.	Old Lock.
Length of canal.	$\frac{1}{8}$ mile.	$\frac{1}{8}$ mile.
Number of locks.	1	1
Dimensions of locks.	200 x 45 feet.	190 x 45 feet.
Total rise or lockage.	3 feet.	3 feet.
Depth on sills.	9 "	6 "

This work, with guide piers above and below, surmounts the St. Anne's rapids between Ile Percé 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.

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 is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

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

GRENVILLE CANAL.

Length of canal.	$5\frac{3}{4}$ 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 feet.

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

RIDEAU NAVIGATION.

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

Length of navigation	126 $\frac{1}{4}$ miles.
Number of locks from Ottawa to Kingston.	{ 33 ascending. 14 descending.
Total lockage 457 $\frac{1}{2}$	{ 292 $\frac{1}{4}$ rise and 165 $\frac{1}{4}$ fall. } at high 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.	{ 54 feet in rock. 60 feet in earth.
Breadth of canal at surface of water.	80 feet in earth.

PERTH BRANCH.

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 surface of water	80 "
Breadth of canal at bottom	{ 40 " in rock. 60 " in clay.

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 sources of supply:—

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

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolf lake system.

3. The southwest descending level to Kingston, supplied by the Mud lake system, discharging into Lake Rideau.

The southwest descending level to Kingston, supplied by the Mud lake system, formerly known as the Devil lake system, discharging into Lake Opinicon.

Lake Opinicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow to 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 at Chambly; thence, by the Chambly canal, to St. Johns, and down 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.

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	145	411

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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	} From 22½ to 24 feet wide.
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.	7 "	
Breadth of canal at bottom.	36 "	
Breadth of canal at surface of water.	60 "	

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

TRENT CANAL.

The term 'Trent canal' is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in 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 165 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 180 miles from Trenton.

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

1. From Trenton, on Bay of Quinte, to Rice lake, at present being improved to give 8 feet 4 inches on lock sills, and 9 feet in reaches. 57 miles.
Of this distance, from Healy Falls to Hastings, a distance of about twenty miles is already navigable for 6 feet draught.
2. From lower end of Rice lake to Gamebridge on Lake Simcoe, navigable with a minimum depth of 6 feet. 121 miles.
3. Across Lake Simcoe to Narrows near Orillia, navigable with minimum depth of 6 feet. 15 miles.
4. Narrows to Washago, on Lake Couchiching, navigable with minimum depth of 6 feet. 10 miles.

From the main line of the canal in Sturgeon lake near Sturgeon point, approximately 144 miles from Trenton, a branch runs through Lindsay to Port Perry via the Scugog river and lake, a distance of about 36 miles. South of Lindsay navigation is limited to about 4 feet draught. A new concrete lock and dam are now under construction at Lindsay.

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. 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 57 miles has been divided into seven sections, five of which are under contract. Rice lake is 359 feet above low water level of Lake Ontario, which height will probably be overcome by 18 locks.

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 dams at Healy 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 have also been built at many of the locks and at other places.

At Healy Falls, about 37 miles from Trenton, a timber dam maintains six feet navigation to Hastings, a distance of about 14 miles.

At Hastings is a masonry lock and a timber dam which maintain navigation on the Trent river, Rice lake and the Otonabee river to Peterborough, a distance of about 36 miles.

At Peterborough, 87 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.

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 97 from Trenton, and thence on five miles further to Young's Point.

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At Young's Point, a masonry lock and timber dam maintains navigation through Clear and Stony lakes to Burleigh, a distance of about nine miles.

At Burleigh, a masonry lock of two lifts and timber dam maintains navigation through Lovesick lake, about two miles, to Lovesick.

At Lovesick, a masonry lock and timber dam maintains 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, 135 miles from Trenton.

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. This new lock will be placed in commission in the spring of 1910.

At Rosedale, the new concrete lock, and the dam which will be built in the summer of 1910 will maintain navigation on Balsam lake, the summit level of the canal, which extends from Rosedale to the hydraulic 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 165 miles from Trenton.

At Rosedale, there is at present an old wooden lock and dam which maintain navigation on the summit level, the route being about a mile longer than via the new lock.

At the Kirkfield hydraulic lock is a drop from the summit level of 50.44 feet. From this point to Gamebridge on Lake Simcoe, 178 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.

From Cooks bay on Lake Simcoe, 28½ miles from Gamebridge, on the main line, the Holland river is being improved for six feet navigation, so as to afford communication with Newmarket 13½ miles from the lake, or 220 miles from Trenton.

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.....	134	33	6	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 lock No. 2.....	140	33	6	50 41
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, Scugog Branch.....	142	33	6	6.5

ST. PETER'S CANAL, CAPE BRETON.

- Length of canal About 2,400 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 4 "

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

PART IX

RAILWAY SUBSIDIES

RAILWAY SUBSIDIES

The following are the several Railway Subsidy Acts passed since and including the year 1906, being the only Acts in force at the close of the fiscal year 1909-10 (March 31, 1910).

For previous Subsidy Acts, see annual report of 1908-09.

1906

ACT, 6 EDWARD VII, CAP. 43, 1906.

(Assented to 13th July, 1906.)

1. 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 one 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:—

To the Manitoulin and North Shore Railway Company (or to the Canada Central Railway Company, with the consent of the Manitoulin and North Shore Railway Company, and subject to the approval of the Governor in Council), for the following lines of Railway:—

(a) From Little Current thence crossing the Canadian Pacific railway, at or near Stanley, and thence to Sudbury, not exceeding 64 miles.

(b) From a point on the said line of railway, between Little Current and Sudbury, westerly towards the Algoma Central and Hudson bay railway, not exceeding 100 miles; and

(c) From a point at or near Sudbury northerly, not exceeding 30 miles; the said subsidies being granted in lieu of the subsidies of 64 and 130 miles, granted by chapter 8 of 1900, section 2, item 6, as amended by section 5 of chapter 7 of 1901, and chapter 7 of 1901, and section 2, item 14, respectively.

To the Algoma Central and Hudson Bay Railway Company for a line of railway 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, and for a line of railway from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific railway not exceeding 25 miles; in lieu of the subsidies of 40, 50 and 135 miles granted by chapter 7 of 1899, section 2, item 23, chapter 8 of 1900, section 2, item 4 and chapter 7 of 1901, section 2, item 20, respectively.

To the Lotbinière and Megantic Railway Company 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; in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 8, not exceeding 50 miles.

- For a line of railway from Lake Nominigue to La Livre, in lieu of subsidy granted by chapter 57 of 1903, section 2, item 44, not exceeding 35 miles.
- For a line of railway from a point on the Intercolonial railway at or near Dartmouth, in the County of Halifax, to Guysborough, in the County of Guysborough, with branch lines to a point on the Intercolonial railway at or near New Glasgow, in the county of Pictou, and also to Country Harbour, in the county of Guysborough, not exceeding in the whole 236 miles in lieu of subsidies of 116 and 120 miles granted by chapter 57 of 1903, section 2, items 19 and 63 respectively.
- For a line of railway from Wellington to Union Bay, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 68, not exceeding 55 miles.
- For a line of railway from a point at or near Sharbot lake or Bathrust Station, in the province of Ontario, or between those points via Lanark village to Carleton Place, in lieu of the subsidy granted by chapter 7 of 1901, section 2, item 17, not exceeding 41 miles.
- For a line of railway from Cape Tourmente towards Murray Bay, in lieu of the subsidy granted by chapter 5 of 1892, not exceeding 20 miles.
- To the Atlantic, Quebec and Western Railway Company, for a line of railway from Gaspé to a point at or near Causapsca on the Intercolonial railway and from that point to Edmundston, not exceeding 260 miles; and for a line of railway from Paspébie to Gaspé as near the shore as practicable, not exceeding 102 miles; in lieu of the subsidies granted by chapter 57 of 1903, section 2, item 51.
- 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 3½ miles.
 - (c) From a point on the line of the Nipigon railway at or near the crossing of the Fraser river, to a point on Lake Jesse, by way of Cameron's Falls, not exceeding 1½ miles.
 - (d) From a point on the North Shore of Lake Nipigon northerly, not exceeding 45 miles:
- The said subsidies to the said lines being granted in lieu of the subsidies granted by chapter 34 of 1904, section 2, item 3, not exceeding in the whole 80 miles.
- For a line of railway from Quebec towards Seven Islands, including branches to Murray Bay and Baie St. Paul, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 48, not exceeding 200 miles.
- For a line of railway from Roberval westward towards James bay, in lieu of the subsidies granted by chapter 57. of 1903, section 2, items 11 and 52, not exceeding 100 miles.
- To the Quebec Central Railway Company for an extension of its line of railway from St. Francis to St. George not exceeding 9 miles; and for a line of railway from Scott Junction to the Quebec bridge, not exceeding 23 miles; in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 46.
- To the Western Alberta Railway Company for a line of railway from a point on the United States boundary, west of range 21, northwesterly towards Anthracite, in the province of Alberta, in lieu of the subsidy granted by chapter 34 of 1904, section 2, item 11, not exceeding 50 miles.
- To the Shediac and Coast Railway Company for a line of railway from Shediac to Shemogue and towards Cape Tormentine in Westmoreland county, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 17, not exceeding 38 miles.
- For a line of railway from St. Constant in the county of Laprairie and Napierville, through St. Edouard, St. Cyprien and Lacolle to a point at or near the International boundary line on the Delaware and Hudson railway (Grand Trunk) in

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- lieu of the 19 and 12 mile subsidies granted by chapter 7 of 1899, section 2, item 10 and chapter 4 of 1894 respectively, not exceeding 28 miles.
- To the Lake Superior, Long Lake and Albany Railway Company for a line of railway from Peninsula Harbour in a northerly direction, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 76, not exceeding 10 miles.
- For a line of railway from Owen Sound in the province of Ontario to Meaford, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 34, not exceeding 30 miles.
- To the Kingston, Smith's Falls and Ottawa Railway Company for a line of railway from Kingston to Ottawa, being a revote of the subsidy granted by chapter 4 of 1897, not exceeding 101 miles.
- To the Lotbinière and Megantic Railway Company, for a line of railway from a point on its line between Lyster and Lime Ridge, to a point at or near the bridge over the St. Lawrence at or near Quebec, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 45, not exceeding 30 miles.
- For a line of railway from a point on the Quebec and Lake St. John railway, near the River Jeannotte to La Tuque, on the St. Maurice river, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 57, not exceeding 35 miles.
- To the Halifax and South Western Railway Company, for a line of railway from a point at or near Halifax, to a point at or near Barrington Passage, (except that part east of Bridgewater which formerly formed part of the line of the Central railway, in lieu of the 68, 77 and 35 miles of subsidies granted by chapter 57 of 1903, section 2, item 23 (a) and (b), and item 75, respectively, not exceeding 185 miles.
- To the Bay of Quinté Railway Company, for a line of railway from a point at or near the village of Tweed, thence northwesterly to a point at or near the village of Bannoekburn, in the county of Hastings, being a revote in part of the subsidy granted by chapter 7 of 1899, section 2, item 45, and in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 37, not exceeding in all 20 miles.
- For a line of railway from a point at or near Baptiste, easterly to a point at or near Renfrew, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 32, not exceeding 75 miles.
- For a line of railway from the Station of Lac Bouchette, or from a point one mile east of the said station, on the Quebec and Lake St. John Railway, to St. André, in lieu of subsidy granted by chapter 57 of 1903, section 2, item 47, not exceeding 13 miles.
- For a line of railway from Debert Station, on the Intercolonial railway, to Debert coal mine, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 20, not exceeding $4\frac{1}{2}$ miles.
- For a line of railway from a point at or near Toulon, to a point on the Icelandie river, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 27, not exceeding 35 miles.
- To the Ontario, Northern and Temagami Railway Company (formerly the Temagami 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 Temagami, in the District of Nipissing, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 36, not exceeding 50 miles.
- To the Quebec and Lake St. John Railway Company, for a line of railway from Roberval to the Government wharf at Lake St. John, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 40, not exceeding one mile.
- For a line of railway from Truro northerly towards Brule, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 64, not exceeding 34 miles.
- To the Kootenay Central Railway Company, for a line of railway from Golden towards the International boundary line, via Windermere and Fort Steele, and

- crossing the Crow's Nest railway at or near Elko, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 6, not exceeding 186 miles.
- To the Brockville, Westport and Sault Ste. Marie Railway Company, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding \$3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was regranted by chapter 5 of 1892; the whole not exceeding \$86,800, being a revote of the subsidy granted by chapter 4 of 1894, and that the said subsidy or so much thereof as has heretofore been agreed upon by the terms of an agreement filed in the Department of Railways and Canals between said Brockville, Westport and Sault Ste. Marie Railway Company and the creditors of said railway company, to be paid over to the said creditors or the legal representatives of said creditors as mentioned in said agreement.
- For a line of railway from Jonquieres to La Baie des Ha Ha, in lieu of subsidy granted by chapter 57 of 1903, section 2, item 7, not exceeding 20 miles.
- For a line of railway from Ste. Rose via the east side of Lake Ainslie to or towards Orangedale on the Intercolonial railway, not exceeding 34 miles; and for a line of railway from a point on the Intercolonial railway at or near Mines Road station to the wharf at Caribou Cove not exceeding four miles; in lieu of the subsidy granted by chapter 57 of 1903, section 2, items 18 and 62.
- For a line of railway from a point at or near Wolfville on the Dominion Atlantic railway to the government Pier at the Basin of Minas, not exceeding one mile, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 25.
- To the Great Northern railway of Canada for a line of railway in extension of its railway from a point at or near Arundel to a point in the municipality of the United Townships of Preston and Hartwell, not exceeding 30 miles; and for a line of railway connecting its Montford and Gatiueau line with the main line at St. Jerome, not exceeding 22 miles; in lieu of the subsidies granted to the Montford and Gatiueau Colonization Railway Company by items 6 and 41 of section 2 of chapter 57 of 1903.
- To the Great Northern railway of Canada, for a line of railway from, at or near Garneau Junction to or towards the Quebec bridge, not exceeding 70 miles, in lieu of the subsidy granted by item 74 of section 2, of chapter 57 of 1903.
- For a line of railway from a point at or near St. Agathe des Monts Station towards the township of Howard, in the county of Argenteuil, passing near Lakes St. Joseph and Ste. Marie, in a southerly direction, not exceeding 15 miles; and for a line of railway between a point in the parish of St. Andrews, in the county of Argenteuil, and a point in the parish of St. Laurent, in the county of Jacques Cartier, passing through the parishes of St. Placide, St. Eustache and St. Martin, not exceeding 38 miles; in lieu of the subsidies granted by chapter 34 of 1904, items 8 and 9 of section 2, not exceeding in the whole 53 miles.
- To the Kettle River Valley Railway Company for a line of railway from Grand Forks to a point 50 miles up the North Fork of Kettle River, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 67, not exceeding 50 miles.
- To the Ottawa, Northern and Western Railway for a line of railway from Aylmer to a point of junction with the Interprovincial bridge approach in the city of Hull (except that portion thereof beginning at a point of junction with the line of the Hull Electric railway in the city of Hull and terminating at a point on the main line of the Canadian Pacific railway at the east end of its Hull station yard) not exceeding nine miles, in lieu of the subsidy granted by item 12 of section 2 of chapter 7, of 1899, and by the first portion of item 13 of section 2 of chapter 57 of 1903.
- 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 57 of 1903, section 2, item 3, not exceeding 51 miles.

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- To the Interprovincial and James Bay Railway Company, for a line of railway from the Lake Temiskaming at the present terminus of the Canadian Pacific railway in a northerly direction, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 42, not exceeding 50 miles.
- For a line of railway from Waltham station to Ferguson Point, in the county of Pontiac, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 43, not exceeding 20 miles.
- To the Matane and Gaspé Railway Company, for a line of railway from a point at or near St. Octave, on the Intercolonial railway, to Matane, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 54, not exceeding 30 miles.
- For a line of railway from the village of Haliburton, via the village of Whitney, towards the town of Mattawa, Ontario, in lieu of the subsidies granted by chapter 7 of 1899, section 2, item 25, and chapter 8 of 1900, section 2, item 9, not exceeding 60 miles.
- For a line of railway from Dawson to Stewart river, passing at or near Grand Forks, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 71, not exceeding 84 miles.

2. That 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. That the subsidies to be authorized towards the construction of any railway shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided herein, 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.

4. That the subsidies to be 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, 1906, 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.

5. That 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 railways so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the 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 so 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.

6. That every company so receiving a subsidy, its successors and assigns, and any person or company controlling or operating the railway or portion of railway so subsidized, 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 so received by the company.

7. That as respects all railways for which subsidies are granted, 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 or bridge, the cost of operating it, and the earnings thereof.

8. That the Governor in Council may make it a condition of the grant of the subsidies herein provided, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

9. That whenever a contract has been duly entered into with a company for the construction of any line of railway so 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 profiles 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 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:—

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(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 is done 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.

1907

ACT 6-7 EDWARD VII., CHAP. 40.

(Assented to April 27, 1907.)

1. 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 Central Ontario Railway, for an extension of its railway from a point at or near Baneroff to a point on the Canada Atlantic railway at or near Whitney, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 4; not exceeding 40 miles.

2. For a line of railway from Woodstock to the International Boundary, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 15; not exceeding 26 miles.

3. For a line of railway from a point on the Canadiau Pacific railway at or near Welsford or Westfield, or between the said two points, to Gagetown, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 16; not exceeding 30 miles.

4. For a line of railway from Liverpool to Milton, Nova Scotia, in lieu of part of the subsidy granted by chapter 57 of 1903, section 2, item 23 (d); not exceeding 7 miles.

5. For a line of railway from Milton to Caledonia, Nova Scotia, in lieu of part of the subsidy granted by chapter 57 of 1903, section 2, item 23 (d); not exceeding 22 miles.

6. 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 57 of 1903, section 2, item 24; not exceeding 37 miles.

7. 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 57 of 1903, section 2, item 25; not exceeding 1 mile.

8. To the Nicola, Kamloops and Similkameen Coal and Railway Company, for a line of railway from a point at or near Spence's Bridge, on the Canadian Pacific railway, to Nicola lake, in lieu of the subsidy granted by chapter 57 of 1903 section 2 item 26; not exceeding 47 miles.

9. To the Edmonton, Yukon and Pacific Railway Company, for a line of railway from the town of Strathcona to Edmonton and thence westerly towards Yellow Head Pass, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 28, not exceeding 50 miles.

10. For a line of railway from Fredericton to Woodstock, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 29, not exceeding 59 miles.

11. For a line of railway from Hawkesbury, Ontario, to South Indian, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 30; not exceeding 35 miles.

12. To the Tilsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Woodstock northerly to a point on the Grand Trunk railway at Berlin, or from Ingersoll to Stratford, or to any point on the Grand Trunk railway between these places, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 31; not exceeding 35 miles.

13. To the Canadian Northern Ontario Railway Company, for a line of railway from Toronto, via the east side of Lake Simcoe, to a point at, near or beyond Sudbury, through Parry Sound, in lieu of the subsidy granted to the James Bay Railway Company by chapter 57 of 1903, section 2, item 39; not exceeding 265 miles.

14. For a branch line from a point at or near the intersection of the Canadian Pacific railway and the Canadian Northern Quebec railway (formerly the Great Northern railway) between St. Philippe d'Argenteuil and Lachute, thence in a northerly direction passing through the village of Brownsburg, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 49; not exceeding 4.2 miles.

15. To the Orford Mountain Railway Company, for the following lines of railway, namely:—from Bolton Line to Mansonville, 7.54 miles; from Mansonville to the International Boundary, 3.12 miles; from Windsor Mills to Brompton Falls, 8 miles; from Melbourne Road Crossing to Melbourne village, 3.50 miles; and from a point on its main line of railway to the south end of Bonella lake, 5 miles; in lieu of the subsidies granted by chapter 57 of 1903, section 2, item 50, but not exceeding in the whole 27 miles.

16. To the Canadian Northern Quebec Railway Company, for a line of railway from a point on its main line at or near L'Epiphanie, passing by way of the parish of St. Jacques de l'Achigan, to the village of Rawdon, in lieu of the subsidy granted to the Chateauguay and Northern Railway Company by chapter 57 of 1903, section 2, item 55; not exceeding 16 miles.

17. To the York and Carleton Railway Company, for a line of railway from its present terminus westerly, in lieu of subsidy granted by chapter 57 of 1903, section 2, item 61; not exceeding 5 miles.

18. To the Midway and Vernon Railway Company, for a line of railway from Midway to Vernon, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 69; not exceeding 150 miles.

19. For a line of railway from a point at or near the north end of Lake Megantic, thence along the said lake to a point on the International Boundary at or near Rivière Morte, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 78; not exceeding 19 miles.

20. For a line of railway from Wellington to or towards Union bay by way of Alberni, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 6; not exceeding 55 miles.

21. For a line of railway from Ste. Rose (or from Chimney Corner Coal Mines to a point at or near Chimney Corner Cove), thence via the east side of Lake Ainslie to or towards a point on the Intercolonial railway at or near Orangedale, not exceeding 34 miles; and for a line of railway from a point on the Intercolonial railway between Orangedale and Point Tupper, to Caribou Cove, or Inhabitants bay or river, not exceeding 4 miles; in lieu of the subsidies granted by chapter 43 of 1906, section 1, item 34.

22. To the Klondike Mines Railway Company, for the following lines of railway, namely:—

(a) for a line of railway from Dawson to a point at or near Sulphur Spring, not exceeding 31 miles;

(b) for a line of railway from a point at or near Sulphur Spring to a point at or near the divide between Dominion and Flat creeks, not exceeding 45 miles; and

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(c) for a line of railway from a point at or near the said divide to or towards the Stewart river, not exceeding 8 miles;

the whole in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 46.

23. For a line of railway from St. Peter's to Louisbourg, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 65; not exceeding 50 miles.

24. For a line of railway from Grandique Ferry to Arichat, Nova Scotia, being a revote of the subsidy granted by chapter 7 of 1901, section 2, item 15; not exceeding 8 miles.

25. For a line of railway from Connors, at the terminus of the Temiscouta railway, to a point on the boundary line between New Brunswick and Quebec at the foot of Beau lake, being a revote of part of the subsidy granted by chapter 7 of 1901, section 2, item 2; not exceeding 18 miles.

2. The Governor in Council may grant, towards the construction and completion of a railway bridge and approaches over the Nicolet river at Nicolet, in lieu of the subsidy granted by chapter 57 of 1903, section 3, item 1, a subsidy of \$15,000.

3. 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, not 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 construction of such railway.

4. 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 sections 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.

5. 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 bridge respectively; all the lines and the bridge 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, 1907, 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 bridge shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the 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 railways and bridge so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the 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 bridge 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.

7. 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 subsidy received by the company under this Act.

8. As respects all railways and the bridge for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or the bridge 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.

9. 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 bridge, 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.

10. 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—

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(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.

1908

ACT 7-8 EDWARD VII., CAP. 63, 1908.

(Assented to 20th July, 1908.)

1. 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 of 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:—

To the Kettle River Valley Railway Company, for a line of railway from a point at or near Grand Forks to a point fifty miles up the North Fork and East or West Fork of the North Fork of Kettle river, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 39; not exceeding 50 miles.

For a line of railway from Owen Sound, in the province of Ontario, to Meaford, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 18; not exceeding 30 miles.

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 43 of 1906, section 1, item 7; not exceeding 41 miles.

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 3½ miles;

(c) from a point on the line of the Nipigon railway at or near the crossing of the Fraser river to a point on Lake Jesse, by way of Cameron's Falls; not exceeding 1½ miles;

(d) from a point on the north shore of Lake Nipigon northerly; not exceeding 45 miles.

The said subsidies to the said lines being granted in lieu of the subsidies granted by chapter 43 of 1906, section 1, item 10; not exceeding in all 80 miles.

To the Manitoulin and North Shore Railway Company (or to the Canada Central Railway Company with the consent of the Manitoulin and North Shore Railway Company, and subject to the approval of the Governor in Council), for the following lines of railway:—

(a) from a point on the said line of railway, between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay railway; not exceeding 100 miles;

(b) from Little Current thence crossing the Canadian Pacific railway, at or near Stanley, and thence to Sudbury; not exceeding 64 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 43 of 1906, section 1, item 1; not exceeding in all 194 miles.

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 43 of 1906, section 1, item 28; not exceeding 50 miles.

For a line of railway from a point at or near Baptiste, easterly to a point at or near Renfrew, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 24; not exceeding 75 miles.

To the Bracebridge and Trading Lake Railway Company, for a railway in Bracebridge, in Mnskoka, to a point at or near Baysville, Ontario, in lieu of the subsidy granted by chapter 34 of 1904, section 2, item 1, for 15 miles; not exceeding 16 miles.

To the Quebec and Lake St. John Railway Company, for a line of railway from Roberval westward towards James Bay, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 12; not exceeding 100 miles.

To the Matane and Gaspé Railway Company, for a line of railway from a point at or near Ste. Flavie, on the Intercolonial railway, to Matane, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 44, for 30 miles; not exceeding 38 miles.

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, not exceeding 30 miles; and for a line of railway connecting its Montfort and Gatineau line with the main line at St. Jerome, not exceeding 15.2 miles; in lieu of the subsidies granted to the Great Northern railway of Canada by chapter 43 of 1906, section 1, item 36, not exceeding in all 45.2 miles.

To the Canadian Northern Quebec Railway Company, for a line of railway from, or from near, Garneau Junction to Quebec, with a branch to or towards the Quebec bridge, in lieu of the subsidy granted to the Great Northern railway of Canada by chapter 43 of 1906, section 1, item 37, for 70 miles; not exceeding 83 miles.

To the Atlantic, Quebec and Western Railway Company, for a line of railway from a point at or near Causapascal, on the Intercolonial railway, to Edmundston, 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 160 miles.

For a line of railway from Yamaska to a point in the County of Lotbinière, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 12, not exceeding 70 miles; and for a line of railway from Mount Johnson to St. Gregoire Station, in lieu of the subsidy granted to the United Counties Railway Company by chapter 7 of 1899, section 2, item 16, for one mile, not exceeding $1\frac{1}{2}$ miles; and not exceeding in all $71\frac{1}{2}$ miles.

To the International Railway Company of New Brunswick for a line of railway from the western end of the twenty miles of its railway, as already constructed from Campbellton, to a point on the St. John river between Grand Falls and Edmundston, in lieu of the subsidies granted by chapter 57 of 1903, section 2, items 14 and 59 respectively; not exceeding 90 miles.

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 8 of 1900, section 2, item 30; not exceeding 11 miles.

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

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- of the subsidy granted by chapter 57, of 1903, section 2, item 24, for 37 miles; not exceeding 37 miles.
- To the Margaree Coal and Railway Company, for a line of railway from a point at or near Orangedale, on the Intercolonial railway, thence via the east side of Lake Ainslie and Ste. Rosa, to Chimney Corner Cove, not exceeding 46 miles; and from a point on the Interecolonial railway between Orangedale and Point Tupper to Caribou Cove on Inhabitant's bay or river, not exceeding 4 miles; in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 21, for 38 miles; not exceeding in all 50 miles.
- 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 at or near Quebec, not exceeding 30 miles; in lieu of the subsidies granted by chapter 43 of 1906, section 1, items 3 and 20, respectively; not exceeding in all 80 miles.
- To the Cape Breton Railway Company, Limited, for a line of railway from Port Hawkesbury or Point Tupper, on the Strait of Canso, Nova Scotia, to St. Peter's, in lieu of the subsidy granted by chapter 7, of 1899, section 2, item 6, for 30 miles; not exceeding 31 miles.
- For a line of railway from a point on the Interecolonial 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 43, of 1906, section 1, item 5; not exceeding 80 miles.
- 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 in part of the subsidy granted by chapter 43, of 1906, section 1, item 5; not exceeding 52 miles.
- 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 branch line to Country Harbour in the county of Guysborough, in lieu in part of the subsidy granted by chapter 43, of 1906, section 1, item 5; not exceeding in all 116 miles.
- To the Ha Ha Bay Railway Company, for a line of railway from a point at or near Jonquières village to Baie de Ha Ha via Laterrières village, in lieu of the subsidy granted by chapter 43, of 1906, section 1, item 33, for 20 miles; not exceeding 24 miles.
- 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 7 of 1901, section 2, item 2, for 45 miles; not exceeding 62 miles.
- 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 43 of 1906, section 1, item 38; not exceeding 45 miles.
- For a line of railway from Tusket Wedge to a point on the Halifax Southwestern railway at or near Riverdale Station; not exceeding 8 miles.
- To the Halifax and Southwestern Railway Company, for a line of railway from Lunenburg to Bridgewater, via upper Lahave; not exceeding 12 miles.
- To the Erie, London and Tilsonburg Railway Company, for a line of railway from Port Burwell to London; not exceeding 35 miles.
- For a line of railway from a point at or near Centreville to Aylesford, or Kingston or Middleton, on the line of the Dominion Atlantic railway; not exceeding 35 miles.

- For a line of railway from a point on the Canadian Pacific railway at or near Plaster Rock to Riley Brook; not exceeding 28 miles.
- To the North Shore Railway Company, Limited (formerly the Beersville Coal and Railway Company), for a line of railway extending its present line from Beersville to Brown's Landing, not exceeding 7 miles; and for a branch line of railway from its main line to Mount Carlyle, not exceeding $2\frac{1}{2}$ miles; not exceeding in all $9\frac{1}{2}$ miles.
- To the York and Carleton Railway Company, for a line of railway from its present terminus to a point on the National Transcontinental railway; not exceeding 9 miles.
- To the Vancouver and Lulu Island Railway Company, for a line of railway from Eburn, on its main line, to New Westminster; not exceeding 9.65 miles.
- To the Esquimalt and Nanaimo Railway Company, for a line of railway from a point near French creek to the village of Sandwich, not exceeding 41 miles; and for a line of railway from the village of Sandwich to Campbell river, not exceeding 38 miles; not exceeding in all 79 miles.
- For a line of railway from MacLeod, via Cardston, towards a point on the Intercolonial Boundary west of range 21; not exceeding 45 miles.
- To the Southern Central Pacific Railway Company for a line of railway from a point at or near Cowley, in Alberta, to a point on Highwood river; not exceeding 50 miles.
- For a line of railway from a point at or near the town of Red Deer to a point on the North Saskatchewan river at or near Rocky Mountain House; not exceeding 70 miles.
- To the Canadian Pacific Railway Company, for a line of railway from Winnipeg Beach northerly to Gimli, not exceeding $9\frac{1}{2}$ miles; and for a line from Gimli to Riverton, not exceeding 25 miles; not exceeding in all $34\frac{1}{2}$ miles.
- To the Canadian Pacific Railway Company, for a line of railway from Moose Jaw; in a northwesterly direction; not exceeding 123 miles.
- To the Eastern Townships Railway Company, for a line of railway from the Intercolonial railway at St. Leonard's Junction to Dudswell; not exceeding 36 miles.
- To the Quebec, Montreal and Southern Railway Company, for a line of railway from Noyan Junction to the international boundary, not exceeding 8 miles; and for a line of railway from St. Lambert to St. Constant, not exceeding 15 miles; not exceeding in all 23 miles.
- 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 $5\frac{1}{2}$ 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 La Tuque branch to the steamboat landing near La Tuque; not exceeding 1.6 miles;
- not exceeding in all 20.9 miles.
- To the Quebec and Lake St. John Railway Company, for a line of railway from Herbertville to St. Joseph d'Alma; not exceeding 10 miles.
- To the St. Maurice Valley Railway Company, for a line of railway from Three Rivers to Grand Mere; not exceeding 28 miles.
- For a line of railway from a point on the main line of the Great Northern railway at or near St. Jerome to Charlemagne (Bout de l'Île); not exceeding 22 miles.
- To the North Eastern Railway Company, for a line of railway from a point east of Lake Temiskaming, at or near Villemarie, easterly; not exceeding 25 miles.

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- To the Canadian Northern Quebec Railway Company, for a line of railway from Montreal to Hawkesbury; not exceeding 65 miles.
- For a line of railway from Montreal to a point on the National Transcontinental railway; not exceeding 200 miles.
- To the Quebec Central Railway Company, for an extension of its line of railway from St. George to or towards St. Justine; not exceeding 30 miles.
- To the Maritime Coal, Railway and Power Company, for a line of railway from Chignecto to a point on the Northumberland Straits, not exceeding 25 miles; and from Joggins Mines to a point on the Bay of Fundy, not exceeding 1 mile; not exceeding in all 26 miles.
- For a line of railway from St. Peters, in the County of Richmond, by the south shore of Bras d'Or lake to Sydney; not exceeding 60 miles.
- To the Nipissing Central Railway Company, for a line of railway from a point on the Temiskaming and Northern Ontario railway, at or near the town of New Liskeard, to a point in the township of Guigues, in the province of Quebec; not exceeding 13 miles.
- To the Vancouver Island and Eastern Railway Company, 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; not exceeding 100 miles.
- To the Vancouver, Westminster and Yukon Railway Company, for a line of railway from Vancouver towards Fort George, on the line of the Grand Trunk Pacific railway; not exceeding 100 miles.
- For a line of railway around Death Rapid, British Columbia; not exceeding 4 miles.
- To the Pacific Northern and Omineca Railway Company, for a line of railway from Kittimat to the Telkwa river; not exceeding 110 miles.
- For a line of railway from Nicola to a point at or near Penticton; not exceeding 100 miles.
- For a line of railway from Carleton Place to Penticton; not exceeding 50 miles.
- To the St. Mary and Western Ontario Railway Company, for a line of railway from Woodstock to Exeter; not exceeding 45 miles.
- To the Algoma Central and Hudson Bay Railway Company, for a line of railway from a point on the Canadian Pacific railway northward towards the National Transcontinental railway; not exceeding 50 miles.
- To the Grand Trunk Pacific Railway Company, for branch lines of railway from the line of the National Transcontinental railway to Port Arthur and Fort William; not exceeding 220 miles.
- To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the line of the National Transcontinental railway; not exceeding 18 miles.
- To the Burk's Falls and French River Railway Company, for a line of railway from Burk's Falls to French river; not exceeding 85 miles.
- To the Thessalon and Northern Railway Company, for a line of railway from Thessalon, northerly; not exceeding 4 miles.
- To the Canadian Northern Ontario Railway Company, for a line of railway from Sudbury Junction to Hutton Mines; not exceeding 30 miles.
- To the Esquimalt and Nanaimo Railway Company, for a line of railway from Cowichan bay to Cowichan lake; not exceeding 24 miles.
- To the Canadian Northern Quebec Railway Company, for a line of railway from Hawkesbury to Ottawa; not exceeding 60 miles.
- For the following lines of railway:—
- (a) from Westfield to St. John, not exceeding 14 miles;
- (b) from Gagetown to Fredericton, not exceeding 40 miles;
- (c) from a point between Centreville and Woodstock to a point at or near Grand Falls, not exceeding 55 miles.

- To the Little Nation River Railway Company, for a line of railway from Papineauville on the Canadian Pacific railway towards Lake Nominigue; not exceeding 30 miles.
- To the L'Avenir and Melbourne Railway Company, for a line of railway from Melbourne to Drummondville; not exceeding 28 miles.
- To the Quebec and Lake St. John Railway Company, for a line of railway from Chicoutimi south or southeast; not exceeding 5 miles.

2. 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:—

Towards the construction and completion of a railway bridge and approaches over the Nicolet river at Nicolet, in lieu of the subsidy granted by chapter 40 of 1907, section 2, \$15,000.

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; not exceeding \$100,000.

To the Quebec, Montreal and Southern Railway Company, towards the construction and completion of the following railway bridges:—

- (a) bridge across the Gently river, \$15,000;
- (b) bridge across the Becancour river, \$30,000;
- (c) bridge across the Richelieu river, \$30,000;

To the Atlantic, Quebec and Western Railway Company, towards the construction and completion of the 26 railway bridges on its line of railway from Paspebiac to Gaspé, payable upon the completion of the said line of railway between the said points, \$250,000.

To the Interprovincial Railway Bridge Company of New Brunswick, towards the construction and completion of a railway bridge over the Restigouche river from Campbellton to Mission Point, not exceeding \$160,000.

To the Vancouver, Westminster and Yukon Railway Company, towards the construction and completion of a railway across Burrard Inlet.

3. 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.

4. 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

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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.

5. 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 railway and bridges respectively; all the lines and the bridge 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, 1908, 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.

6. 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.

7. 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 of 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 of 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.

8. 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.

9. The Governor in Council may make it a condition of the grant of the subsidies herein provide 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 railways 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.

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10. 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 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 credited 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 cases shall the subsidy exceed the sum of \$6,400 per mile.

1909

ACT 8-9 EDWARD VII., CHAP. 35.

(Assented to May 19, 1909).

1. Paragraph 6 of section 2 of chapter 63 of the statutes of 1908 is amended by adding at the end thereof the figures '\$200,000.'

1910

ACT 9-10 EDWARD VII., CHAP. 51.

(Assented to May 4, 1910).

1. 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 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.

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2. To the Halifax and Southwestern 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 Margarec 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 Temiscouta railway to a point on the boundary line between New Brunswick and Quebec, at the foot of Beau lake, in lieu 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 Rock, 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 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 Iuverness, 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 Mauuan, 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 Janquières 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.

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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 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.

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.

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38. 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 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.

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 construction of such railway.

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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.

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.

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.

7. As respects all 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

1 GEORGE V., A. 1911

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.

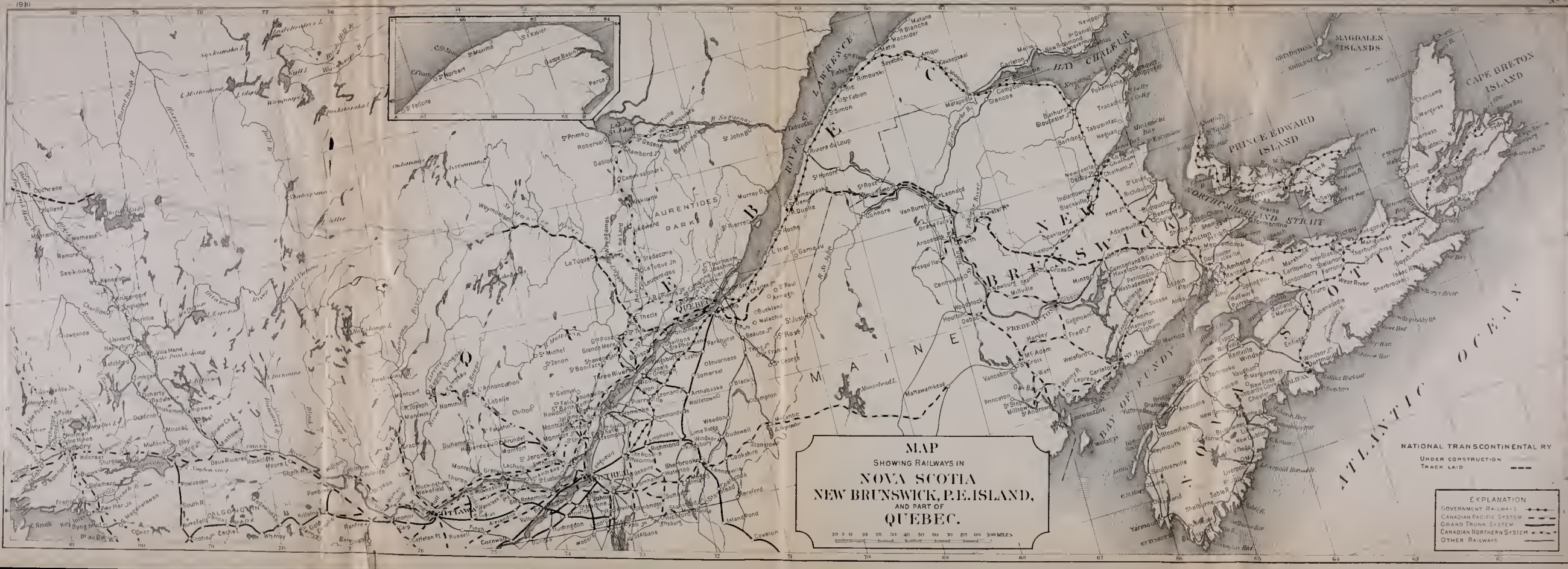
9. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals, and his certificate that 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—

(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.





MAP
 SHOWING RAILWAYS IN
 NOVA SCOTIA,
 NEW BRUNSWICK, P.E. ISLAND,
 AND PART OF
 QUEBEC.

0 10 20 30 40 50 60 70 80 90 100 MILES

NATIONAL TRANSCONTINENTAL RY
 UNDER CONSTRUCTION - - - -
 TRACK LAID - - - -

EXPLANATION	
Government Railways	—
Canadian Pacific System	- - - -
Grand Trunk System	- x - x - x
Canadian Northern System	- / - / - /
Other Railways	- | - | - |

MAP
SHOWING RAILWAYS
IN THE NORTHERN PARTS OF
BRITISH COLUMBIA
AND
ALBERTA
Scale of Miles
0 10 20 30 40 50 60 70 80 90 100

EXPLANATION

- CANADIAN PACIFIC SYSTEM ————
- CANADIAN NORTHERN SYSTEM - - - -
- GRAND TRUNK PACIFIC SYSTEM ————
- OTHER RAILWAYS ————
- G T P Ry Under construction ————





EXPLANATION
 CANADIAN PACIFIC SYSTEM ———
 CANADIAN NORTHERN SYSTEM - - - -
 GRAND TRUNK PACIFIC ———
 OTHER RAILWAYS ———

MAP
 SHOWING RAILWAYS
 IN THE SOUTHERN PARTS OF
BRITISH COLUMBIA
 AND
ALBERTA.
 Scale of Miles
 0 10 20 30 40 50 60 70 80 90 100

MAP SHOWING RAILWAYS IN MANITOBA, AND PART OF SASKATCHEWAN

Scale of Miles
0 10 20 30 40 50 60 70 80 90 100

EXPLANATION

	CANADIAN PACIFIC SYSTEM
	CANADIAN NORTHERN SYSTEM
	GRAND TRUNK PACIFIC SYSTEM
	OTHER RAILWAYS



MAP
 SHOWING RAILWAYS
 IN PARTS OF
ONTARIO AND QUEBEC

Scale of Miles
 0 10 20 30 40 50 60 70 80 90 100



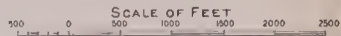
EXPLANATION

- CANADIAN PACIFIC SYSTEM - - - -
- GRAND TRUNK SYSTEM - - - -
- CANADIAN NORTHERN SYSTEM · · · ·
- OTHER RAILWAYS ————

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DOMINION OF CANADA MAP SHOWING CANADIAN SHIP CANAL

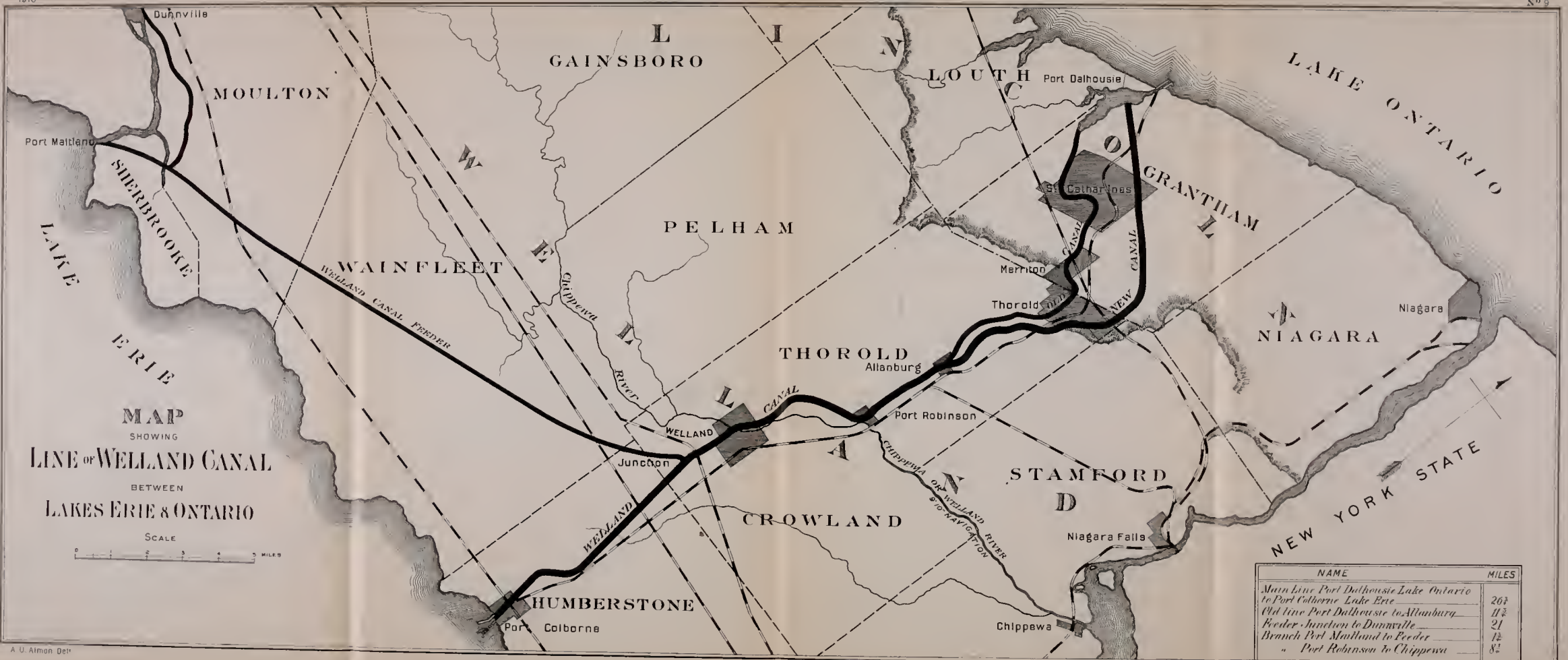
ALSO
ST. MARY'S FALLS CANAL MICH, U.S.A.



CANADIAN SHIP CANAL	
Length of canal between the extreme ends of the entrance piers	7007 ft
Number of locks	1
Dimensions of lock	300 ft by 60 ft
Depth of water on sill (at lowest known water level)	20 ft 3 ins.
Total rise or lockage	18 ft
Breadth of canal at bottom	141 ft @ base
Breadth at surface of water	150 ft

To Lake Superior

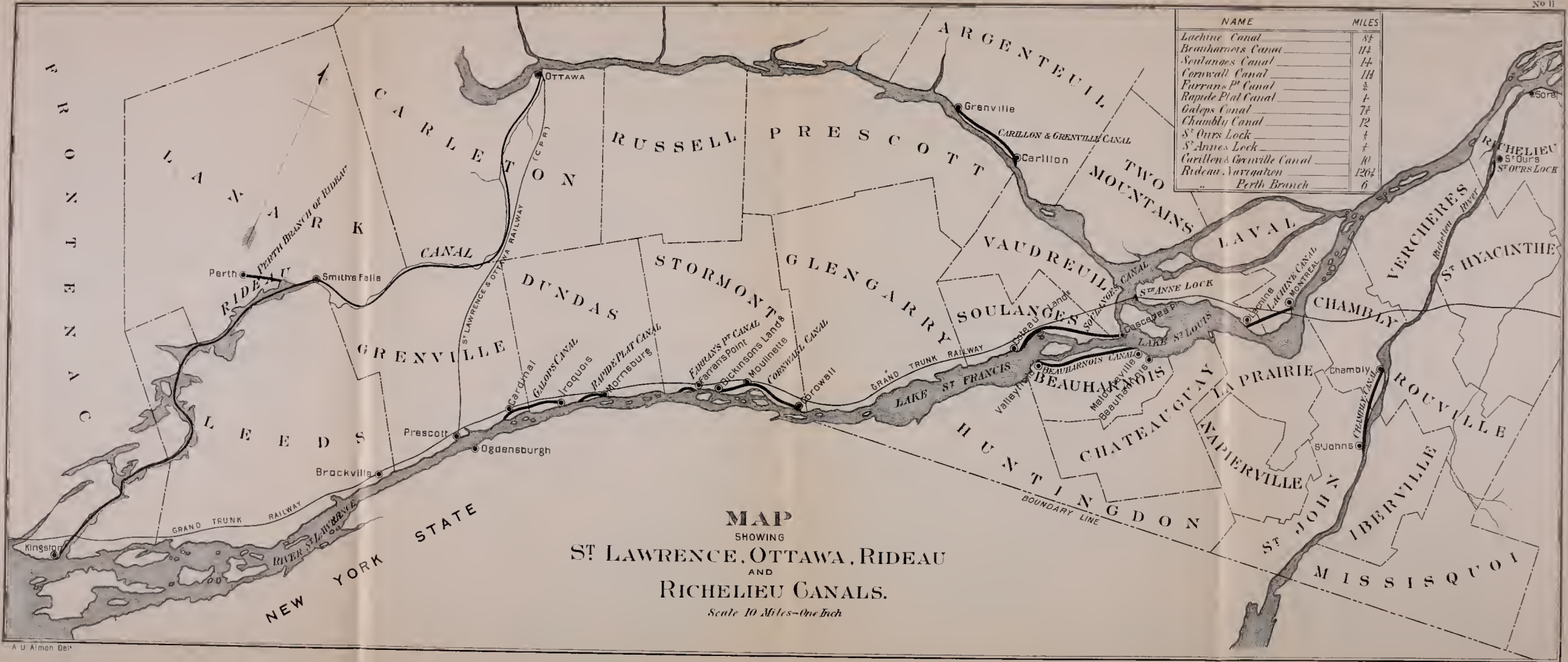




NAME	MILES
Main Line Port Dalhousie Lake Ontario to Port Colborne Lake Erie	26 $\frac{1}{2}$
Old Line Port Dalhousie to Allanburg	11 $\frac{1}{2}$
Feeder Junction to Dunnville	21
Branch Port Maitland to Feeder	1 $\frac{1}{2}$
" Port Robinson to Chippewa	8 $\frac{1}{2}$

A. U. Atton Det.





NAME	MILES
Lachine Canal	13
Beaubarnois Canal	11½
Soulanges Canal	14
Cornwall Canal	11½
Ferran's Pt Canal	½
Rapide Plat Canal	½
Galops Canal	7½
Chamblay Canal	12
St Ours Lock	½
St Annes Lock	½
Carillon & Grenville Canal	10
Rideau Navigation	120½
Perth Branch	6

MAP
SHOWING
ST. LAWRENCE, OTTAWA, RIDEAU
AND
RICHIEU CANALS.

Scale 10 Miles - One Inch

A. U. Almon Des.

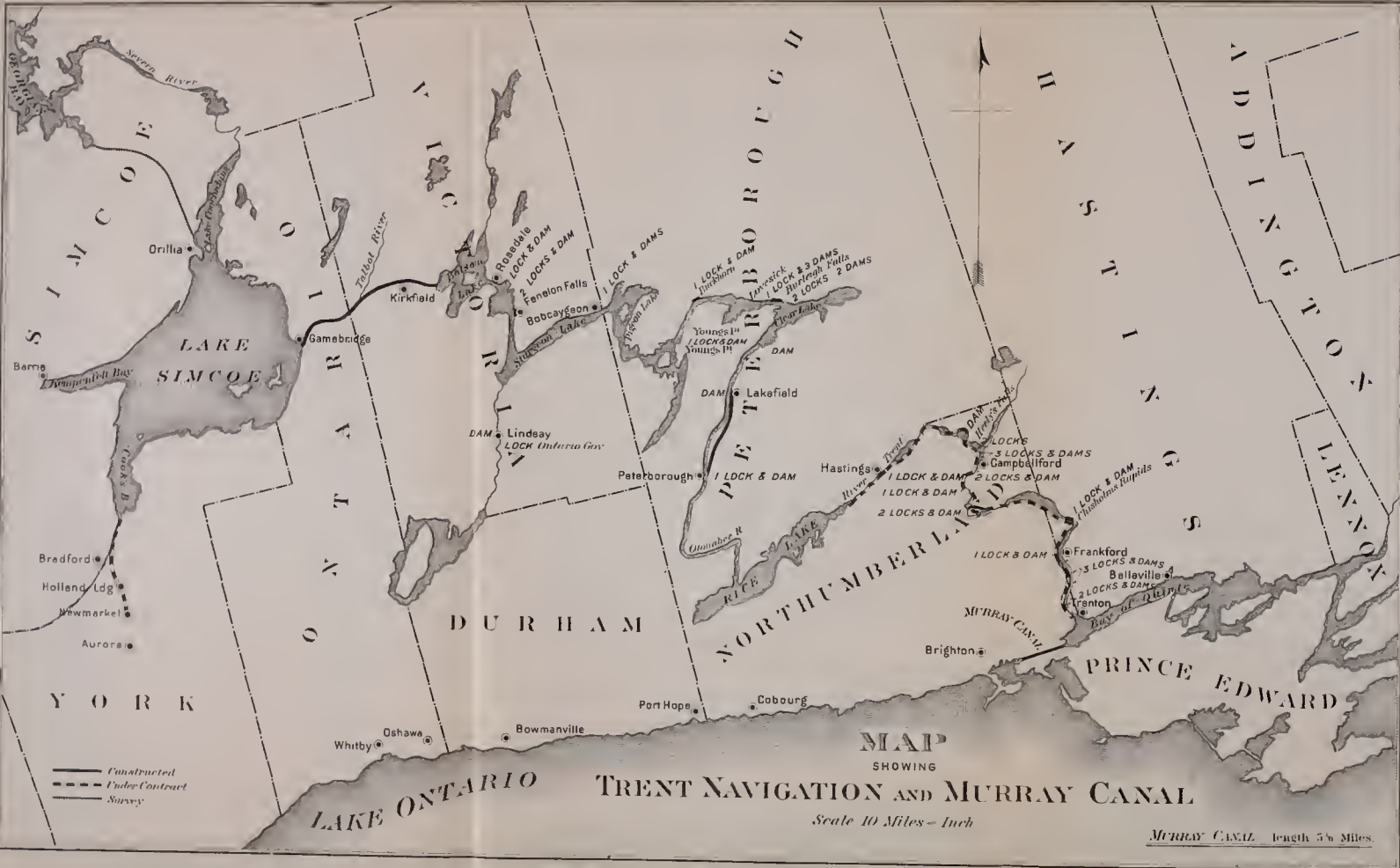




EXPLANATION	
CANADIAN PACIFIC SYSTEM	— — — — —
CANADIAN NORTHERN SYSTEM	— — — — —
GRAND TRUNK PACIFIC	— — — — —
OTHER RAILWAYS	— — — — —

MAP
 SHOWING RAILWAYS
 IN PARTS OF
ONTARIO AND MANITOBA
 Scale of Miles
 0 5 10 20 30 40 50 60 70 80 90 100





MAP
SHOWING
TRENT NAVIGATION AND MURRAY CANAL

Scale 10 Miles = 1 Inch

MURRAY CANAL Length 5 1/2 Miles.

ANNUAL REPORT

OF THE

RAILWAYS AND CANALS FOR 1910

Company Deputy Minister's Report

parts of British Columbia and Alberta.

parts of British Columbia and Alberta.

and part of Saskatchewan.

Ontario and Manitoba.

Ontario and Quebec.

New Brunswick, Prince Edward Island and parts of Quebec.

and also St. Mary's Falls Canal, Mich., U.S.A.

between Lake Erie and Ontario.

Murray Canal.

St. Lawrence, Rideau and Richelieu Canals.

308,71
C121,2
(1911, v. 12. Maps).

ANNUAL REPORT

OF THE

Department of Railways and Canals for 1910

Maps to accompany Deputy Minister's Report

1. General map of the Dominion.
2. Map showing Railways in the northern parts of British Columbia and Alberta.
3. Map showing Railways in the southern parts of British Columbia and Alberta.
4. Map showing Railways in Manitoba and part of Saskatchewan.
5. Map showing Railways in parts of Ontario and Manitoba.
6. Map showing Railways in parts of Ontario and Quebec.
7. Map showing Railways in Nova Scotia, New Brunswick, Prince Edward Island and parts of Quebec.
8. Map showing Canadian Ship Canal and also St. Mary's Falls Canal, Mich., U.S.A.
9. Map showing Line of Welland Canal between Lake Erie and Ontario.
10. Map showing Trent Navigation and Murray Canal.
11. Map showing the St. Lawrence, Ottawa, Rideau and Richelieu Canals.

DEPARTMENT OF RAILWAYS AND CANALS

CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1909

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY C. H. PARMELEE, PRINTER TO THE KING'S MOST
EXCELLENT MAJESTY

1910

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, Viscount Howick, Baron Grey of Howick, in the County of Northumberland, in the Peerage of the United Kingdom, and a Baronet; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, &c., &c., &c., Governor General of Canada.

MAY IT PLEASE YOUR EXCELLENCY,—

The undersigned has the honour to present to Your Excellency the report on Canal Statistics for the year ended December 31, 1909.

GEO. P. GRAHAM,
Minister of Railways and Canals.

To the Honourable GEORGE P. GRAHAM,
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, 1909.

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,
February 7, 1910.

A. W. CAMPBELL, Esq.,
Deputy Minister of Railways and Canals.

SIR,—I have the honour to submit to you herewith Canal Statistics for the year ended December 31, 1909.

At the commencement of the season of navigation a new form of ship's report was adopted. This schedule presents the advantages of being considerably shorter than that which had for many years been in use, and of conforming closely with the classification of commodities in force on the railways of both Canada and the United States.

The traffic of the canals in 1909 amounted to 33,720,748 tons, representing an increase of 16,217,928 tons over 1908, or 92.6 per cent.

Of the total volume of business, 27,976,399 tons were classified as down, or east-bound; while 5,744,349 were entered as up, or westbound. There was for the year an increase of 14,739,171 tons in the former, and of 1,478,757 tons in the latter.

The net increase of 16,217,928 tons for the year 1909 was divided among the various canals as follows:—

	1908.	1909.	Increase.
Sault Ste. Marie.....	12,759,216	27,861,245	15,102,029
Welland.....	1,703,453	2,025,951	322,498
St. Lawrence.....	2,009,102	2,410,629	401,527
Chambly.....	503,276	752,117	248,841
St. Peter's.....	72,015	79,850	7,835
Murray.....	25,901	102,291	76,390
Ottawa.....	258,527	336,939	78,412
Rideau.....	89,640	91,774	2,134
Trent.....	81,690	59,952	.....

The aggregate of business through the canals of Canada during the year 1909 may be better comprehended by a comparison with the results for the preceding nine years. The figures are as follow:—

1900	5,013,693 tons.
1901.....	5,665,259 "
1902.....	7,513,197 "
1903.....	9,203,817 "
1904.....	8,256,236 "
1905.....	9,371,744 "
1906.....	10,523,185 "
1907.....	20,543,639 "
1908.....	17,502,820 "
1909.....	33,720,748 "

Following is a comprehensive table, showing both the volume and direction of freight traffic for a series of years:—

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.	
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	174,289	214,407	223,429	81,611	428,357	789,310	1,972,287	2,761,587
1889	384,777	1,196,306	122,295	198,497	267,224	300,193	81,243	603,311	855,529	2,258,367	3,113,896
1890	369,593	1,137,011	141,368	133,188	246,813	320,324	58,709	533,021	789,505	2,123,542	2,902,596
1891	370,120	1,155,247	103,814	123,193	248,188	307,498	56,747	543,259	772,869	2,129,657	2,902,596
1892	327,560	1,322,137	173,538	135,787	241,034	302,983	47,396	481,391	780,528	2,242,298	3,031,736
1893	351,706	1,344,822	214,076	141,602	247,329	385,769	46,020	806,773	898,023	2,678,966	3,546,489
1894	299,155	1,140,606	204,175	89,614	231,172	363,107	62,285	780,522	780,522	2,162,193	2,942,715
1895	264,824	1,076,046	286,191	91,177	362,637	608,778	117,585	590,140	475,937	2,360,141	3,346,078
1896	293,353	1,619,668	259,659	100,519	1,197,245	3,536,054	108,787	867,040	1,867,792	6,123,281	7,991,073
1897	275,587	1,713,274	268,700	187,960	669,142	1,369,314	81,615	912,135	1,322,246	7,238,751	8,560,967
1898	263,989	1,819,887	187,253	98,967	829,508	2,425,121	125,678	727,111	1,362,365	5,256,110	6,618,475
1899	296,208	1,833,412	266,364	115,133	732,030	2,129,988	105,155	763,665	1,255,586	4,805,614	6,225,924
1900	312,201	1,632,915	270,033	81,711	568,197	1,330,915	177,715	682,065	1,294,173	4,371,086	5,665,259
1901	529,085	1,686,094	268,449	201,231	597,204	3,000,636	190,243	562,229	2,315,117	5,969,829	7,513,197
1902	618,150	2,391,366	342,484	515,828	693,337	3,179,816	373,456	958,018	2,302,203	6,888,700	9,293,817
1903	606,737	2,047,499	430,174	276,578	693,784	3,183,895	483,795	1,137,146	3,439,770	6,920,617	9,371,744
1904	736,376	2,232,514	543,365	347,089	697,228	3,305,256	482,239	997,385	3,359,770	7,183,415	10,523,185
1905	1,238,929	2,355,855	627,094	234,919	1,991,959	11,060,878	849,369	1,356,712	4,737,753	15,805,886	20,543,689
1906	1,034,733	3,162,158	891,692	236,138	1,701,310	8,218,866	972,300	1,417,219	4,265,592	13,237,228	17,502,820
1908	1,028,246	3,292,422	560,736	278,721	1,985,522	22,385,236	1,023,829	1,544,054	5,744,349	27,976,389	33,720,748
1909	1,674,283	3,439,225	1,060,715	647,894							

* Sault Ste. Marie canal opened in August, 1895.

SESSIONAL PAPER No. 20a

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.	Up & down.		
											Up.	Down.	
1887	1,201,529	1,194,665	162,554	36,277	1,071	65	30,778	221,015	1,395,932	1,452,020	2,847,952	18,991	
1888	1,113,290	1,120,774	158,209	34,368	1,252	.....	22,353	189,876	1,295,304	1,345,018	2,640,322	17,661
1889	1,285,374	1,207,892	188,131	39,371	976	802	20,271	252,565	1,494,952	1,500,630	2,995,582	19,393	
1890	1,314,127	1,250,999	229,478	32,909	929	351	14,003	296,676	1,558,537	1,580,935	3,139,472	20,655	
1891	1,356,518	1,287,168	201,758	28,642	560	292	16,350	244,176	1,575,176	1,590,278	3,165,454	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	1,422,826	170,186	26,787	1,172	10	17,037	248,442	1,736,489	1,697,565	3,434,054	20,737	
1894	1,319,792	1,260,307	217,635	19,296	2,177	5	6,394	222,696	1,545,998	1,502,906	3,048,904	19,027	
1895	1,258,848	1,165,683	253,693	13,383	.....	.....	5,899	285,553	1,518,440	1,464,619	2,983,059	17,136
1896	1,547,757	1,420,342	290,292	5,234	137	.....	4,115	271,809	1,752,321	1,697,385	3,449,706	20,972
1897	1,629,192	1,482,951	215,785	11,378	.....	.....	3,533	297,898	1,848,510	1,792,227	3,640,737	21,465
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	21,509	
1899	1,865,643	1,774,789	242,817	32,456	925	3,691	42,290	345,980	2,151,675	2,156,896	4,308,571	23,579	
1900	1,767,293	1,681,340	265,926	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	2,164	101,335	286,520	2,258,732	2,226,963	4,485,695	22,198	
1903	2,061,258	2,088,969	340,383	143,614	7,018	3,082	188,896	379,612	2,597,555	2,615,277	5,212,832	23,767	
1904	1,838,260	1,907,886	299,245	159,740	5,175	4,223	237,910	319,651	2,380,590	2,391,510	4,772,100	21,851	
1905	2,039,097	2,031,766	312,773	188,138	11,820	3,191	262,401	322,005	2,646,091	2,545,100	5,191,191	23,726	
1906	2,271,776	2,264,476	292,705	155,295	24,420	5,506	202,276	309,507	2,791,177	2,735,144	5,526,321	25,498	
1907	2,591,948	2,661,317	337,822	129,246	9,153	7,233	238,172	383,922	3,147,045	3,181,816	6,328,861	28,838	
1908	2,726,776	2,748,139	297,315	137,827	5,037	7,844	348,944	398,337	3,309,104	3,381,685	6,780,789	29,040	
1909	3,385,187	2,992,403	300,320	217,989	82,591	111,236	257,945	513,397	3,976,045	3,835,535	7,811,578	22,507	

STATEMENT of the Tonnage of Canadian and United States Vessels, for the following years :—
UNITED STATES VESSELS.

YEARS.	FROM CANADIAN CANADIAN PORTS.		FROM UNITED STATES UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN 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	52,733	98,849	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	206,507	56,249	169,442	386,458	444,190	830,648	4,542
1890	10,390	16,345	38,136	36,397	248,418	231,728	39,697	97,266	336,661	384,736	721,397	3,361
1891	10,357	23,851	70,665	27,227	283,913	238,818	31,085	146,602	335,118	442,398	836,116	3,602
1892	12,023	29,405	88,221	22,763	280,315	229,137	37,037	172,591	417,596	154,199	871,795	3,928
1893	10,752	34,303	214,047	33,741	351,991	282,734	50,994	397,740	627,787	658,508	1,286,295	4,585
1894	18,528	30,201	139,720	20,830	302,362	280,788	37,406	192,992	498,216	513,811	1,012,027	4,131
1895	8,838	24,768	138,554	17,712	292,240	216,542	32,295	185,730	441,927	444,752	886,679	4,427
1896	11,496	14,093	195,228	21,953	357,295	292,339	40,116	290,370	604,345	623,775	1,228,126	4,650
1897	14,665	18,367	269,430	17,618	338,938	277,345	26,341	347,638	649,375	661,928	1,310,463	4,675
1898	12,142	9,541	233,524	32,880	308,878	305,461	32,331	336,004	586,875	683,889	1,270,764	4,264
1899	17,217	18,044	172,897	30,092	1,605,887	1,156,563	51,902	234,336	1,846,848	1,438,885	3,285,733	6,101
1900	13,316	17,824	157,689	30,443	1,208,725	744,276	45,741	190,971	1,425,471	983,514	2,408,985	5,502
1901	11,587	18,706	177,169	28,124	922,464	1,014,707	51,895	224,622	1,166,115	1,316,159	2,482,274	5,634
1902	13,622	37,871	187,826	70,611	1,756,948	1,651,672	128,257	241,662	2,081,653	2,094,786	4,086,439	6,433
1903	14,014	24,168	265,208	65,247	1,736,187	1,689,414	163,401	335,836	2,121,810	2,114,665	4,236,475	6,495
1904	10,122	16,890	275,721	30,993	1,464,316	1,475,085	68,981	305,697	1,837,665	1,818,249	3,655,905	6,253
1905	19,743	19,434	364,685	81,876	2,350,494	1,701,704	101,536	456,459	2,836,758	2,959,483	5,046,241	7,085
1906	34,306	19,324	356,239	78,561	2,738,623	1,928,131	119,675	118,436	3,244,863	2,440,452	5,685,315	7,319
1907	57,349	72,018	304,591	442,473	4,739,053	5,376,069	203,769	623,911	3,463,767	6,141,067	11,604,834	9,328
1908	32,705	442,773	124,120	2,975,624	2,975,624	4,142,392	218,835	536,103	3,685,819	4,835,320	8,521,139	7,489
1909	263,562	169,407	442,176	290,292	4,178,378	10,429,314	243,750	621,903	5,098,196	11,361,126	16,459,322	9,996

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It will be observed that while 9,996 United States vessels carried 16,459,322 tons through the canals of Canada in 1909, it required 22,507 Canadian vessels to carry 7,811,578 tons. The explanation is found in the fact that the business of American vessels is confined almost wholly to the lakes, where large cargoes prevail, while many craft of small capacity pass through the canals east of the Welland. The record of trade for the past five years, however, would seem to warrant the conclusion that an increase is steadily taking place in the tonnage of Canadian vessels.

The statement following brings the capital expenditure on the Canals of the Dominion down to March 31, 1909. 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 fire of the Ordnance Office, Montreal, in 1852. The details are as follow :—

Canal.	Construction.		Enlargement.		Total.		
	§	cts.	§	cts.	§	cts.	
St. Peter's.....	648,547	14			648,547	14	
Lachine.....	2,589,532	85	9,570,566	95	12,160,099	80	
Beauharnois.....	1,636,690	26			1,636,690	26	
St. Lawrence River and Canals.....	18,442	85	3,415,023	38	3,433,466	23	
Lake St. Louis.....			298,176	11	298,176	11	
Lake St. Francis.....			75,906	71	75,906	71	
Cornwall.....	1,945,624	73	5,289,052	87	7,234,677	60	
Williamsburg	{	Farran's Point.....		877,090	57	10,485,611	69
		Galops.....		6,118,927	32		
		Rapid Plat.....		2,158,242	06		
		Williamsburg.....	1,320,655	54	10,696			26
Welland.....	7,693,824	03	20,644,791	99	28,338,616	02	
Ste. Anne's.....	134,456	51	1,035,759	12	1,170,215	63	
*Carillon and Grenville.....	63,053	64	4,119,039	32	4,182,092	96	
Culbute.....	382,776	46			382,776	46	
Rideau.....	4,085,889	21			4,085,889	21	
Saint Ours.....	121,537	65			121,537	65	
Chambly.....	637,214	66	13,307	12	650,521	68	
Murray.....	1,248,946	71			1,248,946	71	
Trent.....	6,873,501	09			6,873,501	09	
Tay.....	489,599	23			489,599	23	
Saut Ste. Marie.....	4,821,723	47			4,821,723	47	
Soulanges.....	6,973,113	38			6,973,113	38	
Total.....	41,685,129	41	53,626,579	62	94,311,859	03	

Details of tonnage by canals and commodities will be found in the tables subjoined.

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

J. L. PAYNE,
Comptroller of Statistics.

CANAL STATISTICS FOR SEASON OF NAVIGATION, 1909.

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 twenty-eight 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

* Of the quantity of grain passed down to Montreal there were transhipped at Ogdensburg, in 1891, 17,817 tons ; in 1892, 4,341 tons ; in 1893, 71,445 tons ; in 1894, 23,030 tons ; in 1895, 18,987 tons ; in 1896, 77,355 tons ; in 1897, 89,659 tons ; in 1898, 40,257 tons ; in 1899, 48,828 tons ; in 1900, 38,403 tons ; in 1901, 17,387 tons ; in 1902, 34,060 tons ; in 1903, 40,641 tons ; none in 1904, 1905, 1906, 1907 nor 1908.

During the last decade the quantity of agricultural products as above, passed down the Welland and St. Lawrence Canals to Montreal, has increased from 244,661 tons in 1900 to 652,742 tons in 1909, and the quantity passed down the Welland Canal from United States ports to United States, has increased from 84,589 to 129,587 tons the same years.

The quantity of barley, buckwheat, corn, oats, pease, rye and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific Railways for a period of 13 years, is reported as follows :—

	Tons.
For 1897.....	228,611
1898.....	293,391
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.....	.....

The quantity of the same articles passed down the whole length of the St. Lawrence Canals to Montreal for the same period was :—

	Tons.
For 1897.....	604,200
1898.....	575,097
1899.....	372,291
1900.....	295,928
1901.....	203,316
1902.....	242,225
1903.....	400,057
1904.....	220,076
1905.....	375,630
1906.....	449,673
1907.....	684,697
1908.....	776,374
1909.....	652,742

Comparative shipments of grain by the St. Lawrence route, and rail and water via the State of New York, are as follows :—

QUANTITY OF GRAIN TO SEA BOARD BY COMPETING ROUTES.

The quantity of grain and pease passed down the whole length of the St. Lawrence Canal to Montreal, is as follows :—

	Tons.
For 1908.....	756,141
1909.....	652,742
Showing a decrease of.....	103,399

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways is reported as follows :—

	Tons.
For 1908.....	285,262
1909.....
Showing a decrease of.....

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TRANSHIPMENT OF GRAIN.

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.
1895, 123 cargoes, with an aggregate quantity of.....	136,617
1896, 196 " "	227,912
1897, 180 " "	229,265
1898, 166 " "	224,021
1899, 162 " "	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, 355 " "	598,941
1909, " "	550,276

In the United States vessels there were in—

	Tons.
1894, 84 cargoes, with an aggregate quantity of	106,236
1895, 56 " "	73,987
1896, 158 " "	217,978
1897, 197 " "	285,847
1898, 339 " "	464,852
1899, 167 " "	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, " "	272,291

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 924 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.

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The quantity of grain transhipped at Port Colborne in 1909 and the four previous years was as follows:—

Articles.	1905.	1906.	1907.	1908.	1909.
	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat	679,840	1,009,474	1,428,300	1,106,244	2,686,963
Corn.....	104,027	110,629	112,036		
Rye.....					
Oats.....		29,118	30,824	23,945	
Barley.....		2,103		56,544	22,216
Flax Seed			39,040	49,628	8,202

WELLAND CANAL.

The total quantity of freight passed on the Welland Canal during the season of 1909 was 2,025,951 tons; of this quantity 49,911 tons was way or local freight.

There were 1,383,862 tons of freight passed eastward, and 642,089 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 1909 was 1,976,040.

Of this quantity 1,335,023 tons were east bound and 641,017 west bound freight.

Of the east bound through freight, Canadian vessels carried 926,901 tons and United States vessels carried 408,122 tons; and of the west bound through freight Canadian vessels carried 320,793 tons and United States vessels carried 320,224 tons, or a total of 1,247,694 tons for Canadian and 728,346 tons for American vessels.

ST. LAWRENCE CANALS

The total quantity of freight passed through these canals during 1909 was 2,410,629 tons; of this quantity 1,564,584 tons passed eastward and 846,045 passed westward.

East and West bound Through Freight.

The total quantity of through freight was 1,727,564 tons; of this quantity 1,209,979 tons were east bound and 517,585 tons were west bound.

Way Freight.

Of the total quantity of (way) or local freight 354,750 tons were east bound and 328,315 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 :—

	Eastward, to Montreal. Tons.	Westward, from Montreal. Tons.
1895.....	266,659	10,555
1896.....	480,077	10,050
1897.....	584,246	4,542
1898.....	538,108	4,436
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

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 :—

	Eastward. Tons.	Westward. Tons.	Total. Tons.
1895.....	255,259	214,520	469,779
1896.....	385,695	267,518	653,213
1897.....	353,863	210,831	564,694
1898.....	277,023	210,516	487,539
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

The total quantity of freight pass through the Welland Canal from United States ports to United States ports shows a decrease of 3,235 tons as compared with the previous year ; and a decrease of 24,380 tons as compared with 1895.

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The following statement shows the aggregate number of vessels and the total quantity of freight passed through the Welland Canal, and the quantity passed between United States ports during the years 1867 to 1909 inclusive.

Fiscal Year.	Aggregate	Total quantity	Quantity
	number of Vessels.	transported on the Welland Canal.	passed from United States ports to United States ports.
	No.	Tons.	Tons.
1867.....	5,405	933,260	458,386
1868.....	6,157	1,161,821	641,711
1869.....	6,069	1,231,903	688,700
1870.....	7,356	1,311,956	747,567
1871.....	7,729	1,478,122	772,756
<i>Season of navigation.</i>			
1872.....	6,063	1,333,104	606,627
1873.....	6,425	1,506,484	656,298
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.....	2,843	1,016,165	533,957
1891.....	2,594	975,013	553,800
1892.....	2,615	955,554	541,065
1893.....	2,843	1,294,823	631,667
1894.....	2,412	1,008,221	592,267
1895.....	2,222	869,595	469,779
1896.....	2,766	1,279,987	653,213
1897.....	2,725	1,274,292	564,694
1898.....	2,384	1,149,077	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

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The total quantity of freight passed through the several divisions of the Canadian Canal system during the season of 1909 is as follows :

	Farm Stock.	Forest Produce of Wood.	Manufactures.	Produce of Mines.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland.	1,129	186,614	506,489	410,982	920,737	2,025,951
St. Lawrence	12,877	509,157	472,656	642,209	773,730	2,410,629
Chambly.	430	599,330	9,560	122,835	19,962	752,117
Ottawa.	3,735	232,025	64,153	31,305	5,721	336,939
Rideau.	1,730	26,727	42,642	17,036	3,639	91,774
St. Peters.	3,047	8,423	7,626	45,140	15,614	79,850
Murray.	600	655	50,085	50,083	828	102,291
Trent Valley.	189	55,086	1,880	1,832	965	59,952
Sault Ste. Marie.	474	71,129	710,360	23,969,481	3,109,801	27,861,245

The total quantity of freight moved on the Welland Canal was 2,025,951 tons, of which 920,737 tons were agricultural products.

On the St. Lawrence canals the total quantity of freight moved was 2,410,629 tons, of which 773,730 were agricultural products, and 472,656 tons were manufactures.

On the Ottawa canals the total quantity of freight moved was 336,939 tons ; of this quantity 232,035 tons were the produce of the forest.

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COMPARATIVE STATEMENT of the Commerce through the United States, St. Mary's Falls Canals and Canadian Sault Ste. Marie Canal, for the Seasons of 1908 and 1909.

	Traffic for 1909.		Total traffic for		Increase.	Decrease.
	United States canal.	Canadian canal.	Season 1909.	Season 1908.	Amount.	Amount.
Vessels..... Number	12,803	6,331	19,134	15,184	3,950	.....
Lockages..... "	8,525	5,046	13,571	10,685	2,886	.....
Tonnage registered..... Net Tons	28,939,463	17,839,674	46,779,137	31,126,386	15,652,751	.....
" freight..... "	30,132,374	27,861,245	57,993,619	41,416,513	16,577,106	.....
Passengers..... Number	27,736	32,810	60,546	53,306	7,240	.....
Coal (hard)..... Net Tons	1,060,753	361,918	1,422,671	1,362,435	60,236	.....
" (soft)..... "	6,150,540	2,435,781	8,586,321	8,545,923	40,398	.....
Flour..... Barrels	4,580,833	2,522,700	7,103,533	5,614,650	1,488,883	.....
Wheat..... Bushels	38,438,716	74,401,000	112,839,716	106,698,934	6,140,782	.....
Grain (excluding wheat). "	17,990,396	29,503,240	47,493,636	43,452,705	4,040,931	.....
Manufactured & pig iron. Net Tons	363,459	209,433	572,892	308,179	264,713	.....
Salt..... Barrels	419,977	201,114	651,091	549,254	101,837	.....
Copper..... Net Tons	118,889	8,323	127,212	101,329	25,883	.....
Iron ore..... "	18,866,499	21,156,915	40,023,414	24,637,001	15,386,413	.....
Lumber..... ft. B.M.	517,694,000	34,309,300	552,003,300	457,165,355	94,837,945	.....
Silver ore..... Net Tons	.....	.....	.....	.....	.....	.....
Building stone..... "	1,784	1,784	11,589	9,805
Unclassified freight..... "	599,564	532,022	1,131,586	823,597	307,989

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The United States canal was open to navigation during the season of—

1889.....	234 days	1900.....	238 days
1890.....	228 "	1901.....	230 "
1891.....	225 "	1902.....	256 "
1892.....	233 "	1903.....	249 "
1893.....	219 "	1904.....	223 "
1894.....	234 "	1905.....	245 "
1895.....	231 "	1906.....	249 "
1896.....	232 "	1907.....	233 "
1897.....	234 "	1908.....	231 "
1898.....	241 "	1909.....	236 "
1899.....	231 "		

The Canadian canal was open to navigation during the season of—

1895.....	87 days	1903.....	256 days
1896.....	218 "	1904.....	241 "
1897.....	238 "	1905.....	255 "
1898.....	243 "	1906.....	253 "
1899.....	239 "	1907.....	238 "
1900.....	238 "	1908.....	235 "
1901.....	246 "	1909.....	240 "
1902.....	264 "		

The average number of vessels passing per day through the two canals for the season of 1909 was over eighty-one.

A—TABLE showing the total tonnage of the undermentioned articles moved Up and Down

Year.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	45,674	313,825	120,599	20,951	.....	904	1,937
1872	26,651	239,998	254,902	6,035	7,752	64	2,745
1873	30,665	355,847	180,169	8,225	1,194	3	3,777
1874	24,019	413,212	181,151	18,871	5,954	513	8,677
1875	13,964	253,835	103,749	35,751	3,383	917	6,337
1876	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879	10,710	274,570	144,506	4,655	1,239	440	2,444
1880	12,679	242,020	163,738	17,772	477	1,016	1,480
1881	9,959	127,832	101,075	24,509	.....	1,844	2,086
1882	12,261	215,056	54,799	20,126	611	3,226	403
1883	13,471	152,794	182,269	10,436	731	1,642	10,983
1884	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886	19,474	154,169	219,442	1,595	4,911	564	14,657
1887	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888	16,983	160,963	194,886	5,906	26,629	811	13,608
1889	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891	13,517	198,658	185,180	8,113	52,959	65,888	28,042
1892	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894	33,628	270,993	169,233	28,353	27,962	567	60,673
1895	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898	5,578	207,647	437,861	12,286	17,502	16,127	23,182
1899	11,625	197,732	204,004	2,907	24,057	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	165,138	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

* Fiscal. † Apples, meal of all kinds, pease, potatoes.

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through the Welland Canal, during a period of thirty-nine years, ended Dec. 31, 1909.

HEAVY GOODS.							
Total.	Railway Iron.	Other Iron.	Salt.	Iron and Salt having paid full tolls on St. Lawrence Canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	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	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
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	22,480	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

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B.—TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland Canal during a series of thirty-nine years, ended December 31, 1909.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869.....	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872.....	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1873.....	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874.....	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875.....	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876.....	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877.....	13,588	248,894	169,185	10,216	2,810	2,405	1,833	448,931
1878.....	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879.....	10,588	271,545	114,276	803	1,196	.....	2,387	430,795
1880.....	12,467	240,601	162,891	.....	477	.....	1,418	417,853
1881.....	9,655	121,393	103,075	252	.....	6	1,371	235,752
1882.....	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883.....	13,256	146,741	182,143	975	731	518	10,971	355,335
1884.....	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885.....	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886.....	19,418	146,151	218,897	.....	4,891	.....	14,581	403,928
1887.....	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888.....	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889.....	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890.....	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891.....	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892.....	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893.....	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894.....	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895.....	43,895	202,636	164,894	8,689	18,236	.....	46,435	484,785
1896.....	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897.....	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898.....	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
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	67,756	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	33,423	6,667	21,668	974,270
1909.....	38,763	590,074	140,902	23,151	75,135	33	30,206	898,264

* Fiscal. † Apples, meal all kinds, pease, 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 thirty-nine years, ended December 31, 1909.

YEARS.	VEGETABLE FOOD.										HEAVY GOODS.				
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other articles.	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1869	30,681	211,085	91,149	2,942	.....	667	1,006	337,530	68,064	14,334	89,086	28,566	33,912	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	224,264
1873	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	8,826	40,507	170,242	62,942	292,176	
1874	8,280	299,053	125,627	.....	5,948	.....	5,368	374,226	5,742	8,941	22,888	203,673	19,651	240,895
1875	1,881	113,832	54,188	2,641	.....	500	1,920	177,908	14	4,123	12,931	192,767	34,616	241,451
1876	5,187	96,247	58,138	.....	1,905	525	403	162,403	.....	5,531	29,395	167,110	25,808	227,844
1877	3,342	107,396	63,260	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	13,535	150,583	13,535	178,723
1879	159	53,791	33,401	464	.....	.....	11	87,826	2,405	3,648	6,318	118,573	17,797	148,741
1880	.....	16,122	1,551	296	.....	.....	.....	48,580	4,743	3,515	371	63,945	18,380	92,954
1881	.....	34,320	30,081	524	.....	.....	10	65,285	1,313	3,570	.....	83,898	6,460	97,205
1882	107	30,227	32,433	337	.....	684	14	64,002	4,076	4,076	.....	158,552	14,533	177,161
1883	2,041	54,382	66,128	735	731	.....	8,579	132,496	1,209	6,901	8	196,462	24,891	226,471
1884	1,715	40,956	53,707	.....	9,874	.....	8,170	114,422	698	599	.....	210,790	15,100	227,187
1885	124	53,235	63,229	732	882	.....	1	118,203	.....	1,594	.....	198,416	13,029	215,030
1886	7,591	53,258	94,048	.....	4,790	.....	13,291	172,888	156	3,328	1	189,964	11,364	206,815
1887	11,780	37,678	83,431	1,732	12,050	.....	10,859	137,530	15	4,406	.....	87,780	627	87,828
1888	8,563	39,939	102,974	2	26,510	179	11,508	189,825	63	1,601	56	173,259	2,309	177,288	
1889	5,017	39,229	147,045	.....	27,492	.....	17,225	236,208	.....	1,587	.....	227,476	1,204	231,163
1890	9,204	180,842	6,519	6,519	27,030	.....	20,497	275,619	.....	504	208	162,231	1,620	184,563
1891	6,802	32,097	127,494	8,113	52,823	.....	26,115	253,444	.....	292	705	186,372	1,773	189,342
1892	11,018	26,950	131,222	6,433	36,935	.....	31,992	244,550	.....	576	2	183,895	.....	184,473
1893	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389	.....	344	.....	206,827	.....	207,171
1894	17,795	53,846	105,329	28,995	27,621	.....	60,402	198,358	.....	297	.....	188,521	.....	188,818
1895	10,169	100,512	7,904	7,904	17,020	.....	46,316	299,802	181	246	.....	149,490	.....	149,917
1896	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407	.....	146	.....	207,348	.....	207,494
1897	7,237	28,919	169,057	14,173	14,969	.....	41,887	276,242	965	15	.....	163,143	.....	163,123
1898	4,212	11,268	150,967	6,909	12,732	1,197	22,671	269,656	770	339	4	156,814	.....	157,927
1899	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892	351	1,646	553	88,931	.....	91,481
1900	7,966	18,771	60,545	2,402	39,706	2,149	14,243	145,787	.....	953	.....	46,024	.....	46,977
1901	17,165	33,557	55,531	7,119	26,344	.....	14,016	143,732	83	80	105	46,702	.....	48,970
1902	13,765	32,639	63,111	7,418	10,006	.....	12,675	182,634	.....	214	.....	12,911	.....	13,125
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	14,629	60,964	16,621	16,497	.....	13,079	129,986	.....	1	.....	63,882	.....	63,882
1905	24,054	15,483	93,622	9,197	10,892	.....	9,482	162,930	.....	.....	.....	73,464	.....	73,465
1906	15,215	13,410	135,240	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	114,320
1908	17,694	24,651	39,830	7,118	2,070	2	21,333	172,738	.....	.....	.....	158,351	1,400	159,751
1909	15,452	17,940	100,967	4,224	22,683	161,266	5	131,131	1,531	132,467	

*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 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908 and 1909.

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	126,398	104	59,532	354	355,702	195	108,720	869	650,352
1898.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	95,567		36,157		54,934		18,355		205,013	
Corn.....	56,538		30,455		284,059		66,761		437,813	
Barley.....					9,465		2,821		12,286	
Oats.....					17,329				17,329	
Pease.....	260				45				305	
Rye.....	3,564		1,480		9,135		1,948		16,127	
Coal.....	575		1,916		759		2,620		5,870	
Miscellaneous merchandise..	19,385		4,104		47,271		8,758		79,518	
Shingles, woodenware, &c. . .	2		9						11	
Sawed lumber..... Ft. B.M	4,910,669		1,641,783		16,220,972		24,484,283		47,257,707	
Square timber..... Cub. ft.	825,545		1,183,821				388,410		2,397,776	
Firewood..... Cords.										
Staves..... No.	249								249	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	191	100,242	129	75,777	201	212,027	78	36,962	599	425,008
1899.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	91,901		80,928		16,250		7,244		196,323	
Corn.....	28,015		18,905		138,834		18,250		204,004	
Barley.....					2,424				2,424	
Oats.....	1,537				21,646				23,203	
Pease.....										
Rye.....					923				923	
Coal.....	435		6,736				3,398		10,569	
Miscellaneous merchandise..	25,203		18,651		49,522		1,567		94,943	
Shingles, woodenware, &c. . .	485		916				100		1,501	
Sawed lumber..... Ft. B.M	2,077,748		772,739		14,855,338		19,949,079		37,654,904	
Square timber..... Cub. ft.	322,138		585,780		20,802		328,806		1,257,526	
Firewood..... Cords.			9						9	
Staves..... No.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	114,885	109	67,475	168	182,444	71	30,309	564	305,113
1900.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	67,694		43,157		23,066		2,130		136,047	
Corn.....	39,597		31,248		78,701		13,963		163,509	
Barley.....					2,402		1,047		3,449	
Oats.....					39,706		407		40,113	
Pease.....	115				4				119	
Rye.....	1,389				2,149				3,538	
Coal.....	723		637		433		559		2,352	
Miscellaneous merchandise..	53,649		31,536		43,344		3,564		132,093	
Shingles, woodenware, &c. . .	1,078								1,078	
Sawed lumber..... Ft. B.M	6,847,279		5,344,258		14,984,483		18,770,405		45,946,425	
Square timber..... Cub. ft.	439,827		355,951		11,583		198,420		1,005,781	
Firewood..... Cords.	126		255						381	
Staves..... No.	1,000								1,000	

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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.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	197	103,802	114	59,022	163	182,497	48	22,319	522	367,640
1901.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		57,641		58,973		31,955		1,241		149,810
Corn		7,350		4,689		53,717				67,756
Barley						7,119				7,119
Oats		944				27,197				28,141
Pease										2,961
Rye		2,961								2,961
Coal		1,960		362		357				2,679
Miscellaneous merchandise		71,300		32,312		12,874		7,469		123,955
Shingles, woodenware, &c.		18								18
Sawed lumber.....Ft. B.M.		6,533,423		4,060,231		11,089,806		13,092,940		34,776,420
Square timber.....Cub. ft.		362,441		204,682		9,384		149,531		726,038
Firewood.....Cords.		165		264						429
Staves.....No.										
	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										4,079
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		23,437,287		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		389		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

10-11 EDWARD VII., A. 1911

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—Continued.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	228	157,539	55	39,375	205	187,748	42	15,918	530	490,580
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		58,259,380	
Square timber..... Cub. ft.	944,508		744,000				149,000		1,837,508	
Firewood..... Corps.					717				717	
Staves..... No.	634,000								634,000	
	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.	
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.....					1,711				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		12,479,698		54,589,200	
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.	
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		10,769,755		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	

SESSIONAL PAPER No. 20a

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.
	375	290,509	148	81,070	408	397,616	76	36,921	1,007	806,116
1907.	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		47,373		50,183		14,493		143,555	
Iron ore	12,040		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	558,090		323,000						881,090	
Firewood..... Cords.					660				660	
	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.	
Wheat	505,151		39,001		183,101		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					40				40	
Rye	742				5,925				6,667	
Coal	39,733		42,656		57,448		8,344		148,181	
Merchandise	26,815		14,783		14,410		13,686		69,694	
Firewood..... Cords.			70		1,173				1,243	
Sawed lumber..... Ft. B.M.					17,572,070		6,578,545		24,150,615	
Square timber..... Cub. ft.	221,500		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.	
Wheat	415,208		34,903		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					63				63	
Rye	33								33	
Coal	160,475		53,681		21,097		630		235,883	
Merchandise	52,994		14,782		12,232		16,498		96,506	
Sawed lumber..... Ft. B.M.					31,643		10,214		41,857	
Square timber..... Cub. ft.	3,450		7,840		125		1,475		12,800	

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 1909 is as follows:—

Summary.	Tons.	Tons.
In Canadian steam vessels.....	302,704	
" sail ".....	18,089	
Total quantity in Canadian vessels.....		320,793
In United States steam vessels.....	312,276	
" sail ".....	7,948	
Total in United States vessels.....		320,224
Grand total freight passed Up the Welland Canal in Canadian and United States vessels.....		641,017

STATEMENT of the Quantity of Through Freight passed Up and Down the Welland Canal during the Season of Navigation in 1909.

Summary.	Tons.	Tons.
In Canadian steam vessels up.....	302,704	
" " down.....	802,515	
Total in Canadian steam vessels.....		1,105,219
In Canadian sail vessels up.....	18,089	
" " down.....	124,386	
Total in Canadian sail vessels.....		142,475
Total quantity in Canadian vessels.....		1,247,694
In United States steam vessels up.....	312,276	
" " down.....	379,305	
Total in United States steam vessels.....		691,581
In United States sail vessels up.....	7,948	
" " down.....	28,817	
Total in United States sail vessels.....		36,765
Total quantity in United States vessels.....		728,346
Total in Canadian and United States vessels.....		1,976,040
	Down or East Bound.	Up or West Bound.
In Canadian vessels.....	926,901	320,793
In United States vessels.....	408,122	320,224
Total.....	1,325,023	641,017

SESSIONAL PAPER No. 20a

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 Season of Navigation 1897 to 1909.

Articles.	1897. 1898. 1899. 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909.												
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Cement and water lime.....									22				
Clay, lime and sand.....								10					
Iron, railway.....				50									
" pig.....				508									5,632
" all other.....	7,564	6,217	5,063	4,292	1,478	5,785	1,651	384	289	124		553	12,689
Steel.....	375	1,351	3,000	5,420			16	48					
Stone, for cutting.....													
Apples.....							1			9,486			
Barley.....		3,960	596	1,288			9,697	43,607	21,196	105,984		24,318	19,143
Beans.....		310,498	150,999	109,359	14,319	1,719	123,864	84,204	55,659			10,454	17,137
Corn.....		297,583			4,965	3,643		15,694	80,570	49,159		27,500	19,631
Flaxseed.....		3,293			1,400	16,151	24,662	14,271	9,174			5,028	21,905
Flour.....		1,029	653	4,229	35	348	57	270	60			156	
Meal, all kinds.....								21,404	37,164	66,941		28,081	65,624
Oats.....	6,847	3,975	10,250	8,922	1,584	1,442	2,438	9,229					
Oil cake.....					1,083		462	7,846					
Pease.....		260		115		63							30
Rye.....	2,078	15,488	923	3,078	2,961	4,079	4,260	1,711	1,405	2,266		6,662	120
Salt.....	8,435	144	183		50		132	168	75	143		419	
Seed, all kinds.....	216		200							20			
Hay, pressed.....					216								
Hay, pressed.....					23								
Tobacco, raw.....	51												
Wheat.....	278,498	184,154	169,978	121,896	132,702	200,975	133,528	190,505	289,611	450,446		686,626	550,775
All other agricultural products, vegetables.....		56	32										5,876
Hides, skins, horns and hoofs.....							10		2				
Horses.....		4	1										
Lard and lard oil.....					1,455			2,847	4,810				
Meats, all kinds.....		114			31							524	
Pork.....													
Tallow.....								53					
All other agricultural products, animal.....													366
Total, class 3.....	576,008	532,499	345,565	256,491	161,849	220,805	241,522	384,727	499,895	688,749		790,321	718,951
<i>Class 4.</i>													
Agricultural implements.....													
Ashes.....			3		1,785	13	58						
Bricks.....	133	73	55	25	8		2	16					1,543

10-11 EDWARD VII., A. 1911

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, &c.—*Concluded.*

Articles.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Crockery.....	1			1	5		3	6	43	6			
Furniture.....	53	75	16	6	1		15	3	21	11	4		
Glass, all kinds.....	9	56	159			54	240		820				
Molasses.....			1				19		61			3	
Nails.....	112	1,141	7,143	15,647	14,987	12,091	14,619	12,848	20,700	19,995	22,111	30,002	31,149
Oil.....					17		5		53		101		
Paint.....							4						
Pitch and tar.....							20						
Rags.....													
Rosin.....					4				59	72	15		
Soda ash.....					112				2,019				173
Sugar.....								87	53				
Tin.....			96						204				
Tobacco.....				16									
White lead.....		4	74	11	32				635	614	1,224	1,056	525
Whisky, beer and other spirits.....	1,226	866	518	92	2,420	419	582	766	713	466	2,294	2,126	10,418
Merchandise not enumerated.....													
Total, class 4.....	1,580	2,215	7,969	15,798	19,366	12,577	15,569	14,456	25,572	21,164	25,749	34,730	42,265
<i>Class 5.</i>													
Barrels, empty.....			1	182	66	15							
Hoops.....	257												
Sawed lumber.....	478	3,065	924	15,760	2,635	1,085			3,957	100			
Staves, pipe and barrel.....	4,716							394		2,400			
" West India and pipe.....													
Timber, square, in vessels.....								1,514	1,200	1,500	4,180		900
" in rafts.....	1,207	329	26			17							
Woodenware.....													
Total, class 5.....	6,658	3,394	951	15,942	3,295	1,117		1,938	5,217	4,000	4,180		900
<i>Special Class.</i>													
Coal.....									29,351			42,075	175,115
Iron ore.....									3,837		70,489		1,824
Stone, all kinds.....						15,976		17,362				1,272	
Total, special class.....									33,188		70,489	43,367	176,939
Grand total.....	584,246	538,108	354,485	28,231	184,420	250,475	398,427	275,278	448,704	554,231	789,167	869,398	439,055

SESSIONAL PAPER No. 20a

G.—STATEMENT showing the Quantity of Freight passed Westward from Montreal through the whole length of the St. Lawrence and Welland Canal to Lake Erie, during the Seasons of Navigation in 1897, 1898, 1899, 1900, 1901, 1902, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907 and 1909.

Articles.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1909.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>												
Bricks.....	70	70	24	49	196	22	80	115	132			
Brimstone.....					5	20	23	12			556	
Cement and water lime.....	837	946	997	1,931	2,916	178	3,924	39	181	88	13	400
Clay, lime and sand.....	4	114	8	4	2	1	181				100	
Cotton, raw.....							23					
Fish.....	10	9	10	8	8	4	8	4			39	
Gypsum.....			1									
Iron, railway.....				74	748	11,735	39,641	283	126	7,259	4,119	
" pig.....	6		3	3		558	273		312	680	7,655	7,231
" all other.....	559	699	1,318	1,428	4,950	2,904	5,845	3,782	3,633	8,235	6,987	
Salt.....	25	35	48	48	75	4	87	99	150	17		
Steel.....		19	18		3	11	332	58	192	111	2,561	35,153
Stone for cutting.....	62							41				
Flour.....					16							
Hay.....											30	255
Meals.....							17					
Oats.....												
Potatoes.....												
Seeds, all kinds.....												
Tobacco, raw.....	121	56	121	218	302	58	325	164	35	17		
Agricultural products not enumerated, vegetables.....	4					1	2					
Hides and skins.....					1	1			127			
Horses.....						16	6					
Lard and lard oil.....		1										
Meats other than pork.....		2				11			28	20	1	
Pork.....							1	25			15	
Wool.....												
All other articles not enumerated.....												
Total, class 3.....	1,698	2,031	2,500	3,764	9,222	15,520	50,768	4,647	4,934	16,457	22,076	43,039
<i>Class 4.</i>												
Agricultural implements.....											5	
Ashes, pot and pearl.....	1											
Crockery and earthenware.....	4	33	3	5			32	291	155	294	456	
Dye woods, &c.....								2			2	

SESSIONAL PAPER No. 20a

H.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1897 to 1909 inclusive.

Articles.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Bricks	845	300		18									
Cement and water line													
Fish	965	770									20		
Iron, railway		324	1,008	714		30			1	27	30		
" all other					105								
Salt		2,951	13,522	3,110						2	509	9,086	
Stone for cutting													
Apples													
Barley	14,173	6,909	2,421	2,462	7,119	7,418	11,433	16,621	9,197	9,266	2,812	7,148	4,224
Corn	163,057	156,667	81,777	66,545	53,531	66,111	108,917	60,964	93,622	135,240	124,474	99,830	100,997
Flour	7,237	4,212	6,118	7,966	17,168	13,785	6,082	8,556	24,054	15,215	18,898	17,694	
Hay, pressed	301								200				
Meal, all kinds	41,644	22,626	18,198	14,214	14,016	12,675	13,546	13,076	9,606	10,668	21,976	21,353	
Marble									87				
Nails									1				
Oil cake	14,969	12,729	19,526	2,705	1,302	110	740	16,497	228		114		
Oats		45		39,706	26,344	19,006	6,112	3	10,892	11,323	4,741	2,070	
Pease				4			22		76	11	25	40	63
Potatoes		1,197		2,149			4,174					2	
Rye		200					1,594			756			15,452
Flax seed		44	11			10	27		43	3	17		
Seeds, all kinds	299												
Tobacco					23								
Wheat	28,919	11,268	12,926	18,771	23,557	32,639	15,436	14,269	15,483	13,410	21,892	24,631	17,940
Agricultural products, vegetables				6			1			1	7		
Hides and skins, &c.	23											21	315
Horses	3			4			2			22	86		
Lard and lard oil, &c.	1,444	3,671	864	1,588	1,680	2,413							
Meats, other than pork				17									
Pork	243	1,271	343	17	970	632	152	379	273	268	429	190	
Sheep		359	201	631	119								
Tallow		89	130										
Wool	197				3	752	482	134	21	89	30		157
Total, class 3.	280,319	219,434	198,720	147,947	146,581	146,581	168,720	130,499	163,784	196,301	196,062	182,085	161,738
<i>Class 4.</i>													
Agricultural implements						399		396	552	494			254
Crockery and earthenware													
Furniture		2			3	17							

H.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the season of Navigation from 1897 to 1909 inclusive.—*Concluded.*

Articles.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Marble					4								
Molasses			8	57									
Nails			11								3		
Oil, in barrels	198	119	367	17	22	1,594	2,000	1			8	15	
Paint		3	2	36				17	42	1	1		
Rags			1					4	4				
Soda ash													
Stone, wrought				154		280		53	53	840	26,075		1,196
Sugar	31				448				7				
White lead											21		
Whiting				1	1						30		
Whisky, beer and all other spirits	3,591	3,828	6,219	7,889	3,327	1,928	2,010	1,554	2,008	2,324	41,621	1,857	5,866
Merchandise	3,820	3,986	6,783	8,164	3,805	4,218	4,017	2,021	2,655	3,660	67,768	1,875	7,316
Total, class 4													
<i>Class 5.</i>													
Empty barrels				5	282				3	2	1		
Firewood, in vessels						4		717	2,700	3,609	1,980	3,569	
Lumber, sawn, in vessels	68,280	52,844	57,695	55,128	38,085	72,806	48,337	30,194	15,726	27,791	14,314	21,571	24,357
Masts and spars, in vessels	403							154					
Hop poles								652	2,248		2,151	478	
Railway ties, in vessels									62	53	70		
Shingles									12	1,500			
Split posts													
Staves, salt barrels													125
Timber, square, in vessels	1,040												2,932
Woodenware, &c.	1												
Total, class 5	69,724	52,844	57,695	55,133	38,367	72,810	48,337	31,717	20,751	32,865	18,516	25,558	27,384
<i>Special class.</i>													
Coal		759	2,293	992	357	501		1,100	3,346	4,400	110,347		400
Stone, not suitable for cutting													
Kryolite											2,734		
Iron ore											1,316		
Total, special class		759	2,293	992	357	501		1,100	3,346	4,400	114,397		400
Grand total	353,863	277,023	225,491	218,969	190,476	224,110	221,074	165,337	190,547	237,226	396,743	209,518	196,838

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L—STATEMENT of the quantity of Grain Transhipped to the following Ports for the season of 1909.

Ports.	Wheat.	Oats.	Barley.	Corn.	Other Grain.	Total.	Total.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Tons.</i>
Kingston.....	7,998,834	1,015,470	569,708	251,035	190,868	10,025,733	282,696
Prescott.....	70,800	82,118	.....	.....	26,200	179,118	4,175
Ogdensburg.....	.....	.....	.....	68,143	.....	68,143	1,908
Total Bushels....	8,069,634	1,097,588	569,708	319,178	216,886	10,272,994	.....
Total Tons.....	242,089	18,658	13,673	8,937	5,422	.....	288,779

M.—The quantity of Coal passed through the Welland Canal during a series of years from 1885 to 1909 inclusive, as follows:—

Years.	From Canadian Ports to Canadian Ports.		From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total.
	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.....	80	.....	116,616	615	17,280	22,781	202,372
1891.....	.....	.....	185,190	1,382	17,374	20,698	224,644
1892.....	.....	.....	183,244	651	12,991	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	223,445
1897.....	.....	4	165,143	.....	1,277	9,799	176,223
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

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N.—STATEMENT showing the quantity of Coal passed though the whole length of the St. Lawrence Canal during the seasons of 1885 to 1909 inclusive.

Years.	Quantity passed up.	Quantity passed down to Montreal.	Total 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	469,695	483,238

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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.
1898.	Tons.	Tons.	Tons.
Barley	3,960	1,417	6,909
Corn	310,498	13,338	116,317
Oats	3,975	625	12,729
Pease	260	.....	45
Rye	16,133	39	.....
Wheat	184,706	15,860	8,612
Total grain	†519,532	31,279	144,612
Other articles	19,773	79,614	114,259
Total	539,305	110,893	258,871
1899.			
Barley	568	.....	1,828
Corn	150,999	16,594	43,854
Oats	10,250	1	13,139
Pease .....	.....	.....	.....
Rye	923	.....	.....
Wheat	169,978	24,602	9,190
Total grain	† 332,736	40,197	68,011
Other articles	21,739	68,671	104,727
Total	354,485	108,958	172,732
1900.			
Barley	1,288	563	1,598
Corn	109,358	9,844	44,406
Oats	8,925	348	30,840
Pease	115	.....	4
Rye	3,078	160	300
Wheat	121,896	6,610	7,541
Total grain	**244,661	17,525	84,589
Other articles	43,670	95,680	93,287
Total	288,231	113,205	177,876
1901.			
Barley .....	.....	.....	.....
Corn	14,319	4,828	49,609
Oats	1,584	853	25,704
Pease .....	.....	.....	.....
Rye	2,961	.....	.....
Wheat	132,702	8,051	9,057
Total grain	†151,566	13,732	83,370
Other articles	32,854	128,614	91,799
Total	184,420	142,346	175,169

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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.
1902.	Tons.	Tons.	Tons.
Barley.....			7,418
Corn.....	1,719	10,335	55,583
Oats.....	1,412		9,764 *
Pease.....			
Rye.....	4,079		
Wheat.....	200,975	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.....	351,936	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.....	53,021	3,950	57,473
Oats.....			16,497
Pease.....			3
Rye.....			
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	16,892
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.—*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.
1906.	Tons.	Tons.	Tons.
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.....	*450,609	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.....	168,785	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

TABLE 1.—Comparative Statement of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation in 1908 and 1909.

Canals.	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.	Up.	Down.	Canadian.	United States.
1908.														
Sault Ste. Marie.....	378,198	1,486,689	17,940	230,333	1,464,421	8,008,121	955,288	218,226	2,815,847	9,943,369	12,759,216	2,092,231	10,666,985	
Welland.....	128,077	571,961	35,370	15,278	230,136	209,518	8,377	495,736	410,360	1,292,433	1,703,453	775,245	927,208	
St. Lawrence.....	434,966	839,981	140,162	198	733	1,227	8,635	583,340	584,456	1,424,646	2,009,102	1,261,651	747,451	
Chambly.....	4,160	10,730	364,774	.....	.....	.....	.....	123,612	368,934	134,342	503,276	379,674	123,602
St. Peter's.....	22,420	49,595	.....	.....	.....	.....	.....	.....	22,420	49,595	72,015	72,015	.....
Murray.....	6,717	5,380	492	6	.....	.....	.....	13,306	7,269	18,692	25,901	12,595	13,306
Ottawa.....	2,358	296,623	.....	28,855	.....	.....	.....	691	2,358	256,169	258,527	258,527	.....
Rideau.....	39,570	31,713	1,998	4,051	.....	.....	.....	12,308	41,568	48,072	89,640	77,519	12,121
Trent.....	11,840	69,850	.....	.....	.....	.....	.....	.....	11,840	69,850	81,690	81,690	.....
Grand total.....	1,028,246	3,292,422	560,736	278,721	1,704,310	8,218,866	972,300	1,447,219	4,265,592	13,237,228	17,502,820	5,012,147	12,490,673	
1909.														
Sault Ste. Marie.....	641,601	1,597,940	46,011	512,293	1,736,801	22,188,388	1,000,300	167,881	3,424,743	24,436,502	27,861,245	3,366,495	24,494,750	
Welland.....	217,737	618,718	164,304	16,469	248,581	196,838	11,467	551,837	642,089	1,383,862	2,025,951	1,050,241	975,710	
St. Lawrence.....	533,568	932,104	242,954	36,547	140	.....	3,759	661,557	780,421	1,630,208	2,410,629	1,710,797	639,832
Chambly.....	5,480	11,475	606,466	.....	.....	.....	.....	128,936	611,946	140,171	759,117	623,421	128,696
St. Peter's.....	27,169	52,052	.....	.....	.....	.....	629	.....	27,798	52,052	79,850	79,150	700
Murray.....	72,034	7,244	406	.....	.....	.....	672	21,335	73,112	29,179	102,291	79,254	23,037
Ottawa.....	49,131	240,156	150	42,333	.....	.....	5,175	336,939	54,456	282,483	336,939	331,104	5,835
Rideau.....	44,152	33,033	394	252	.....	.....	1,827	12,148	46,341	45,433	91,774	77,643	14,131
Trent.....	17,819	42,133	.....	.....	.....	.....	.....	.....	17,819	42,133	59,952	59,952	.....
Grand total.....	1,608,659	3,504,849	1,060,715	607,894	1,985,522	22,385,226	1,023,829	1,544,054	5,678,725	28,012,023	33,720,748	7,378,657	26,342,691	

TABLES 2.—Statement showing the Number, Tonnage and Nationality of Vessels passed through the several Canals during the Season of Navigation in 1909.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
CANADIAN VESSELS.												
<i>Steam and Sail.</i>												
Sault Ste. Marie.....	2,597	1,096,320	1,012,874	98,486	213,062	81,423	111,236	252,281	123,254	1,528,510	1,460,426	2,988,936
Welland.....	1,724	435,367	380,371	152,354	1,452	1,168	.....	4,648	210,614	593,537	592,437	1,185,974
St. Lawrence.....	8,135	1,230,168	1,072,416	21,896	.....	.....	.....	.....	152,497	1,252,064	1,224,913	2,476,977
Chambly.....	670	32,721	34,194	16,075	.....	.....	.....	.....	14,545	48,796	48,789	97,585
Ottawa.....	1,935	181,226	179,934	157	3,399	.....	.....	766	502	182,149	183,885	365,934
Rideau.....	2,202	73,919	72,876	3,067	76	.....	.....	70	4,259	77,066	77,211	154,297
St. Peter's.....	1,428	50,694	51,729	.....	.....	.....	.....	.....	.....	50,694	51,729	102,423
Trent Valley.....	3,730	85,722	88,206	.....	.....	.....	.....	.....	.....	85,722	88,206	173,928
Murray.....	886	149,050	99,803	8,285	.....	.....	.....	.....	8,235	157,515	108,039	265,554
Total Canadian.....	22,507	3,335,187	2,992,403	300,320	217,989	82,591	111,236	257,945	513,907	3,976,043	3,835,535	7,811,578
UNITED STATES VESSELS.												
Sault Ste. Marie.....	3,734	144,118	83,507	55,615	180,573	3,902,156	10,228,083	197,837	58,249	4,209,726	10,551,012	14,850,738
Welland.....	709	859	1,139	61,457	6,902	207,395	200,005	4,911	135,216	334,622	343,952	677,884
St. Lawrence.....	1,135	115,486	20,956	120,844	40	8,789	306	93	222,118	245,212	244,020	489,232
Chambly.....	4,055	.....	1,876	203,865	.....	.....	.....	.....	203,278	293,865	207,154	411,019
Ottawa.....	246	2,649	.....	.....	12,581	.....	.....	9,389	.....	12,038	12,581	24,619
Rideau.....	34	198	1,022	10	49	.....	.....	712	13	920	1,134	2,054
St. Peter's.....	11	293	628	.....	.....	.....	.....	282	.....	575	628	1,203
Trent Valley.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Murray.....	71	289	279	385	7	38	20	536	1,029	1,238	1,335	2,573
Total United States.....	9,996	263,892	109,407	442,176	206,202	4,178,378	10,429,614	213,750	621,903	5,008,196	11,361,126	16,459,322
Grand Total Canadian and U. S.....	32,503	3,599,079	3,101,810	742,496	418,191	4,260,969	10,540,850	471,695	1,135,810	9,074,239	15,196,661	24,270,900

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TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

Vessels.	Total Number of trips.	From Canadian to Canadian Ports.		From Canadian to United States Ports.	
		Up.	Down.	Up.	Down.
SAULT STE. MARIE CANAL.					
Canadian Vessels, steam.....	2,531	1,082,810	993,102	98,486	209,156
" " sail.....	66	13,510	19,772		3,906
Total Canadian.....	2,597	1,096,320	1,012,874	98,486	213,062
United States Vessels, steam.....	3,679	136,221	83,127	55,615	176,566
" " sail.....	53	7,897	380		4,007
Total United States.....	3,734	144,118	83,507	55,615	180,573
Grand total, Sault Ste. Marie Canal.....	6,331	1,240,438	1,096,381	154,101	393,635
WELLAND CANAL.					
Canadian Vessels, steam.....	1,150	375,866	325,428	114,631	1,452
" " sail.....	574	59,505	54,943	37,723	
Total Canadian.....	1,724	435,367	380,371	152,354	1,452
United States Vessels, steam.....	652		1,079	48,401	4,653
" " sail.....	57	859	60	13,056	2,249
Total United States.....	709	859	1,139	61,457	6,902
Grand total, Welland Canal.....	2,433	436,226	381,510	213,811	8,354
ST. LAWRENCE CANALS.					
Canadian Vessels, steam.....	4,046	723,100	603,171	14,281	
" " sail.....	4,089	507,068	469,245	7,615	
Total Canadian.....	8,135	1,230,168	1,072,416	21,896	
United States Vessels, steam.....	634	75,339	2,922	87,618	40
" " sail.....	502	40,147	18,034	33,226	
Total United States.....	1,136	115,486	20,956	120,844	40
Grand total, St. Lawrence Canals.....	9,271	1,345,654	1,093,372	142,740	40
CHAMBLY CANAL.					
Canadian Vessels, steam.....	278	28,511	28,536	135	
" " sail.....	392	4,210	5,658	15,940	
Total Canadian.....	670	32,721	34,194	16,075	
United States Vessels, steam.....					
" " sail.....	4,055		1,876	203,865	
Total United States.....	4,055		1,876	203,865	
Grand total, Chambly Canal.....	4,725	32,721	36,070	219,940	
OTTAWA CANALS					
Canadian vessels, steam.....	901	83,684	86,759	157	1,007
" " sail.....	1,034	97,542	93,175		2,392
Total Canadian.....	1,935	181,226	179,934	157	3,399

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passed through the several Canals during the Season of Navigation in 1909.

From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
Up.	Down.	Up.	Down.	Up.	Down.	
81,423	109,466	252,281	123,254	1,515,000	1,434,978	2,949,978
	1,770			13,510	25,448	38,958
81,423	111,236	252,281	123,254	1,528,510	1,460,426	2,988,936
3,870,252	10,169,548	195,591	58,249	4,257,679	10,487,490	14,745,169
31,904	59,135	2,246		42,047	63,522	105,569
3,902,156	10,228,683	197,837	58,249	4,299,726	10,551,012	14,850,738
3,983,579	10,339,919	450,118	181,503	5,828,236	12,011,438	17,839,674
977		4,460	166,827	495,934	493,707	989,641
191		188	43,787	97,603	98,730	196,333
1,168		4,648	210,614	593,537	592,437	1,185,974
263,284	198,355	3,147	121,513	314,832	325,600	640,432
4,111	1,650	1,764	13,703	19,790	17,062	37,452
267,395	200,005	4,911	135,216	334,622	343,262	677,884
268,563	200,005	9,559	345,830	928,159	935,699	1,863,858
			114,329	737,381	717,500	1,454,881
			38,168	514,683	507,413	1,022,096
			152,497	1,232,064	1,224,913	2,476,977
8,660	111	93	162,841	171,710	165,915	337,625
129	795		59,276	73,502	78,105	151,607
8,789	906	93	222,118	245,212	244,020	489,232
8,789	906	93	374,615	1,497,276	1,468,932	2,966,209
				28,646	28,536	57,182
			14,545	20,150	20,203	40,353
			14,545	48,796	48,739	97,535
			205,278	203,865	207,154	411,019
			205,278	203,865	207,154	411,019
			219,823	252,661	255,893	508,554
		294	98	84,135	87,864	171,999
		472	404	98,014	95,971	193,985
		706	502	182,149	183,835	365,984

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TABLE NO. 3.—STATEMENT showing the Number, Tonnage and Nationality of vessels
1909—

Vessels.	Total Number of Trips.	From Canadian to Canadian Ports.		From Canadian to United States Ports.	
		Up.	Down.	Up.	Down.
OTTAWA CANALS.					
United States vessels, steam	3	233			
" " sail	243	2,416			12,581
Total United States	246	2,649			12,581
Grand total, Ottawa Canals	2,181	183,875	179,934	157	15,980
RIDEAU CANAL.					
Canadian vessels, steam	1,773	57,222	57,419	3,067	76
" " sail	427	16,697	15,457		
Total Canadian	2,202	73,919	72,876	3,067	76
United States vessels, steam	2		10		
" " sail	32	198	1,012	10	99
Total United States	34	198	1,022	10	99
Grand total, Rideau Canal	2,236	74,117	73,898	3,077	175
ST. PETER'S CANAL.					
Canadian vessels, steam	276	16,282	15,118		
" " sail	1,152	34,412	36,611		
Total Canadian	1,428	50,694	51,729		
United States vessels, steam	8	215	502		
" " sail	3	78	126		
Total United States	11	293	628		
Grand total, St. Peter's Canal	1,439	50,987	52,357		
TRENT VALLEY CANALS.					
Canadian vessels, steam	2,947	68,853	70,833		
" " sail	783	16,869	17,373		
Total Canadian	3,730	85,722	88,206		
United States vessels, steam					
" " sail					
Total United States					
Grand total, Trent Valley Canals	3,680	85,722	88,206		
MURRAY CANAL.					
Canadian vessels, steam	652	137,796	88,847	3,347	
" " sail	234	11,254	10,956	4,938	
Total Canadian	886	149,050	99,803	8,285	
United States vessels, steam	47	175	162	36	
" " sail	24	114	117	349	7
Total United States	71	289	279	385	7
Grand total, Murray Canal	957	149,339	100,082	8,670	7

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TABLE 4.—COMPARATIVE STATEMENT of the Traffic of all the Canals for the Years ending December 31, 1908 and 1909.

Articles.	1908.	1909.	Increase.	Decrease.
<i>Class No. 1.</i>	Tons.	Tons.	Tons.	Tons.
Canadian vessels, steam.....	5,201,093	6,150,224	949,131	
" sail.....	1,579,696	1,661,354	81,658	
United States vessels, steam.....	7,881,570	15,726,035	7,844,465	
" sail.....	639,569	733,287	93,718	
Total, class No. 1.....	15,301,928	24,270,900	8,968,972	
<i>Class No. 2.</i>	No.	No.	No.	No.
Passengers.....	280,830	272,222		8,608
<i>Class No. 3.</i>	Tons.	Tons.	Tons.	Tons.
Barley.....	174,628	176,577	1,949	
Buckwheat.....	858	6,789	5,931	
Corn.....	153,713	180,203	26,490	
Oats.....	225,659	432,769	207,110	
Rye.....	26,661	7,688		18,973
Flax.....	234,738	206,750		27,988
Pease.....	286	326	40	
Wheat.....	3 199,031	3,397,567	198,536	
Flour.....	228,605	324,044	95,439	
Hay.....	18,259	36,503	18,244	
Other mill products.....	28,234	57,288	29,054	
Fruit and vegetables.....	23,838	15,036		8,802
Potatoes.....	6,858	9,457	2,599	
Live stock.....	1,907	1,635		272
Poultry, game, fish.....	2,220	3,064	844	
Dressed meats.....	106	573	467	
Other packing house products.....	2,273	3,201	928	
Hides and leather.....	101	594	493	
Wool.....	4	287	283	
All other animal products.....	10,177	14,947	4,770	
Total, class No. 3.....	4,338,156	4,875,298	593,177	56,035
<i>Class No. 4.</i>				
Agricultural implements.....	11,378	18,836	7,458	
Cement, bricks, lime.....	191,411	489,745	298,334	
Household goods and furniture.....	4,718	2,517		2,201
Iron, pig and bloom.....	52,952	98,667	45,715	
" and steel, all other.....	227,284	309,188	81,904	
Petroleum and other oils.....	87,456	99,980	12,524	
Sugar and salt.....	22,709	104,474	81,765	
Wines, liquors and beers.....	10,193	18,314	8,121	
Merchandise not enumerated.....	542,029	723,680	181,651	
Total, class No. 4.....	1,150,130	1,865,401	717,472	2,201

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TABLE 4.—COMPARATIVE STATEMENT of the Traffic of all the Canals for the Years ending December 31, 1908 and 1909—*Concluded.*

Articles.	1908.	1909.	Increase.	Decrease.
<i>Class No. 5.</i>	Tons.	Tons.	Tons.	Tons
Pulpwood.....	467,306	883,937	416,631	.....
Sawed lumber.....	417,229	668,780	251,551	.....
Squared timber.....	53,072	31,772	.....	21,300
Shingles.....	9,990	8,992	.....	998
Other woods.....	39,834	95,665	55,831	.....
Total, class No. 5.....	987,431	1,689,146	724,013	22,298
<i>Class No. 6.</i>				
Hard coal.....	1,006,259	933,234	.....	73,025
Soft coal.....	2,521,850	3,090,799	568,949	.....
Coke.....	52	1,456	1,404	.....
Copper ore.....	8,855	8,329	.....	526
Iron ore.....	7,402,672	21,204,848	13,802,176	.....
Other ore.....	87,415	52,237	.....	35,178
Total, class No. 6.....	11,027,103	25,290,903	14,372,520	108,729
Grand total.....	17,502,820	33,720,748	16,407,191	189,263

Net Increase, 16,217,928 tons.

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TABLE 5.—STATEMENT of Traffic on the Undermentioned Canals during the Season of Navigation in 1909.

ARTICLES.	Sault Ste. Marie Canal.	Welland Canal.	St. Lawrence Canals.	Chambly Canal.	Ottawa Canals.	Rideau Canal.	St. Peter's Canal.	Murray Canal.	Trent Valley Canal.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class No. 1.</i>									
Canadian vessels, steam.....	2,949,978	989,641	1,454,881	57,182	171,999	122,113	31,400	233,344	139,686
" " sail.....	38,958	196,383	1,022,096	10,353	193,985	32,154	71,023	32,210	34,242
United States vessels, steam.....	14,745,169	640,432	337,625	233	24,386	13	717	1,846	.....
" " sail.....	105,969	37,452	151,607	411,019	24,386	2,041	486	727	.....
Total, class No. 1.....	17,839,674	1,863,858	2,966,209	508,554	390,603	156,321	103,626	268,127	173,928
<i>Class No. 2.</i>									
Passengers.....	No.	No.	No.	No.	No.	No.	No.	No.	No.
	32,810	3,092	97,371	2,979	21,731	19,498	.....	24,368	70,373
<i>Class No. 3.</i>									
Barley.....	133,708	23,151	19,255	17	59	30	5	348	4
Buckwheat.....	5,769	.....	1,002	.....	10	.....	1	.....	.....
Corn.....	5,562	140,902	33,535	48	47	102	4	3	.....
Oats.....	282,147	75,135	70,038	686	380	307	3,780	277	19
Rye.....	7,058	33	541	.....	36	.....	2	.....	18
Flax.....	166,045	20,538	20,152	1	14	.....	.....	.....	64
Peanut.....	69	63	106	18	3	1	2	.....	.....
Wheat.....	2,232,036	590,196	573,832	10	119	821	1,318	.....	559
Flour.....	252,270	38,763	28,895	1,312	1,111	310	2,528	.....	65
Hay.....	4,164	1,701	9,789	15,474	1,352	1,474	.....	.....	21
Other mill products.....	18,580	30,158	7,070	121	614	188	522	10	45
Fruit and vegetables.....	2,081	97	8,203	2,248	807	244	1,209	145	2
Potatoes.....	318	.....	1,312	27	1,139	205	6,243	45	168
Live stock.....	5	.....	1,013	.....	526	12	15	6	58
Poultry, game, fish.....	62	230	119	.....	112	8	2,532	1	.....
Dressed meats.....	.....	.....	309	.....	13	18	.....	225	.....
Other packing house products.....	78	427	1,540	239	269	286	320	42
Hides and leather.....	259	315	14	2	4
Wool.....	70	157	10	10	17	1	20	2

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	3,110,275	921,866	786,607	430	2,833	1,402	205	118	87
All other animal.....									
Total, class No. 3.....				20,392	9,456	5,369	19,661	1,518	1,154
<i>Class No. 4.</i>									
Agricultural implements.....	8,163	9,571	449	71	253	285	2	35	24
Cement, bricks, lime.....	123,028	80,852	177,143	915	42,070	27,662	3,619	33,705	751
Household goods and furniture.....	43	16	1,644	23	160	146	135	265	65
Iron, pig and bloom.....	51,903	21,193	20,920	58	665	510	25	395	.....
Iron and steel, all other.....	154,530	65,832	84,010	606	1,250	1,172	139	1,635	14
Petroleum and other oils.....	11,062	48,352	37,641	188	878	710	445	685	19
Sugar and salt.....	36,044	46,671	10,839	885	4,292	3,639	1,778	340	16
Wines, liquors and beers.....	4,361	4,890	6,280	160	1,018	668	297	660	18
Merchandise not enumerated.....	318,203	229,100	133,780	6,654	13,619	7,850	1,186	12,315	973
Total, class No. 4.....	710,360	506,489	472,656	9,560	64,153	42,642	7,626	50,935	1,880
<i>Class No. 5.</i>									
Pulpwood.....	2,331	122,867	253,086	483,573	778	1,710	.....	1	19,591
Sawed lumber.....	47,789	43,881	292,771	114,671	197,040	18,931	5,634	318	5,745
Squared timber.....	2,187	13,069	13,845	.....	225	1	986	50	1,479
Shingles.....	7,206	298	145	23	439	253	506	2	120
Other woods.....	11,616	4,499	9,310	1,063	33,543	5,832	1,347	304	28,151
Total, class No. 5.....	71,129	186,614	509,157	599,330	232,025	26,727	8,423	635	55,086
<i>Class No. 6.</i>									
Hard coal.....	361,618	148,328	313,709	98,533	4,706	9,447	287	1,245	61
Soft coal.....	2,435,781	234,353	326,058	.....	26,005	6,186	41,014	21,360	42
Coke.....	1,440	.....	2	.....	2	12	.....	.....	.....
Copper ore.....	8,323	.....	.....	.....	.....	.....	6	.....	.....
Iron ore.....	21,156,915	31,770	1,848	14,144	.....	.....	158	.....	11
Other ore.....	5,104	1,531	592	10,158	592	1,389	3,675	27,478	1,718
Total, class No. 6.....	23,969,481	410,982	642,209	122,835	31,305	17,036	45,140	50,083	1,832
Grand total.....	27,861,245	2,025,951	2,410,629	752,117	336,439	91,774	79,850	102,291	59,952

TABLE 6.—SUMMARY STATEMENT of Traffic on the undermentioned Canals during the Season of Navigation ended December 31, 1909, showing the total quantity of each description of property passed through.

ARTICLES.	Sault Ste. Marie Canal.	Welland Canal.	St. Lawrence Canals.	Chambly Canal.	Ottawa Canals.	Rideau Canal.	St. Peter's Canal.	Murray Canal.	Trent Valley Canal.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Vessels of all kinds.....	17,839,674	1,863,858	2,966,209	508,554	390,603	156,321	163,626	268,127	173,928
Passengers.....	No.	No.	No.	No.	No.	No.	No.	No.	No.
	32,810	3,092	97,371	2,979	21,731	19,498	.....	24,368	70,373
<i>Forest—Produce of Wood.</i>									
Pulpwood.....	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sawed lumber.....	2,331	122,867	253,086	483,573	778	1,710	.....	1	19,591
Dressed lumber.....	47,789	45,881	232,771	114,671	197,010	18,931	5,634	318	5,745
Square timber.....	2,187	13,069	13,845	.....	225	1	436	30	1,479
Shingles.....	7,206	298	145	23	439	253	506	2	120
Other woods.....	11,616	4,499	9,310	1,063	33,543	5,832	1,347	301	28,151
Total.....	71,129	186,614	509,157	599,330	232,025	26,727	8,423	655	55,086
<i>Animals and Produce of Animals.</i>									
Live stock.....	5	.....	1,013	.....	526	12	15	6	58
Poultry, game and fish.....	62	230	119	.....	112	8	2,632	1	.....
Dressed meats.....	.....	.....	369	.....	13	18	8	225	.....
Other packing house products.....	78	427	1,540	.....	239	269	286	320	42
Hides and leather.....	259	315	14	.....	2	4	.....	.....	.....
Wool.....	70	151	10	.....	10	17	1	20	2
All other animal products.....	9,872	430	2,833	1,402	265	118	87
Total.....	474	1,129	12,877	430	3,735	1,730	3,047	630	188

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<i>Agricultural Products.</i>												
Barley	183,708	23,151	19,255	17	59	30	5	348	1			
Buckwheat	5,769	1,002	1,002	48	47	7	1					
Corn	33,535	140,902	33,535	686	380	102	4	3				
Oats	282,147	75,135	70,038			397		277	19			
Rye	7,058	83	541		36				18			
Flax	166,045	20,538	20,152	1	14							
Pease	69	63	106	18	3	1	2					
Wheat	2,232,030	590,196	573,832	10	119	821			64			
Flour	252,270	38,703	1,312	1,111	10	310			559			
Hay	4,164	9,789	28,895	15,474	1,352	1,474			65			
Other mill products	18,580	30,158	7,070	121	644	138			21			
Fruits and vegetables	2,081	97	8,203	2,248	807	244			45			
Potatoes	318		1,312	27	1,139	205			168			
Total	3,109,801	920,737	773,730	19,962	5,721	3,639			15,614			965
<i>Manufactures.</i>												
Agricultural implements	8,163	9,374	449	71	233	285			35			21
Cement, bricks and lime	123,028	80,832	177,143	915	42,070	27,662			33,619			751
Household goods and furniture	63	16	1,644	23	160	146			135			65
Iron, pig and bloom	54,903	21,193	20,920	58	663	510			25			
Iron, steel, all other	154,530	65,832	84,010	606	1,250	1,172			139			14
Petroleum and other oils	11,062	48,352	37,641	188	878	710			1,635			
Sugar and salt	36,041	46,671	10,839	885	4,292	3,639			445			19
Wines, liquors and beers	4,364	4,869	6,250	160	1,018	668			1,778			16
Merchandise not enumerated	3,18,263	229,100	133,780	6,654	13,619	7,850			297			18
Total	710,360	506,489	472,656	9,560	64,153	42,642			7,626			1,880
<i>Products of Mines.</i>												
Hard coal	361,318	143,328	313,709	98,533	4,706	9,447			287			61
Soft coal	2,435,781	234,353	326,058		26,005	6,186			41,014			42
Coke	3,440	2			2	12						
Copper ore	8,323					2			6			11
Iron ore	21,156,915	31,770	1,848	14,144	592	1,389			3,975			1,718
Other ore	5,104	1,531	592	10,158								
Total	23,969,481	410,982	642,209	122,835	31,305	17,036			45,140			1,832
Grand totals (passengers and tonnage of vessels not included)												
	27,861,245	2,025,951	2,410,629	752,117	336,939	91,774			79,850			59,952

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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 1909.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	8,133								30		8,133	30	8,163	
All other animal.....													105,713	27,995
Barley.....	40	35,033				82,397				40	133,668	133,708	5,769	5,990
Buckwheat.....		5,769									1,600	123,028	117,038	361,918
Cement, bricks, etc.....	98,496	1,600	11,605		11,605		91,880		121,428	361,918	63,480	2,435,781		1,440
Coal, hard.....	32	270,005			270,005		888,250		2,372,301	1,440	5,550	5,562	2,532	3,030
" soft.....	102,775	6,400	1,376,276		1,376,276		1,440		1,440	12				
Coke.....						3,931								
Corn.....	12								1,619					
Dressed meats.....														
Flax.....	795	38,017				98,815					166,045	166,045	129,753	36,292
Flour.....	2,024	162,467				82,876		46	5,631	936	251,334	252,270	220,167	32,103
Fruits and vegetables.....	3,601									2,081				
Hay.....	6	29								4,165	29		4,164	
Hides and leather.....	6	213								45	214	259	259	
Household goods.....	37	5								21	63	63		
Iron, pig and bloom.....	36,328	2,434			3,212	2,935	9,924		49,524	54,903	30,903	154,530	48,916	5,987
Iron and steel, all other.....	90,406	30,801			32,245	6	392		123,627	131,954	5		131,954	22,576
Live stock.....	4	1								4				
Merchandise.....	256,000	4,932	12,680		30,619	3,841	5,287	3,196	304,646	12,557	218,203	303,715	14,488	
Oats.....	830	239,839				24,622		748			282,147	282,147	267,561	14,586
Other mill products.....		6,034				7,055		4,541		830	17,750	18,580	13,228	5,352
" packing house products.....														
" woods.....	8,618	2,998								46	32	78		
Ore, all other.....										8,618	2,998	11,616	11,255	361
" copper.....					1,367	3,737				1,367	3,737	5,104		5,104
" iron.....														8,323
Pease.....														
Petroleum.....	41	28,212				21,048,908		66,019			21,156,915	21,156,915	3,339	21,153,576
Poultry, game and fish.....	6,372	1,237			30	28				41	28	69	41	28
Potatoes.....	273	62								9,825	1,237	11,062	6,756	4,306
		17								301	17	318	62	318

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Pulpwood.....	81	2,250	6,393	560	2,331	2,331	2,331	2,331
Rye.....	105	12,178	7,058	7,058	7,058	4,312
Sawed lumber.....	7,533	26,919	6,966	.....	46,630	47,789	31,447	16,342
Shingles.....	.....	.....	1,050	240	7,206	7,206	4,950	2,256
Squared timber.....	24	1,000	.....	.....	2,134	2,187	2,187	.....
Sugar and salt.....	900	11,155	35	.....	935	36,044	28,055	7,989
Wheat.....	993,041	400,330	764,212	61,681	2,219,264	2,232,030	1,907,415	324,615
Wines, liquors and beers.....	58	.....	.....	70	58	4,364	4,364	.....
Wool.....	50	203	.....	20	70	70	70	.....
Total freight.....	1,567,940	512,233	22,188,338	167,881	24,436,502	27,861,245	3,366,495	24,494,750

TABLE 7 (No. 2) —GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal during the Season of Navigation in 1909.—*Con.*

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.		Total tons.		Origin of cargo	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.	Total	
													Up.	Down.
Agricultural implements.	9,207	83							30	9,207	367	9,574	9,320	254
All other animal							254							
Barley		18,927				4,224							18,927	4,224
Buckwheat														
Cement, bricks, &c.	54,379	13,900			6,804				5,769	61,183	19,689	80,852	63,727	11,125
Coal, hard									1,530	141,798	1,530	143,328		143,328
Coal, soft					130,731				233,953		234,353	234,353		234,353
Coke					400									
Corn						100,967			30,935		140,902	140,902		140,902
Dressed meats.														
Flax		20,538											20,538	
Flour		20,661			15,452				2,650		20,538	38,763	20,254	18,509
Fruits and vegetables	97									97			97	
Hay	1,701									1,701			1,701	
Hides and leather.														
Household goods	3	13								3			16	315
Iron, pig and bloom.	18,338	1,398							1,457	18,338	2,855	21,193	19,736	1,457
Iron and steel, all other	46,285	8,355							10,054	47,118	18,414	65,832	53,841	9,991
Live stock.														
Merchandise.	82,971	28,128			68,826	5,861			9,503	185,608	13,492	229,100	147,241	81,859
Oats		72,263							2,872		75,135	75,135	74,234	904
Other mill products	15	2,185							5,388		30,143	30,158	1,089	29,069
" packing house products.	25								402	15	402	427	25	402
" woods.	84	140							1,343	84	4,415	4,499	224	4,275
Ore, all other.														
" copper.														
" iron.														
Pease.														
Petroleum.	81	23,879							31,170		31,770	31,770		31,770
Poultry, game and fish.														
									96	63	48,256	48,352	23,975	63
									230	230	230	230		230

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TABLE 7 (No. 3).—GENERAL STATEMENT showing the Quantity of each through Article transported on the Welland Canal during the Season of Navigation in 1909.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.	9,207	83							9,207	367	9,574		9,326	254
All other animal.						254		30						
Barley.		18,927				4,224					23,151		18,927	4,224
Buckhead.														
Cement, bricks, &c.	54,379	300	6,804				5,763		61,183	6,069	67,252		56,127	11,125
Coal, hard.			130,731				1,530		141,798		143,328			143,328
" soft.						400		11,067		234,353				234,353
Coke.														
Coin.						100,967		39,935		140,902				140,902
Dressed meats.														
Flax.		20,538								20,538			20,538	
Flour.		20,661				15,452		2,650		38,763			20,254	18,509
Fruits and vegetables.	97								97		97		97	
Hay.	1,701								1,701		1,701		1,701	
Hides and leather.						315				315				315
Household goods.	3	13							3	13	16		16	
Iron, pig and bloom.	18,338	1,308						1,007	18,338	2,405	20,743		19,736	1,007
Iron and steel, all other.	46,285	8,355				5		10,054	47,418	18,414	66,832		56,841	9,991
Live stock.														
Merchandise.	82,218	1,701	35,411						181,855	17,065	201,920		120,061	81,859
Oats.		72,263				5,861		400		75,135			74,231	904
Other mill products.	15	2,135				22,620		2,872	15	30,143	30,158		1,089	29,069
" packing house products.	25							402	25	402	427		25	402
" woods.						2,932		2		2,934	2,934			2,934
Ore, all other.									1,531		1,531			1,531
" copper.														
" iron.								31,770		31,770	31,770			31,770
Pease.						63				63	63			63
Petroleum.									96	48,256	48,352		23,975	24,377
Poultry, game and fish.	81	23,879	15					24,377	230	230	230			230
Potatoes.														
Pulpwood.									122,867		122,867		122,867	
Rye.		33								33	33		33	
Sawed lumber.	16		3,984	14,696				2,834	4,000	41,867	45,867		17,663	28,194

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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 1909.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	305	144							305	144			449	1
All other animal.....	1,279	8,593							1,279	8,593			9,872	
Barley.....	88	19,167							88	19,167			19,255	
Buckwheat.....	984	18							984	18			1,002	
Cement, bricks, &c.....	84,946	87,212					4,985		84,946	92,197			177,143	5,439
Coal, hard.....	3,577	4,813					301,560		7,336	306,373			2,801	310,908
" soft.....	139,168	1,316					185,374		139,168	186,890			140,965	185,093
Coal.....	2	2					2		2	2			2	2
Corn.....	2,960	20,803					9,772		2,960	30,575			16,062	17,473
Dressed meat.....	101	206			2				103	206			307	2
Flax.....	14	20,138							14	20,138			20,152	
Flour.....	2,097	24,439					2,859		2,097	26,798			26,196	2,699
Fruits and vegetables.....	1,426	6,750			2		25		1,428	6,775			8,176	27
Hay.....	7,363	2,426							7,363	2,426			9,789	
Hides and leather.....	7	5			2				9	5			12	2
Household goods.....	518	1,124			2				520	1,124			1,642	
Iron—pig and bloom.....	20,399	521							20,399	521			20,813	107
Iron and steel, all other.....	67,658	9,815					6,537		67,658	16,352			77,473	6,537
Live stock.....	86	927							86	927			1,013	
Merchandise.....	104,879	24,262			52		4,587		104,931	28,849			124,449	9,331
Oats.....	297	69,741							297	69,741			70,038	
Other mill products.....	411	1,743					4,916		411	6,659			2,918	4,852
Other packing house products.....	573	507					384		649	891			1,071	469
Other woods.....	225	9,085			76				225	9,085			9,310	
Ore, all other.....	556	1,860							556	1,860			1,860	556
" copper.....														
" iron.....	24								24				24	
Pease.....	35	71							35	71			106	
Petroleum.....	3,293	18,771					15,377		3,293	34,348			20,559	17,082
Poultry, game and fish.....	1	118							1	118			119	
Potatoes.....	357	955							357	955			1,312	
Pulpwood.....	18,923	685					233,478		252,401	685			253,086	
Rye.....	416	125							416	125			541	
Sawed lumber.....	37,578	149,170					30,547		47,054	185,717			232,771	

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Pulpwood.....	18,248	231,243	249,497	249,497	249,497	249,497	249,497
Eye.....	120	120	120	120	120	120	120
Sawed lumber.....	1,237	9,476	10,713	10,713	10,713	10,713	10,713
Shingles.....	900	900	900	900	900	900	900
Squared timber.....	324	324	324	324	324	324	324
Sugar and salt.....	4,936	4,936	4,936	4,936	4,936	4,936	4,936
Wheat.....	750	425,739	750	750	750	750	750
Wines, liquors and beers.....	4,209	747	4,209	4,209	4,209	4,209	4,209
Wool.....	40	40	40	40	40	40	40
Total freight.....	209,540	636,095	451,961	451,961	1,727,564	1,060,101	667,463
		240,625	1,686	1,275,603			
			639,507				

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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 1909.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....		61							205			61	266	1
All other animal.....	1,204	3,603							1,204		3,603	4,807	4,807	
Barley.....	88	24							88		24	112	112	
Buckwheat.....	984	18							984		18	1,002	1,002	
Cement, bricks, &c.....	70,935	74,497							70,935		74,497	145,432	144,010	1,422
Coal, hard.....	2,870	202						2,063	11,591		11,793	16,736	2,094	14,632
" soft.....	128,028	1,316						10,459			11,775	139,803	129,825	9,978
Coke.....	2								2		2	2	2	
Corn.....	2,146	13,438							2,146		13,438	15,584	15,248	336
Dressed meats.....	33	6			2				25		6	31	29	2
Flax.....	14	504							14		504	518	518	
Flour.....	2,072	4,833							2,072		4,833	6,965	6,965	
Fruits and vegetables.....	1,382	761							1,384		761	2,145	2,143	2
Hay.....	5,662	2,426							5,662		2,426	8,088	8,088	
Hides and leather.....	7	5							9		5	14	12	2
Household goods.....	244	349							246		349	595	593	2
Iron—pig and bloom.....	1,173	416							1,173		416	1,589	1,482	107
Iron and steel, all other.....	23,456	835							23,456		835	26,291	26,291	
Live stock.....	81	895							81		895	976	976	
Merchandise.....	16,446	7,379							16,498		7,379	23,877	20,013	3,864
Oats.....	297	4,117			52				297		4,117	4,414	4,414	
Other mill products.....	364	783							364		783	1,147	1,147	
" packing house products.....	411	231							487		231	718	713	65
" woods.....	223	9,085							223		9,085	9,308	9,308	
Ore, all other.....	556	36							556		36	592	36	556
" copper.....														
" iron.....	24								24			24	24	
Pease.....	351	41							35		41	76	76	
Petroleum.....	2,206	216							2,206		216	2,422	1,022	1,400
Poultry, game and fish.....	1	112							1		112	113	113	
Potatoes.....	330	955							330		955	1,285	1,285	

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Pulpwood.....	675	685	2,229			2,904	685	3,589	3,589	
Rye.....	416	5				416	5	421	421	
Sawed lumber.....	36,341	149,170	36,547			36,341	185,717	222,058	222,058	
Shingles.....		145					145	145	145	
Squared timber.....	482	12,463				482	12,463	12,945	12,945	
Sugar and salt.....	5,123	360				5,123	360	5,483	5,483	
Wheat.....	16,297	6,010				16,297	6,010	22,307	22,307	
Wines, liquors and beers.....	1,084	41				1,084	41	1,125	1,125	
Wool.....		10					10	10	10	
Total freight.....	223,887	296,153	36,547	136	2,063	328,315	354,750	83,065	650,696	32,369

TABLE 7 (No. 9).—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal during the Season of Navigation in 1909.

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.	Origin of Cargo.	
													Canadian.	United States.
Agricultural implements.....	2								2				2	
All other animal.....	5	200							5	200			205	
Barley.....	5								5				5	
Buckwheat.....	1								1				1	
Cement, bricks, &c.....	756	2,863							756	2,863			3,619	
Coal, hard.....	147				140				287				287	211
Coal, soft.....	47	40,967							47	40,967			41,014	
Coke.....	4								4				4	
Corn.....	4								4				4	
Dressed meats.....	8								8				8	
Flax.....														
Flour.....	1,303	15							1,303	15			1,318	
Fruits and Vegetables.....	1,209								1,209				1,209	
Hay.....	2,528								2,528				2,528	
Hides and leather.....		14								14			14	
Household goods.....	22	121							22	121			135	
Iron-pig and bloom.....	63	76							63	76			139	
Iron and steel, all other.....	15								15				15	
Live stock.....	988	194							988	194			1,182	4
Merchandise.....	3,780				4				3,780		4		3,784	
Oats.....	522								522				522	
Other mill products.....	283	3							283	3			286	
Other packing house products.....	365	980							367	980			1,347	2
Other woods.....		3,603							72	3,603			3,675	72
Ore, all other.....	6								6				6	
" copier.....														
" iron.....	158								158				158	
Pease.....	2								2				2	
Petroleum.....	403	42							403	42			445	

TABLE 7 (No. 10).—GENERAL STATEMENT showing the Quantity of each Article transported on the Murray Canal during the Season of Navigation in 1909.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	30	5							30	5			35	
All other animal.....	27	91							27	91			118	
Barley.....		348								348			348	
Blackwheat.....														
Cement, bricks, &c.....	32,825	880							32,825	880			33,705	
Coal, hard.....					672	573			672	573			1,245	1,245
Coal, soft.....						21,360				21,360			21,360	21,360
Coke.....														
Corn.....		3								3			3	
Dressed meats.....	65	160							65	160			225	225
Flax.....														
Flour.....														
Fruits and vegetables.....	15	130							15	130			145	145
Hay.....														
Hides and leather.....														
Household goods.....	307	58							307	58			365	365
Iron-pig and bloom.....	370	25							370	25			395	395
Iron and steel, all other.....	952	683							952	683			1,635	1,635
Live stock.....	4	2							4	2			6	6
Merchandise.....	9,241	3,072				2			9,241	3,074			12,315	12,315
Oats.....		277								277			277	277
Other mill products.....		16								16			16	16
Other packing house products.....	165	155							165	155			320	320
Other woods.....	100								100				304	304
Ore, all other.....	26,928	550							26,928	550			27,478	27,478
" copper.....														
" iron.....														
Pease.....														
Petroleum.....	385	300							385	300			685	685
Poultry, game and fish.....		1								1			1	1

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TABLE 7 (No. 11).—GENERAL STATEMENT showing the quantity of each Article transported on the Ottawa Canals during the Season of Navigation in 1909.

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 implements.....	194	39							194	39	233		233
All other animal.....	113	2,730							113	2,730	2,833		2,833
Barley.....	59								59		59		59
Buckwheat.....	10								10		10		10
Cement, bricks, &c.....	1,829	40,241							1,829	40,241	42,070		42,070
Coal, hard.....	784				3,922				4,706		4,706		4,706
" soft.....	25,995	10							25,995	10	26,005		26,005
Coke.....	9								9		9		9
Corn.....	47								47		47		47
Dressed meats.....	7	6							7	6	13		13
Flax.....	14								14		14		14
Flour.....	1,017	94							1,017	94	1,111		1,111
Fruits and vegetables.....	307	500							307	500	807		807
Hay.....	106	1,246							106	1,246	1,352		1,352
Hides and leather.....	2								2		2		2
Household goods.....	106	54							106	54	160		160
Iron-pig and bloom.....	682	1							682	1	683		683
Iron and steel, all other.....	1,189	41	20						1,269	41	1,250		1,250
Live stock.....	29	497							99	497	596		596
Merchandise.....	9,120	3,782	30		687				9,837	3,782	13,619		13,619
Oats.....	135	245							135	245	380		380
Other mill products.....	51	593							51	593	644		644
Other packing house products.....	207	22	10						217	22	239		239
Other woods.....	33,313			230					33,543		33,543		33,543
Ore, all other.....	36								556	36	592		592
" copper.....													
" iron.....	3								3		3		3
Petroleum.....	698	170	10						708	170	878		878
Poultry, game and fish.....		112								112	112		112

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TABLE 7 (No. 12).—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal during the Season of Navigation in 1909.

Articles.	From Canadian to Canadian Ports.		From United States to United States Ports.		From Canadian 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.	Canadian.	United States.
Agricultural implements.....	188	97							188	97			285	
All other animal.....	514	888							514	888			1,402	
Barley.....		30								30			30	
Buckwheat.....	7								7				7	
Cement, bricks, &c.....	5,767	11,895							15,767	11,895			27,662	
Coal, hard.....	189	157							1,976	7,471			9,447	
" soft.....	1,371	26			1,787	7,314			1,371	4,815			6,186	
Coke.....	12								12				12	
Corn.....	2	60				40			2	100			102	
Dressed meats.....	13	5							13	5			18	
Flax.....														
Flour.....	67	243							67	243			310	
Fruit and vegetables.....	159	45			40				199	45			244	40
Hay.....	1,322	152							1,322	152			1,474	
Hides and leather.....	2	2							2	2			4	
Household goods.....	64	82							64	82			146	
Iron-pig and bloom.....	394	116							394	116			510	
Iron and steel, all other.....	1,081	91							1,081	91			1,172	
Live stock.....	6	6							6	6			12	
Merchandise.....	5,078	2,771				1			5,078	2,772			7,850	
Oats.....	30	277							30	277			307	
Other mill products.....	30	108							30	108			138	
Other packing house products.....	293	66							293	66			269	
Other woods.....	4,844	987				1			4,844	988			5,832	
Ore, all other.....		950							439	950			1,389	
" copper.....														
" iron.....		2								2			2	
Pease.....		1								1			1	

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TABLE 7 (No. 13).—GENERAL STATEMENT showing the Quantity of each Article transported on the Trent Valley Canals during the Season of Navigation in 1909.

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.	Total Tons.	Canadian.	United States.	
Agricultural implements.....									4	20				
All other animal.....	34	53							34	53	24	24		
Barley.....	4								4		87	87		
Buckwheat.....											4	4		
Cement, bricks, &c.....	527	224							527	224	751	751		
Coal, hard.....	37	24							37	24	61	61		
" soft.....	42								42		42	42		
Coke.....														
Corn.....														
Dressed meats.....														
Flax.....														
Flour.....	44	21							44	21	65	65		
Fruits and vegetables.....	2								2		2	2		
Hay.....	21								21		21	21		
Hides and leather.....														
Household goods.....	45	20							45	20	65	65		
Iron-pig and bloom.....														
Iron and steel, all other.....											14	14		
Live stock.....	45	13							45	13	58	58		
Merchandise.....	637	336							637	336	973	973		
Oats.....	19								19		19	19		
Other mill products.....	16	29							16	29	45	45		
Other packing house products.....	42								42		42	42		
Other woods.....	13,179	14,972							13,179	14,972	28,151	28,151		
Ore, all other.....	4	1,714							4	1,714	1,718	1,718		
" copper.....														
" iron.....	11								11		11	11		
Pease.....	64								64		64	64		
Petroleum.....	15	4							15	4	19	19		
Poultry, game and fish.....														
Potatoes.....	167	1							167	1	168	168		

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Pulpwood.....	539	19,052	539	19,052	19,591	19,591
Rye.....	18		18		18	18
Sawn lumber.....	1,044	4,701	1,044	4,701	5,745	5,745
Shingles.....	45	75	45	75	120	120
Squared timber.....	631	848	631	848	1,479	1,479
Sugar and salt.....	14	2	14	2	16	16
Wheat.....	559		559		559	559
Wines, liquors and beers.....	10	8	10	8	18	18
Wool.....		2		2	2	2
Total freight.....	17,819	42,133	17,819	42,133	59,952	59,952

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TABLE 8.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed

SAULT STE.

CANADIAN.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 5,142 tons.....	1	5,142	1	5,000 to — tons.....		
2	4,000 " 5,000 ".....	1	4,361	2	4,000 " 5,000 ".....		
3	3,000 " 4,000 ".....	2	6,775	3	3,000 " 4,000 ".....		
4	2,000 " 3,000 ".....	6	17,333	4	2,000 " 3,000 ".....		
5	1,000 " 2,000 ".....	57	75,254	5	1,000 " 2,000 ".....		
6	Under 1,000 ".....	61	20,278	6	Under 1,000 ".....	4	3,244
	Total.....	128	129,143		Total.....	4	3,244

WELLAND

1	250 to 1,579 tons.....	66	61,058	1	250 to 989 tons.....	14	7,585
2	200 " 249 ".....	2	430	2	200 " 249 ".....	3	675
3	150 " 199 ".....	4	675	3	150 " 199 ".....	4	670
4	100 " 149 ".....	4	450	4	100 " 149 ".....	6	600
5	50 " 99 ".....	6	460	5	50 " 99 ".....	1	50
6	Under 50 ".....	15	625	6	Under 50 ".....	1	15
	Total.....	97	63,698		Total.....	29	9,595

ST. LAWRENCE

1	250 to 1,597 tons.....	46	48,242	1	250 to 1,184 tons.....	79	33,141
2	200 " 249 ".....	7	1,520	2	200 " 249 ".....	7	1,475
3	150 " 199 ".....	7	1,145	3	150 " 199 ".....	59	9,605
4	100 " 149 ".....	10	1,185	4	100 " 149 ".....	87	10,525
5	50 " 99 ".....	22	1,625	5	50 " 99 ".....	64	5,055
6	Under 50 ".....	36	706	6	Under 50 ".....	6	255
	Total.....	128	54,423		Total.....	302	60,056

RIDEAU, OTTAWA AND

1	250 to 372 tons.....	4	1,334	1	250 to — tons.....		
2	200 " 249 ".....			2	200 " 149 ".....	5	1,025
3	150 " 200 ".....	1	185	3	150 " 200 ".....	39	6,375
4	100 " 149 ".....	1	100	4	100 " 149 ".....	52	6,650
5	50 " 99 ".....	8	530	5	50 " 99 ".....	17	1,290
6	Under 50 ".....	36	609	6	Under 50 ".....	11	286
	Total.....	50	2,758		Total.....	124	15,626

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through the following Canals during the Season of Navigation in 1909.

MARIE CANAL.

UNITED STATES.							
Class.	Steam Vessels.	No.	Tonnage.	Class	Sailing Vessels.	No.	Tonnage.
1	5,000 to 6,498 tons	50	270,666	1	5,000 to — tons	3	13,839
2	4,000 " 5,000 "	77	308,184	2	4,000 " 4,725 "	6	19,540
3	3,000 " 4,000 "	137	464,262	3	3,000 " 4,000 "	6	14,962
4	2,000 " 3,000 "	45	123,158	4	2,000 " 3,000 "	5	7,148
5	1,000 " 2,000 "	59	96,016	5	1,000 " 2,000 "	6	3,348
6	Under 1,000 "	51	19,905	6	Under 1,000 "	26	58,837
	Total	419	1,282,191				

CANAL.

1	250 to 1,673 tons	55	49,912	1	250 to 1,310 tons	10	1,925
2	200 " 249 "	1	200	2	200 " 249 "	1	200
3	150 " 199 "	2	340	3	150 " 199 "	1	160
4	100 " 149 "	1	120	4	100 " 149 "	4	290
5	50 " 99 "	9	750	5	50 " 99 "	1	35
6	Under 50 "	17	420	6	Under 50 "	17	2,610
		84	51,542				

CANALS.

1	250 to 1,609 tons	29	24,552	1	250 to 796 tons	10	5,256
2	200 " 249 "	1	200	2	200 " 249 "	41	4,450
3	150 " 199 "	3	235	3	150 " 199 "	88	8,240
4	100 " 149 "	4	88	4	100 " 149 "	3	63
5	50 " 99 "	4	25,010	5	50 " 99 "	142	17,989
6	Under 50 "	4		6	Under 50 "		

CHAMBLY CANALS.

1	250 to — tons			1	250 to — tons		
2	200 " 249 "			2	200 " 249 "	9	1,410
3	150 " 200 "			3	150 " 200 "	440	45,905
4	100 " 149 "			4	100 " 149 "	199	18,630
5	50 " 99 "			5	50 " 99 "	2	23
6	Under 50 "	9	174	6	Under 50 "	650	65,968
	Total	9	174		Total		

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.	8½
Lake St. Louis and River St. Lawrence.	16
2. Soulanges' canal.	14
Lake St. Francis and River St. Lawrence.	33
3. Cornwall canal.	11
River St. Lawrence.	5
4. Farran's Point canal.	1½
River St. Lawrence.	10
5. Rapide Plat canal.	3¾
River St. Lawrence.	4
6. Galops canal.	7½
River St. Lawrence and Lake Ontario.	236
7. Welland canal.	26¾
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie canal.	1¼
Lake Superior to Port Arthur.	266
Total.	1,223½
To Duluth.	1,357
Chicago.	1,286

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 2,200 statute miles. The distance to Duluth is 2,343 statute miles. The distance to Chicago, 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. 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 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 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 Farran's, 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 } at two locks.....	18 “
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 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 of the River St. Lawrence. They are 986 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 rapids and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges, the distance is sixteen miles.

CORNWALL CANAL.

First 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.....	100 “
Breadth of canal at water surface.....	164 “

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The old lift locks, 200 feet by 45 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 $32\frac{3}{4}$ 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 or lockages	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	3¾ 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 $10\frac{1}{2}$ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

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GALOPS CANAL.

First commenced, 9 feet.....	1844
Opened.....	1846
Enlargement commenced.....	1888
" completed.....	1903
Length of canal.....	7 $\frac{1}{4}$ miles.
Number of locks.....	3
Dimensions of locks. } one of which is }.....	2-270 by 45.
} a guard lock. }.....	1-800 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 $\frac{1}{2}$ miles.
Breadth at bottom.....	80 feet.
Breadth at water surface.....	120
Depth below lowest known lake level.....	11
No locks.	

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of 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
Number of locks { lift.....	26	25
} guard.....	1	1
Dimensions.....	{ 1 lock 200 x 45 1 lock 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 45 }	270 feet x 45 feet.
Total rise or lockage	326 $\frac{3}{4}$ feet	326 $\frac{3}{4}$ feet.
Depth of water on sills.. .. .	10 $\frac{1}{4}$ "	14 "
Construction commenced, 10 feet 3 inches.....		1824
" Completed.....		1833
Enlargement commenced, 14 feet.....		1872
" completed.....		1887

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WELLAND RIVER BRANCHES.

Length of canal—

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

GRAND RIVER FEEDER.

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

PORT WELLAND BRANCH.

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

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

From Port Dalhousie to Allanburg, 11¾ 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 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL.

Construction commenced	1888
Opened for traffic	1895
Length of canal, between the extreme ends of the entrance piers	5,967 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	20 feet 3 inches.
Total rise or lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

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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 245½ miles.

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

Ottawa River Canals.

The Ste. Anne's lock.	Grenville canal.
Carillon 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	23
Ste. Anne's lock and piers	½	23
Ste. Anne's lock to Carillon canal	27	50
The Carillon canal	¾	51
The Carillon to Grenville canal	6¼	57
The Grenville canal	5¾	63
From the Grenville canal to entrance of Rideau navigation	56	119
Rideau navigation ending at Kingston	126¼	245

STE. ANNE'S LOCK.

Construction commenced		1814.
“ completed		1816
Rebuilt of wood		1833
“ in masonry		1843.
	Old Lock.	New Lock.
Length of canal	⅓ mile.	⅓ mile.
Number of locks	1	1
Dimensions of locks	190 x 45 feet.	200 x 45 feet.
Total rise or lockage	3 feet.	3 feet.
Depth of water on sills	6 “	9 “

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

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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 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. 446 $\frac{1}{2}$ feet	{ 282 $\frac{1}{4}$ rise and 16 $\frac{1}{4}$ fall } at high water.
Dimensions of locks.	134 x 33 feet.
Depth of water on sills.	5 feet.
Navigation depth through the several reaches.	4 $\frac{1}{2}$ "
Breadth of canal reaches at bottom.	{ 60 feet 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 bottom.	40 “				
Breadth of canal at surface of water.	<table> <tr> <td>40 “</td> <td>in rock.</td> </tr> <tr> <td>60 “</td> <td>in clay.</td> </tr> </table>	40 “	in rock.	60 “	in clay.
40 “	in rock.				
60 “	in clay.				

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 sources of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataragui. 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 Cataragui. 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.	66	258
Erie canal, from junction to Albany.	7	265
Albany to New York.	146	411

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ST. OURS LOCK DAM.

Construction commenced.	1844
“ completed.	1849
Length.	$\frac{1}{2}$ mile.
Number of locks.	1 “
Dimensions of lock.	200 feet by 45 feet.
Total rise of lockage.	5 “
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.	7 “
Breadth of canal at bottom.	36 “
Breadth of canal at surface of water.	60 “

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

TRENT CANAL.

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

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

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

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

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

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these

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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 Seugog to Port Perry, a distance of 190 miles from Trenton.

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

From Trenton, Bay of Quinté to Nine Mile rapids ..	—	9
Nine Mile rapids to Percy landing..	19½	—
Percy landing to Heeley's Falls dam..	—	14½
Heeley's Falls dam to Peterborough..	51¾	—
Peterborough to Lakefield..	—	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 Lake- field, the branch through the town of Lindsay to Port Perry at the head of Lake Seugog..	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 Niue 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' x 33' x 5' 0" to	7' 6" depth water on mitre sill.	
1 " Lindsay	134' x 33' x 5' 0" to	7' 6" "	"
1 " Bobcaygeon	134' x 33' x 5' 8" to	7' 0" "	"
1 " Buckhorn	134' x 33' x 5' 0" to	9' 0" "	"
1 " Lovesick	134' x 33' x 5' 0" to	9' 4" "	"
2 " Burleigh	134' x 33' x 6' 0" to	8' 0" "	"
1 " Young's point.	134' x 33' x 5' 0" to	14' 0" "	"
1 " Peterborough	134' x 33' x 5' 0" to	10' 0" "	"
1 " Hastings	134' x 33' x 7' 0" to	10' 6" "	"
1 " Chisholms	134' x 33' x 5' 0" to	8' 6" "	"

ST. PETER'S CANAL, CAPE BRETON.

Construction commenced..	1854
“ completed..	1869
Enlargement begun..	1875
“ completed..	1881
Length of canal..	About 2,400 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..	4 “

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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ST. LAWRENCE NAVIGATION—TABLE OF DISTANCES.

FROM STRAITS OF BELLE-ILE TO PORT ARTHUR, AT HEAD OF LAKE SUPERIOR
BY WATER.

From	To	Sections of Navigation.	Statute Miles.	
			Inter- mediate.	Total to Straits of Belle-Ile.
Straits of Belle-Ile.....	Cape Whittle.....	Gulf of St. Lawrence.....	240	240
Cape Whittle.....	West Point, Anticosti.....	".....	201	441
West Point, Anticosti.....	Father Point.....	River St. Lawrence.....	202	643
Father Point.....	Rimouski.....	".....	6	649
Rimouski.....	Bic.....	".....	12	661
Bic.....	Isle Verte.....	".....	39	700
Isle-Verte (opp. Saguenay).....	Quebec.....	".....	126	826
Quebec.....	Three Rivers.....	" to tide-water.....	74	900
Three Rivers.....	Montreal.....	".....	86	986
Montreal.....	Lachine.....	Lachine Canal.....	8 $\frac{1}{2}$	994 $\frac{1}{2}$
Lachine.....	Cascade Point.....	Lake St. Louis.....	16	1,009 $\frac{1}{2}$
Cascade Point.....	Coteau Landing.....	Soulanges Canal.....	14	1,021
Coteau Landing.....	Cornwall.....	Lake St. Louis.....	30	1,053 $\frac{1}{2}$
Cornwall.....	Dickinson's Landing.....	Cornwall Canal.....	11 $\frac{1}{2}$	1,065 $\frac{1}{2}$
Dickinson's Landing.....	Farran's Point.....	River St. Lawrence.....	.5	1,070 $\frac{1}{2}$
Farran Point.....	Upper end of Croyle's Island.....	Farran's Point.....	$\frac{3}{4}$	1,071
Upper end Croyle's Island.....	Williamsburg or Morrisburg.....	River St. Lawrence.....	10 $\frac{1}{2}$	1,081 $\frac{1}{2}$
Williamsburg.....	Rapide Plat.....	Rapide Plat Canal.....	4	1,085 $\frac{1}{2}$
Rapide Plat.....	Point Iroquois Village.....	River St. Lawrence.....	4 $\frac{1}{2}$	1,090
Point Iroquois Village.....	Upper end Presqu'Isle.....	Point Iroquois Canal.....	3	1,093
Presqu'Isle.....	Point Cardinal, Edwardsburg.....	Junction Canal.....	2 $\frac{3}{8}$	1,095 $\frac{5}{8}$
Point Cardinal.....	Head of Galops Rapids.....	Galops Canal.....	2	1,097 $\frac{5}{8}$
Galops Rapids.....	Prescott.....	River St. Lawrence.....	7 $\frac{3}{8}$	1,105
Prescott.....	Kingston.....	".....	59	1,164
Kingston.....	Port Dalhousie.....	Lake Ontario.....	170	1,334
Port Dalhousie.....	Port Colborne.....	Welland Canal.....	26 $\frac{3}{4}$	1,360 $\frac{3}{4}$
Port Colborne.....	Amherstburg.....	Lake Erie.....	232	1,592 $\frac{3}{4}$
Amherstburg.....	Windsor.....	River Detroit.....	18	1,610 $\frac{3}{4}$
Windsor.....	Foot of St. Mary's Island.....	Lake St. Clair.....	25	1,635 $\frac{3}{4}$
Foot of St. Mary's Island.....	Sarnia.....	River St. Clair.....	33	1,668 $\frac{3}{4}$
Sarnia.....	Foot of St. Joseph Island.....	Lake Huron.....	270	1,938 $\frac{3}{4}$
Foot of St. Joseph's Island.....	Foot of Sault Ste. Marie.....	River Ste. Marie.....	47	1,985 $\frac{3}{4}$
Sault Ste. Marie.....	Head of Sault Ste. Marie.....	Sault Ste. Marie Canal.....	1	1,986 $\frac{3}{4}$
Head of Sault Ste. Marie.....	Point aux Pins.....	River Ste. Marie.....	7	1,993 $\frac{3}{4}$
Pointe aux Pins.....	Port Arthur.....	Lake Superior.....	266	2,259 $\frac{3}{4}$
Port Arthur to Lake Shebandowan.....			45	
Lake Shebandowan to North-west Angle.....			312	
North-west Angle to Winnipeg.....			95	
Pointe aux Pins to Duluth.....			390	

Of the 2,259 $\frac{3}{4}$ miles from the Straits of Belle-Ile to the head of Lake Superior, 73 $\frac{1}{2}$ miles are artificial navigation, and 2,188 $\frac{3}{4}$ open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical or 2,234 statute miles.

The total fall from Lake Superior to tide-water is about 600 feet.

The steamboat voyage from Collingwood to Port Arthur is 532 miles.

" " Depot Harbour to Port Arthur is 510 miles; to Duluth is 644 miles; to Chicago 525 miles, and to Milwaukee, 442 miles.

DEPARTMENT OF RAILWAYS AND CANALS

CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1910

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY C. H. PARMELEE, PRINTER TO THE KING'S MOST
EXCELLENT MAJESTY

1911

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, Viscount Howick, Baron Grey of Howick, in the County of Northumberland, in the Peerage of the United Kingdom and a Baronet; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, &c., &c., &c., Governor General of Canada.

MAY IT PLEASE YOUR EXCELLENCY,

The undersigned has the honour to present to Your Excellency the report on Canal Statistics for the year ended December 31, 1910.

GEO. P. GRAHAM,
Minister of Railways and Canals.

To the Honourable GEORGE P. GRAHAM,
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, 1910.

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,

February 15, 1911.

A. W. CAMPBELL, Esq.,

Deputy Minister of Railways and Canals.

SIR,—I have the honour to submit to you herewith Canal Statistics for the year ended December 31, 1910.

It will be observed that there was a further substantial increase in the volume of traffic through the canals of the Dominion. The freight transported amounted to 42,990,608 tons, as compared with 33,720,748 tons in 1909. This betterment of 9,269,860 tons was equal to 27·5 per cent.

The freight traffic of 1910 was distributed among the various canals as follows :—

	Tons.	Increase.
Sault Ste. Marie	36,395,687	8,534,442
Welland.....	2,326,290	300,359
St. Lawrence.....	2,760,752	350,123
Chambly.....	669,299	.....
St. Peter's.....	85,951	6,101
Murray.....	177,941	75,650
Ottawa.....	385,261	48,322
Rideau.....	134,881	43,107
Trent.....	46,263	.....
St. Andrew's.....	8,283	8,283
Total.....	42,990,608	9,366,367

It may be explained that St. Andrew's lock, which was constructed in 1909 to overcome the rapids by that name in the Red River near Winnipeg, appears in the list of canals for the first time. The traffic which it makes possible is between Lake Winnipeg and the city of Winnipeg.

In order that comparison may be made with preceding years, and, at the same time, a demonstration afforded of the rapid expansion of Canadian waterborne business, the figures relating to tonnage for the past decade are given :—

1901.....	5,665,259 tons.
1902.....	7,513,197 "
1903.....	9,203,817 "
1904.....	8,256,236 "
1905.....	9,371,744 "
1906.....	10,523,185 "
1907.....	20,543,639 "
1908.....	17,502,820 "
1909.....	33,720,748 "
1910.....	42,990,608 "

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The growth during the first five-year period was equal to 65 per cent, and during the second period 308 per cent.

The business of the past three years was distributed among the various canals as follows :—

	1908.	1909.	1910.
Sault Ste. Marie.....	12,759,216	27,861,245	36,395,687
Welland.....	1,703,453	2,025,951	2,326,290
St. Lawrence.....	2,009,102	2,410,629	2,760,752
Chambly.....	503,276	752,117	669,299
St. Peter's.....	72,015	79,850	85,951
Murray.....	25,901	102,291	177,941
Ottawa.....	258,527	336,939	385,261
Rideau.....	89,640	91,774	134,881
Trent.....	81,690	59,952	46,263
St. Andrew's.....			8,283

The classes of commodities which constitute the tonnage of the past two years with the volume of each, are shown in the following table :—

Canals.	Vegetable Products.	Animal Products.	Manu- factures.	Produce of Forest.	Produce of Mines.	Total.
1909.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Soo.....	2,832,388	277,887	710,360	71,129	23,969,481	27,861,245
Welland.....	850,018	71,848	506,489	186,614	410,982	2,025,951
St. Lawrence.....	718,461	68,146	472,656	509,157	642,209	2,410,629
Chambly.....	780	19,612	9,560	599,330	122,835	752,117
St. Peter's.....	3,794	14,867	7,626	8,423	45,140	79,850
Murray.....	628	890	50,035	655	50,083	102,291
Ottawa.....	668	8,788	64,153	232,025	31,305	336,939
Rideau.....	1,268	4,101	42,642	26,727	17,036	91,774
Trent.....	664	490	1,880	55,086	1,832	59,952
Total.....	4,408,669	466,629	1,865,401	1,689,146	25,290,903	33,720,748
1910.						
Soo.....	2,530,396	304,729	862,526	100,613	32,597,423	36,395,687
Welland.....	982,346	60,880	516,333	154,737	611,994	2,326,290
St. Lawrence.....	856,611	83,754	497,007	564,328	759,052	2,760,752
Chambly.....	783	23,288	21,834	496,119	127,275	669,299
St. Peter's.....	4,603	14,867	7,889	10,124	48,468	85,951
Murray.....	20	4,544	162,506	3,471	7,400	177,941
Ottawa.....	723	8,111	72,294	268,199	35,934	385,261
Rideau.....	1,433	3,576	76,299	40,026	13,547	134,881
Trent.....	298	765	8,672	35,849	679	46,263
St. Andrew's.....	1	153	177	7,952		8,283
Total.....	4,377,214	504,667	2,225,537	1,681,418	34,201,772	42,990,608

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The proportion of commodities by classes is shown in the following comparison for 1909 and 1910 :—

	1909.	1910.
	Per cent.	Per cent.
Vegetable products.....	13·0	10·2
Animal ".....	1·5	1·2
Manufactures.....	5·6	5·2
Produce of forests.....	4·9	3·9
Produce of mines.....	75·0	79·5

TRANSPORTATION OF CANADIAN WHEAT.

The growth of the Canadian wheat trade has been reflected in the rising tonnage of the canal at Sault Ste. Marie. In order that the facts may be in mind, following is a statement of the volume of wheat which passed through that canal since it was opened for business in 1895 :—

	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

During the past year it became necessary, in the adjustment of statistical methods, to make a more or less thorough study with respect to the movement of Canadian wheat through the canal at Sault Ste. Marie. Errors had been made in the classification of wheat of Canadian origin, and it was important to ascertain the correct figures. The inquiry covered the years 1909 and 1910.

It may be explained, that up to 1908 it had not been the practice of this Department to identify the products of Canada or the United States when they passed through any of the canals. At Sault Ste. Marie this was the rule on both sides of the boundary. Hence, it was quite impossible to know the volume of Canadian wheat which came down from the West or to follow the course which it took. This was obviously a defect in our statistical work, and a change was made in 1908.

*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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A further explanation is necessary. At Sault Ste. Marie there are two canals, one on the Canadian side of the line and the other on the American side.

Both canals are free, and the captain of a vessel may select whichever one he may at the moment prefer. On the Canadian side the origin of all commodities passed through the canal is recorded. On the American side an account it is understood, has been kept during the past two years of Canadian wheat taking that route; but the facts are not officially made public. In any event, only the volume is ascertained. The subsequent movement of each cargo is not made a matter of record.

Using the corrected figures, the volume of Canadian wheat which passed through the Sault Ste. Marie Canal during the year 1910 was 1,553,245 tons, or 51,774,833 bushels. In 1909 the aggregate was 1,441,435 tons, or 48,047,833 bushels. In addition, 9,117,328 bushels of Canadian wheat passed through the American canal in 1909, and 5,321,446 bushels in 1910. Joining the shipments of Canadian wheat which passed through the two canals, the total was 57,165,161 bushels for 1909, and 57,096,279 bushels for 1910.

By a careful analysis of the ships' reports it was ascertained that the distribution of Canadian wheat which passed through the Canadian Canal at Sault Ste. Marie in 1909 and 1910 without reference to official figures appearing elsewhere and here corrected, was as follows:—

	1909.	1910.
	Bushels.	Bushels.
Fort William to Montreal.....	10,517,266	13,185,370
" " " Georgian Bay.....	13,384,400	12,753,200
" " " other Canadian ports.....	10,149,633	9,603,400
" " " Buffalo.....	12,841,334	15,693,363
Duluth to Montreal.....	520,000	315,000
" " Buffalo.....	528,200	224,500
" " Georgian Bay.....	28,000	
" " other Canadian ports.....	79,000	
Total.....	48,047,833	51,774,833
Through American canal.....	9,117,328	5,321,446
Grand total.....	57,165,161	57,096,279

As has been said, the course of Canadian wheat which passed through the American canal at Sault Ste. Marie cannot be followed. With respect to that which passed through the Canadian canal, however, the following summary illuminates the facts given in the preceding paragraph.

	1909.	1910.
	Per cent.	Per cent.
Fort William to Montreal.....	21.9	25.5
" " Georgian Bay.....	27.9	24.6
" " other Canadian ports.....	21.1	18.5
" " Buffalo.....	26.7	30.3
Duluth to Canadian ports.....	1.3	.6
" American ".....	1.1	.5

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With regard to the situation as a whole, it will be seen that $\overline{62}$ per cent of the Canadian wheat which came down from the West in 1910 followed Canadian channels from start to finish. The remaining 38 per cent passed in part or wholly through American channels.]

It will be observed that last year 30.3 per cent of the wheat which was shipped eastward by water from the provinces of the Canadian west found an outlet by way of Buffalo. This took place in spite of the fact that both distance and rates were in favour of the St. Lawrence route. The freight rate which prevailed during the season was from $3\frac{1}{2}$ to $4\frac{1}{2}$ cents per bushel from the head of Lake Superior to Montreal. From either Duluth or Fort William to New York the rate was from 4 to 5 cents, according to the season. It would seem that the popular conviction with respect to the controlling force of distance and rates in the handling of a commodity like wheat, which is supposed to yield most easily to such influences, is not entirely sound. Other conditions may act as a countervail. They did in this instance to the extent indicated.

[It may help to a better understanding of our inland waterborne trade if the conditions which caused the diversion to Buffalo of over 30 per cent of the Canadian wheat which passed through the Sault Ste. Marie canal in 1910, while only 25 per cent was delivered at Montreal, are briefly presented. It may not be considered improper to discuss the basic facts of the matter, frankly and fairly in a report of this character. On the surface it would appear reasonable to expect that a cargo of wheat taken aboard a vessel at Fort William, and consigned to Liverpool, would seek the nearest ocean port. Montreal happens to be that port. Moreover, the lake freight rate to Montreal last year was from a half to over one cent per bushel less than the combined vessel and rail rate to New York, via Buffalo. At Buffalo the entire cargo must be transferred to cars or to barges. Only a small percentage of the 15,693,363 ^{bushels} tons of Canadian wheat which is definitely known to have gone to Buffalo in 1910 was carried by water to New York. The rail route commands the trade.

The conditions which operated against the St. Lawrence route in 1910, as in preceding years, were: First, the character of the vessels which ply between the head of Lake Superior and Buffalo; second, the ocean freight rates; third, the Atlantic insurance rate; and fourth, return cargo. The United States steamers engaged in the grain trade of the Great Lakes are much larger than those which can pass through the 14 feet waterway provided by the Welland and St. Lawrence canals. Such vessels can carry 450,000 bushels of wheat without lightering at Sault Ste. Marie. With a draft of 21 feet they cannot pass beyond Lake Erie. Many of them, too, are owned by the railways operating between Buffalo and New York. They have an advantage in the economical transportation of grain as against smaller steamers.

The ocean rates out of New York are lower than out of Montreal. The difference is from $\frac{3}{4}$ to $1\frac{1}{2}$ cents per bushel in favor of the former port. This situation is due to a number of causes, to which allusion need not be made here. The fact alone is of immediate importance.

The rates of marine insurance for vessels sailing out of Montreal during the season of 1910 were as follows: From the opening of navigation to 15th September, 25 cents per \$100; from October 16th to 31st, 45 cents; from 1st to 15th November, 60 cents;

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from 16th November to close of navigation, 75 cents. From New York and Boston the rates were from $12\frac{1}{2}$ to 15 cents, according to the class of steamer, throughout the entire year.

The fourth consideration—return cargo—is of relatively large importance. It was ascertained that United States steamers were able during the season of 1910 to obtain westbound cargo at Buffalo, chiefly coal, to the extent of a little more than 50 per cent. of their capacity. The return cargo obtained by vessels at Montreal did not exceed 25 per cent. So far as vessels bound for Fort William were concerned, it did not reach 15 per cent.

The distribution of Canadian wheat which passed through the Sault Ste. Marie Canal during the seasons of 1909 and 1910 disclosed another fact worthy of attention. Of the entire traffic, 43 per cent was carried to Georgian Bay and other Canadian ports west of Lake Erie. Thence it was transported by rail eastward, chiefly to Montreal. It is sufficient to give the statistical facts, without comment, which this movement has created. The vessel freight rate from Fort William to Georgian Bay has averaged about 2 cents per bushel for the past two years. During the middle of the season of 1910 it was from 1 to $1\frac{1}{4}$ cents. To this must be added the rail rate from Georgian Bay to Montreal, which was from $3\frac{1}{2}$ to 5 cents per bushels, including the cost of elevation at both terminal points.

SAULT STE. MARIE CANAL.

The canal at Sault Ste. Marie forms the chief gateway of the inland waterborne traffic of the Dominion. Eighty-four per cent of the aggregate canal business of 1910 passed through the lock at that point. Having regard to freight tonnage, the eastbound traffic represented last year over 87 per cent of the total, showing that the movement of commodities is principally in one direction. Iron ore has for some years held first place in the freight list of eastbound cargoes, while wheat comes next. The up, or westbound, movement consists, to the extent of about 70 per cent, of coal. In view of the important position of the Sault Ste. Marie Canal, the following comparative summary of statistical facts is of interest :

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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.		
1895.	609	126,534	583	623,092	1,192	749,626	.....	699	87	Canal first operated Sept. 9, 1895.
1896.	2,070	589,407	3,066	3,805,749	5,136	4,395,156	.....	3,042	218	
1897.	1,969	476,546	2,359	3,391,936	4,328	3,797,482	.....	2,604	238	
1898.	1,811	403,931	1,864	2,353,699	3,675	2,757,630	.....	2,520	243	
1899.	2,000	558,562	1,769	2,389,457	3,769	2,948,009	.....	2,610	239	
1900.	1,790	577,310	1,291	1,617,438	3,081	2,194,748	.....	2,035,677	238	
1901.	2,796	775,151	1,408	1,674,597	4,204	2,449,748	.....	2,890,394	246	
1902.	3,080	1,306,930	1,904	3,237,372	5,044	4,604,302	.....	4,739,268	264	
1903.	2,711	1,615,939	1,640	3,146,807	4,351	4,762,746	.....	5,511,868	256	
1904.	2,637	1,565,042	1,325	2,675,663	3,962	4,230,705	.....	3,022	241	
1905.	3,970	1,803,288	1,692	3,734,349	5,662	5,537,637	.....	4,031	255	
1906.	3,922	1,959,252	1,758	4,399,872	5,680	6,359,124	.....	4,152	253	
1907.	3,217	2,154,688	3,132	9,961,281	6,349	12,115,969	.....	6,574,039	238	
1908.	3,289	2,603,232	2,204	7,085,655	5,293	9,638,887	.....	15,688,165	235	Origin of cargo first shown.
1909.	2,597	2,388,936	3,734	14,850,738	6,331	17,839,674	.....	3,667	240	
1910.	2,744	3,173,494	5,228	20,187,704	7,972	23,361,198	.....	5,046	248	
							3,345,619	33,030,008	6,110		

GENERAL STATISTICS.

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	292,565	151,805	192,528	86,374	457,482	713,519	2,006,397	2,720,516
1888	355,165	1,146,260	138,127	174,239	214,407	223,429	81,611	428,357	789,319	1,972,287	2,761,597
1889	384,777	1,156,306	122,295	194,497	267,224	300,193	81,243	603,311	865,529	2,258,367	3,113,896
1890	369,593	1,137,011	144,368	135,188	216,313	320,324	98,769	533,021	789,505	2,123,342	2,913,047
1891	370,120	1,155,237	163,514	123,133	248,188	397,958	59,747	513,259	772,869	2,129,657	2,902,526
1892	327,660	1,322,137	173,538	135,787	241,034	302,983	47,396	481,301	789,528	2,242,298	3,031,736
1893	351,706	1,344,822	214,075	141,602	247,329	385,769	54,912	806,773	868,023	2,678,866	3,546,989
1894	299,155	1,140,606	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	296,191	91,177	362,637	608,778	62,285	590,140	975,937	2,360,141	3,336,078
1896	233,353	1,619,663	259,639	109,519	1,197,245	3,536,094	117,335	867,040	1,837,732	6,123,281	7,991,073
1897	275,587	1,713,274	268,700	187,960	669,112	4,369,314	108,787	968,263	1,322,216	7,238,751	8,560,967
1898	263,989	1,819,887	187,253	98,967	929,598	2,425,121	81,615	912,135	1,362,365	5,256,110	6,618,475
1899	296,208	1,833,412	206,364	115,133	732,030	2,129,988	125,078	727,111	1,420,280	4,895,644	6,225,924
1900	312,201	1,632,915	270,033	81,714	568,197	1,339,915	105,155	682,665	1,255,586	3,758,107	5,013,693
1901	340,805	1,686,094	268,449	201,231	507,204	1,801,696	177,715	682,665	1,294,173	4,371,086	5,665,259
1902	529,085	2,064,480	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	348,174	863,337	3,130,816	373,456	358,018	2,316,117	6,888,700	9,203,817
1904	606,577	2,047,499	511,887	276,578	699,784	2,778,903	483,795	851,053	2,302,203	5,954,033	8,256,236
1905	736,976	2,252,514	649,305	347,089	607,228	3,183,895	577,528	1,137,146	2,451,097	6,920,647	9,371,744
1906	726,855	2,355,855	627,064	234,919	991,959	3,595,256	482,239	997,385	3,339,770	7,183,415	10,523,185
1907	1,034,733	3,162,158	891,692	296,138	1,991,959	11,060,878	819,369	1,326,712	4,737,753	15,805,886	20,543,639
1908	1,028,246	3,292,422	560,736	278,721	1,704,310	8,218,866	972,300	1,47,219	4,265,592	13,237,228	17,502,820
1909	1,608,659	3,604,849	1,060,715	607,894	1,985,522	22,385,226	1,023,829	1,544,054	6,744,349	27,976,369	33,726,748
1910	2,312,740	3,861,272	600,144	661,436	3,323,822	29,530,163	995,749	1,705,282	7,232,455	35,758,153	42,990,608

* 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.	Up and Down.		
1887.....	1,201,529	1,194,665	162,554	36,277	1,071	65	30,778	221,013	1,305,932	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.....	1,286,574	1,207,892	188,131	39,371	976	802	20,271	252,565	1,494,952	1,500,630	2,995,582	19,393	
1890.....	1,314,127	1,250,999	229,478	35,909	929	351	14,003	296,676	1,568,537	1,580,935	3,139,472	20,655	
1891.....	1,356,518	1,287,168	201,758	28,642	560	292	16,350	244,176	1,575,176	1,569,278	3,135,454	19,246	
1892.....	1,517,249	1,460,505	177,136	29,184	394	394	14,659	201,374	1,710,510	1,691,455	3,401,965	21,171	
1893.....	1,548,094	1,422,826	170,186	26,787	1,466	10	17,037	248,442	1,736,489	1,637,565	3,434,054	20,757	
1894.....	1,319,792	1,260,907	217,635	19,298	1,172	5	6,394	222,696	1,545,998	1,502,906	3,048,904	19,027	
1895.....	1,258,848	1,165,683	253,693	13,383	.....	.....	5,899	285,553	1,518,440	1,464,619	2,983,059	17,136
1896.....	1,547,757	1,420,342	200,282	5,234	157	.....	4,115	297,898	1,752,321	1,792,227	3,440,706	20,972
1897.....	1,625,192	1,482,951	215,785	11,378	.....	.....	3,533	255,927	1,927,358	1,848,510	3,797,985	21,466
1898.....	1,704,661	1,609,255	215,393	4,927	499	518	6,805	345,980	2,191,675	2,136,896	4,308,571	23,579	
1899.....	1,895,643	1,774,789	242,817	32,456	925	3,691	42,200	358,781	2,074,143	2,055,107	4,129,250	21,755	
1900.....	1,757,293	1,681,340	245,926	14,922	2,909	64	38,015	312,003	1,995,591	1,984,673	3,980,264	20,840	
1901.....	1,615,952	1,587,221	279,007	82,541	3,300	2,908	97,332	379,612	2,258,732	2,226,963	4,485,695	29,198	
1902.....	1,914,167	1,840,787	241,356	37,492	1,874	2,164	101,335	286,520	2,357,555	2,315,277	4,672,832	23,767	
1903.....	2,061,258	2,085,969	340,383	143,614	7,018	3,082	188,896	379,612	2,597,555	2,615,277	5,212,832	21,851	
1904.....	1,838,260	1,907,886	299,245	159,740	5,175	4,223	287,910	319,661	2,380,590	2,391,510	4,772,100	23,261	
1905.....	2,059,097	2,031,766	312,773	188,138	11,820	3,191	262,401	302,005	2,646,091	2,646,091	5,191,191	23,726	
1906.....	2,271,776	2,264,476	292,705	155,595	24,420	5,506	202,276	369,567	2,791,177	2,745,144	5,526,321	25,498	
1907.....	2,561,948	2,661,317	337,822	129,246	9,153	7,331	238,172	383,922	3,147,095	3,181,816	6,328,911	28,833	
1908.....	2,736,776	2,748,139	318,324	227,315	5,057	7,844	348,944	398,387	3,399,104	3,381,685	6,780,789	29,040	
1909.....	3,355,187	2,992,403	300,320	217,989	82,591	111,236	257,945	513,907	3,976,043	3,835,535	7,811,578	29,507	
1910.....	3,891,613	3,504,463	315,656	122,688	95,151	89,618	287,555	627,046	4,587,975	4,343,815	8,931,790	25,337	

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.	Up and Down.		
												Up and Down.	
1887	16,265	17,925	38,857	56,708	143,730	140,562	52,793	98,840	251,645	98,840	315,035	566,680	3,883
1888	14,304	26,801	42,425	50,047	177,714	156,095	49,778	113,613	284,221	113,613	347,566	631,777	3,921
1889	21,125	26,449	55,996	63,572	253,088	266,567	56,249	160,442	386,458	160,442	444,190	830,648	4,542
1890	10,390	16,345	38,156	36,397	248,418	234,728	39,697	97,264	336,661	97,264	384,736	721,397	3,364
1891	10,357	29,851	70,655	97,727	283,013	238,818	31,083	146,602	395,118	146,602	442,998	838,116	3,602
1892	12,023	29,405	88,221	22,763	280,315	229,437	37,037	172,594	417,586	172,594	454,139	871,735	3,928
1893	10,752	34,303	214,017	33,741	351,394	282,724	307,994	307,740	627,787	307,740	638,308	1,286,295	4,585
1894	18,528	30,201	139,720	20,830	302,362	269,788	37,406	192,992	498,216	192,992	513,811	1,012,027	4,131
1895	8,838	24,768	138,554	17,712	262,240	216,542	32,295	185,730	441,927	185,730	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	290,370	623,775	1,228,136	4,650
1897	14,666	18,367	269,430	338,938	277,345	277,345	26,341	347,698	649,375	347,698	664,028	1,310,403	4,675
1898	12,142	9,541	233,524	32,880	308,878	305,463	52,331	336,004	586,875	336,004	683,889	1,270,764	4,264
1899	17,217	18,044	172,807	30,092	1,605,887	1,156,503	51,992	234,336	1,846,848	234,336	1,838,885	3,285,733	6,101
1900	13,316	17,824	157,089	30,443	1,268,725	744,276	45,741	190,371	1,425,471	190,371	983,514	2,408,485	5,502
1901	11,587	18,706	177,169	28,124	922,464	1,044,797	54,895	224,622	1,106,115	224,622	1,316,159	2,482,274	5,634
1902	13,622	37,871	187,826	70,641	1,756,948	1,654,672	123,257	241,602	2,081,653	241,602	2,004,786	4,086,439	6,433
1903	14,014	24,168	265,208	65,247	1,736,187	1,689,414	106,401	335,836	2,121,810	335,836	2,114,665	4,236,475	6,695
1904	10,122	16,890	275,721	39,993	1,464,316	1,475,085	68,081	305,697	1,818,240	305,697	1,837,665	3,655,965	6,283
1905	19,743	19,424	364,985	81,876	2,350,494	1,701,704	104,536	456,459	2,836,708	456,459	5,096,241	7,485	
1906	37,306	15,324	356,259	78,501	2,738,623	1,928,131	118,346	515,675	3,244,863	515,675	2,440,452	5,685,315	7,319
1907	57,349	72,018	304,591	72,048	4,739,053	5,376,080	205,769	623,941	5,463,767	623,941	6,141,027	11,604,834	9,328
1908	54,587	32,705	442,773	124,120	4,132,320	4,132,320	218,835	536,163	3,685,819	536,163	4,835,320	8,521,139	7,489
1909	263,592	109,407	442,476	290,292	4,178,378	10,429,344	213,750	621,903	5,098,196	621,903	11,361,426	16,459,392	9,996
1910	119,222	50,498	428,792	306,330	5,509,417	14,488,565	299,462	576,101	6,356,803	576,101	15,420,494	21,777,297	11,462

SESSIONAL PAPER No. 20a

CAPITAL EXPENDITURE.

The statement following brings the capital expenditure on the Canals of the Dominion down to March 31, 1910. 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 fire of the Ordnance Office, Montreal, in 1852. The details are as follow :—

Canal.	Construction.		Enlargement.		Total.			
	\$	c.	\$	c.	\$	c.		
St. Peter's	648,547	14			648,547	14		
Lachine.....	2,589,532	85	9,786,178	93	12,375,711	78		
Beauharnois.....	1,636,690	26			1,636,690	26		
St. Lawrence River and Canals.....	18,442	85	3,451,470	56	3,469,913	41		
Lake St. Louis.....			298,176	11	298,176	11		
Lake St. Francis.....			75,906	71	75,906	71		
Cornwall.....	1,945,624	73	5,289,142	41	7,234,767	14		
Williamsburg	{ Farran's Point			877,090	57	{ 10,485,611	{ 69	
		Galops.....			6,118,927			32
		Rapide Plat.....			2,158,242			00
		Williamsburg.....	1,320,655	54	10,696			26
Welland.....	7,693,824	03	20,813,039	16	28,506,863	19		
Ste. Anne's.....	134,456	51	1,035,759	12	1,170,215	63		
*Carillon and Grenville	63,053	64	4,119,039	32	4,182,092	96		
Culbute.....	382,776	46			382,776	46		
Rideau.....	4,085,889	21			4,085,889	21		
St. Ours.....	121,537	65			121,537	65		
Chambly.....	637,214	66	43,786	43	681,001	09		
Murray.....	1,248,946	71			1,248,946	71		
Trent.....	7,873,501	09			7,873,501	09		
Tay.....	489,599	23			489,599	23		
Sault Ste. Marie.....	4,868,532	60			4,868,532	60		
Soulanges.....	7,126,135	61			7,126,135	61		
Total	42,884,960	77	54,077,454	90	96,962,415	67		

The cost of maintenance during the fiscal year 1910 was \$1,608,390.54.

Details of tonnage by canals and commodities will be found in the tables subjoined.

I have the honour to be, Sir,

Your obedient servant,

J. L. PAYNE,
Comptroller of Statistics.

CANAL STATISTICS

FOR

SEASON OF NAVIGATION, 1910

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 twenty-nine 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

During the last decade the quantity of agricultural products as above, passed down the Welland and St. Lawrence Canals to Montreal, has increased from 151,566 tons in 1901 to 789,661 tons in 1910, and the quantity passed down the Welland Canal from United States ports to United States, has increased from 83,370 to 115,457 tons the same years.

1 GEORGE V., A. 1911

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 14 years, is reported as follows:—

	Tons.
For 1897.....	228,611
1898.....	293,391
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.....	

The quantity of the same articles passed down the whole length of the St. Lawrence Canals to Montreal for the same period was:—

	Tons.
For 1897.....	604,200
1898.....	575,097
1899.....	372,291
1900.....	295,928
1901.....	203,316
1902.....	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

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:—

	Tons.
For 1909.....	652,742
1910.....	789,661
Showing an increase of	<u>136,919</u>

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways is reported as follows:—

	Tons.
For 1909.....	426,163
1910.....	
Showing	<u><u> </u></u>

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TRANSHIPMENT OF GRAIN.

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.
1896, 196 cargoes, with an aggregate quantity of	227,912
1897, 180 " "	229,265
1898, 166 " "	224,021
1899, 162 " "	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 " "	314,605
1907, 255 " "	427,813
1908, 355 " "	598,941
1909, 308 " "	550,276
1810, 383 " "	679,358

In the United States vessels there were in—

	Tons.
1896. 158 cargoes, with an aggregate quantity of	217,978
1897, 197 " "	285,847
1898, 339 " "	464,852
1899, 167 " "	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

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 924 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.

1 GEORGE V., A. 1911

The quantity of grain transhipped at Port Colborne in 1909 and the four previous years was as follows:—

Articles.	1905.	1906.	1907.	1908.	1909.
	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat	679,840	1,009,474	1,428,300	1,106,244	2,686,963
Corn.....	104,027	110,629	112,036		
Rye.....					
Oats.....		29,118	30,824	23,945	
Barley.....		2,103		56,544	22,216
Flaxseed			39,040	49,628	8,202

WELLAND CANAL.

The total quantity of freight passed on the Welland Canal during the season of 1910 was 2,326,290 tons; of this quantity 44,771 tons was way or local freight.

There were 1,601,456 tons of freight passed eastward, and 724,834 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 1910 was 2,281,519.

Of this quantity 1,557,283 tons were east bound and 724,236 west bound freight.

Of the east bound through freight, Canadian vessels carried 1,146,457 tons and United States vessels carried 410,826 tons; and of the west bound through freight Canadian vessels carried 357,019 tons and United States vessels carried 367,217 tons, or a total of 1,503,476 tons for Canadian and 778,043 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1910 was 2,760,752 tons; of this quantity 1,916,733 tons passed eastward and 844,019 passed westward.

East and West bound Through Freight.

The total quantity of through freight was 1,959,771 tons; of this quantity 1,488,551 tons were east bound and 471,220 tons were west bound.

Way Freight.

Of the total quantity of (way) or local freight 428,182 tons were east bound and 372,799 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 :—

	Eastward, to Montreal. Tons.	Westward, from Montreal. Tons.
1896.....	480,077	10,050
1897.....	584,246	4,542
1898.....	538,108	4,436
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

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 :—

	Eastward. Tons.	Westward. Tons.	Total. Tons.
1896.....	385,695	267,518	653,213
1897.....	353,863	210,831	564,694
1898.....	277,023	210,516	487,539
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	288,198	485,499

The total quantity of freight passed through the Welland Canal from United States ports to United States ports shows an increase of 40,080 tons as compared with the previous year ; and a decrease of 167,714 tons as compared with 1896.

1 GEORGE V., A. 1911

The following statement shows the aggregate number of vessels and the total quantity of freight passed through the Welland Canal, and the quantity passed between United States ports during the years 1867 to 1910 inclusive.

Fiscal Year.	Aggregate number of Trips.	Total quantity transported on the Welland Canal.	Quantity passed from United States ports to United States ports.
	No.	Tons.	Tons.
1867..	5,405	933,260	458,386
1868..	6,157	1,161,821	641,711
1869..	6,069	1,231,903	688,700
1870..	7,356	1,311,956	747,567
1871..	7,729	1,478,122	772,756
<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..	4,194	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..	2,882	1,016,165	533,957
1891..	2,594	975,013	553,800
1892..	2,615	955,554	541,065
1893..	2,843	1,294,823	631,667
1894..	2,412	1,098,221	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

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The total quantity of freight passed through the several divisions of the Canadian Canal system during the season of 1910 is as follows :

	Farm Stock.	Forest Produce of Wood.	Manufac- tures.	Produce of Mines.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland.	688	154,737	516,333	611,994	1,042,538	2,326,290
St. Lawrence.	9,514	564,328	497,007	759,052	930,851	2,760,752
Chambly.	404	496,119	21,834	127,275	23,667	669,299
Ottawa.	3,242	268,199	72,294	35,934	5,592	385,261
Rideau.	2,124	40,026	76,299	13,547	2,885	134,881
St. Peters.	2,599	10,124	7,889	48,468	16,871	85,951
Murray.	149	3,471	162,506	7,400	4,415	177,941
Trent Valley.	435	35,849	8,672	679	628	46,263
Sault Ste. Marie.	1,368	100,613	862,526	32,597,423	2,833,737	36,395,687
St. Andrews.		7,952	177		177	8,283

The total quantity of freight moved on the Welland Canal was 2,326,290 tons, of which 1,042,538 tons were agricultural products.

On the St. Lawrence canals the total quantity of freight moved was 2,760,752 tons, of which 930,851 were agricultural products, and 497,007 tons were manufactures.

On the Ottawa canals the total quantity of freight moved was 385,261 tons ; of this quantity 564,328 tons were the produce of the forest.

1 GEORGE V., A. 1911

COMPARATIVE Statement of the Commerce through the United States, St. Mary's Falls
Canals and Canadian Sault Ste. Marie Canal, for the Seasons of 1909 and 1910.

	Traffic for 1910.		Total Traffic for		Increase	Decrease.
	U. States Canal.	Canadian Canal.	Season of 1910.	Season of 1909.	Amount.	Amount.
Vessels No. †	12,927	7,972	20,899	19,134	1,765	
Lockages. "	8,459	6,110	14,569	13,571	998	
Tonnage registered. Net tons	26,506,986	23,361,198	49,868,184	46,779,137	3,089,047	
" freight. "	25,927,661	36,395,687	62,323,348	57,993,619	4,329,729	
Passengers No.	33,536	33,291	66,827	69,546	6,281	
Coal hard Net tons	1,109,533	601,208	1,710,741	1,422,671	288,070	
" soft. "	8,319,072	3,508,357	11,827,429	8,586,321	3,241,108	
Flour. Barrels	4,856,756	2,831,260	7,688,016	7,103,533	584,483	
Wheat. Bushels	17,505,949	68,396,300	85,902,249	112,839,716		25,937,467
Grain (excluding wheat). "	14,945,290	23,855,747	38,601,037	47,493,636		8,692,599
Manufactured & pig iron. Net tons	266,951	218,717	485,668	572,892		87,224
Salt. Barrels	390,191	138,419	528,610	651,091		122,481
Copper. Net tons	121,438	35,806	157,244	127,212	30,032	
Iron ore. "	13,075,362	28,440,952	41,516,314	40,023,414	1,492,900	
Lumber, ft. B. M.	558,607,000	44,646,650	603,253,650	552,003,300	51,250,350	
Silver ore. Net tons						
Building stone "	9,335		9,335	1,784	7,551	
Unclassified freight. "	747,886	740,554	1,488,440	1,131,586	356,854	

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The United States canal was open to navigation during the season of—

1889.....	234 days	1900.....	238 days
1890.....	228 "	1901.....	230 "
1891.....	225 "	1902.....	256 "
1892.....	233 "	1903.....	249 "
1893.....	219 "	1904.....	223 "
1894.....	234 "	1905.....	245 "
1895.....	231 "	1906.....	249 "
1896.....	232 "	1907.....	233 "
1897.....	234 "	1908.....	231 "
1898.....	241 "	1909.....	236 "
1899.....	231 "	1910.....	224 "

The Canadian canal was open to navigation during the season of—

1895.....	87 days	1903.....	256 days
1896.....	218 "	1904.....	241 "
1897.....	238 "	1905.....	255 "
1898.....	243 "	1906.....	253 "
1899.....	239 "	1907.....	238 "
1900.....	238 "	1908.....	235 "
1901.....	246 "	1909.....	240 "
1902.....	264 "	1910.....	248 "

The average number of vessels passing per day through the two canals for the season of 1910 was over eighty-eight.

1 GEORGE V., A. 1911

A—TABLE showing the total tonnage of the undermentioned articles moved Up and Down

Year.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	45,674	313,825	120,599	20,951	.....	904	1,937
1872.	26,651	239,998	254,902	6,035	7,752	64	2,745
1873.	30,665	355,847	180,169	8,225	1,194	3	3,777
1874.	24,019	413,212	181,151	18,871	5,954	513	8,677
1875.	13,964	253,835	103,749	35,751	3,383	917	6,337
1876.	15,778	201,906	144,561	18,455	24,496	1,454	3,198
1877.	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878.	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879.	10,710	274,570	144,506	4,655	1,239	440	2,444
1880.	12,679	242,020	163,738	17,772	477	1,016	1,480
1881.	9,959	127,832	101,075	24,509	.....	1,844	2,086
1882.	12,261	215,056	54,799	20,126	611	3,226	403
1883.	13,471	152,794	182,269	10,436	731	1,642	10,983
1884.	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885.	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886.	19,474	154,169	219,442	1,595	4,911	564	14,657
1887.	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888.	16,983	160,963	194,886	5,906	26,629	811	13,608
1889.	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890.	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891.	13,517	198,658	185,180	8,113	52,959	65,888	28,042
1892.	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893.	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894.	33,628	270,993	169,233	28,353	27,962	567	60,673
1895.	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896.	42,425	320,563	320,444	11,368	28,178	9,403	56,591
1897.	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898.	5,578	297,647	437,861	12,286	17,592	16,127	23,182
1899.	11,625	197,732	204,004	2,907	24,637	923	18,460
1900.	10,968	137,800	163,509	4,035	41,955	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	250,031	210,758	14,656	7,911	4,904	13,994
1904.	35,049	165,138	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

* Fiscal. † Apples, meal of all kinds, peas, potatoes.

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through the Welland Canal, during a period of forty years, ended December 31, 1910.

HEAVY GOODS.							
Total.	Railway Iron.	Other Iron.	Salt.	Iron and Salt having paid full tolls on St. Lawrence Canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	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
306,432	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,349
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
527,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
591,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
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	22,480	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 GEORGE V., A. 1911

B.—TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland Canal during a series of forty years, ended December 31, 1910.

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
1873.....	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874.....	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875.....	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876.....	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877.....	13,588	248,894	169,185	10,216	2,810	2,405	1,833	448,931
1878.....	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879.....	10,588	271,515	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	403,923
1887.....	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888.....	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889.....	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890.....	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891.....	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892.....	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893.....	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894.....	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895.....	43,895	202,636	164,894	8,689	18,236	.....	46,435	484,785
1896.....	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897.....	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898.....	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
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	67,756	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	33,423	6,667	21,668	974,270
1909.....	38,763	590,074	140,902	23,151	73,135	33	30,206	898,264
1910.....	41,152	587,493	229,980	21,575	136,233	18,149	1,034,582

*Fiscal. †Apples, meal all kinds, pease, 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 years, ended December 31, 1910.

YEARS.	VEGETABLE FOOD.										HEAVY GOODS.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other Articles.	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Cres.	Total.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869	30,681	211,045	91,149	2,942	7,400	667	1,006	337,530	68,064	13,334	89,086	28,566	35,912	235,462		
1870	10,482	124,695	89,761	1,301	7,400		608	234,337	24,040	13,259	49,843	95,741	59,401	224,264		
1871	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176		
1872	8,230	229,053	125,627	5,948	5,948		5,368	374,226	5,732	8,941	22,888	203,675	19,651	260,895		
1873	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451		
1874	3,342	96,247	58,138	1,965	1,965	525	403	162,405		5,531	29,395	107,110	25,808	227,844		
1875	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		
1876	1,316	65,542	60,026	859	277		341	128,361		10,713	3,892	150,583	13,535	178,723		
1877	139	53,791	33,401		464		11	87,826	2,405	3,648	6,318	118,573	17,747	148,741		
1878		30,611	16,122	1,551	296			48,580	4,743	3,515	371	65,945	18,380	92,954		
1879		34,320	30,031	1,224				65,285	1,313	5,570		83,858	6,464	97,295		
1880	107	30,227	32,433	537		684	14	64,002		4,076		138,552	14,533	177,161		
1881	2,041	48,382	66,128	735			8,579	132,496	1,209	6,901	8	196,462	24,891	229,471		
1882	1,715	40,956	53,707		9,874		8,170	114,422	698			210,790	15,100	227,187		
1883	124	53,235	63,229	732	882			118,203		1,594		198,416	15,029	215,639		
1884	7,591	53,258	94,048	4,790			13,201	172,888	156	5,328	1	189,964	11,364	206,813		
1885	11,780	37,678	83,431	1,732	12,050		10,859	157,530		4,406		82,780	627	87,828		
1886	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	36	173,259	2,309	177,288		
1887	5,017	39,229	147,045	27,492	27,492		17,225	236,208		1,587	806	227,476	1,204	231,163		
1888	9,204	31,527	180,842	6,519	27,030		20,497	275,619		504	208	162,231	1,620	184,563		
1889	6,802	32,097	127,494	8,113	52,823		26,115	253,444		292	705	186,572	1,773	189,342		
1890	11,018	26,950	131,222	6,433	36,335		31,992	244,550		576	2	183,895		184,473		
1891	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389	344			206,827		207,171		
1892	17,795	53,846	105,329	28,095	27,621		60,462	198,358	297			188,521		188,818		
1893	10,169	27,881	100,512	7,904	17,029		46,316	209,302	181			149,490		149,917		
1894	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407	146			207,348		207,494		
1895	7,237	28,919	169,057	14,173	14,969		41,887	276,242	965			165,143		166,123		
1896	4,212	11,268	150,667	6,909	12,732	1,197	22,671	209,656	770	339	4	156,814		157,927		
1897	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892	351	1,646	553	88,931		91,481		
1898	7,966	18,771	60,545	2,402	39,706	2,149	14,248	145,787		953		46,024		46,977		
1899	17,165	23,557	55,531	7,119	26,344		14,016	143,732	83	80	106	46,702		46,970		
1900	13,785	32,630	66,111	7,418	10,006		12,675	142,634		214		12,911		13,125		

* Apples, meal all kinds, pease, 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 years, ended December 31, 1910—*Concluded*.

YEARS.	VEGETABLE FOOD.										HEAVY GOODS.				
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other Articles.	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
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		13,079	129,986				63,882		63,882	
1905.	21,054	15,483	93,622	9,197	10,892		9,682	162,930		1		73,465		73,465	
1906.	15,215	13,410	135,240	9,266	11,323		10,478	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	7,118	2,070	2	21,393	172,788				158,351	1,000	159,751	
1909.	15,452	17,940	100,967	4,224			22,683	161,266		5		131,131	1,531	132,667	
1910.	11,859	10,717	126,938	3,840			8,571	161,925				201,833		201,833	

* Apples, meal all kinds, beans, 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 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909 and 1910.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	191	100,242	129	75,777	201	212,027	78	36,962	599	425,008
1899.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Wheat.....	91,901	80,928	16,250	7,244	196,323					
Corn.....	28,015	18,905	138,834	18,250	204,004					
Barley.....			2,424		2,424					
Oats.....	1,557		21,646		23,203					
Pease.....										
Rye.....			923		923					
Coal.....	435	6,736		3,398	10,569					
Miscellaneous merchandise.....	25,203	18,651	49,522	1,567	94,943					
Shingles, woodenware, &c.....	485	916		100	1,501					
Sawed lumber..... Ft. B.M.	2,077,748	772,739	14,855,338	19,949,079	37,654,904					
Square timber..... Cub. ft.	322,138	585,780	20,802	328,806	1,257,526					
Firewood..... Cords.		9			9					
Staves..... No.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	114,885	109	67,475	168	182,444	71	30,309	564	395,113
1900.	Tons.	Tons.	Tons.	Tons.	Tons.					
Wheat.....	67,694	43,157	23,066	2,130	136,047					
Corn.....	39,597	31,248	78,701	13,963	163,509					
Barley.....			2,402	1,047	3,449					
Oats.....			39,706	407	40,113					
Pease.....	115		4		119					
Rye.....	1,389		2,149		3,538					
Coal.....	723	637	433	559	2,352					
Miscellaneous merchandise.....	53,649	31,536	43,344	3,564	132,093					
Shingles, woodenware, &c.....	1,078				1,078					
Sawed lumber..... Ft. B.M.	6,847,279	5,344,258	14,984,483	18,770,405	45,946,425					
Square timber..... Cub. ft.	439,827	355,951	11,583	198,420	1,005,781					
Firewood..... Cords.	126	255			381					
Staves..... No.	1,000				1,000					
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	197	103,802	114	59,022	163	182,497	48	22,319	522	367,640
1901.	Tons.	Tons.	Tons.	Tons.	Tons.					
Wheat.....	57,641	58,973	31,955	1,241	149,810					
Corn.....	7,350	4,689	55,717		67,756					
Barley.....			7,119		7,119					
Oats.....	944		27,197		28,141					
Pease.....										
Rye.....	2,961				2,961					
Coal.....	1,960	362	357		2,679					
Miscellaneous merchandise.....	71,300	32,312	12,874	7,469	123,955					
Shingles, woodenware, &c.....	18				18					
Sawed lumber..... Ft. B.M.	6,533,423	4,060,251	11,089,806	13,092,940	34,776,420					
Square timber..... Cub. ft.	362,441	204,682	9,384	149,531	726,038					
Firewood..... Cords.	165	264			429					
Staves..... No.										

1 GEORGE V., A. 1911

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—Continued.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	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.....	389		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 timber..... 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	490,580
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		32,751,541		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	

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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.				UNITED STATES 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 .....	.....	.....	1,711	.....	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	12,479,698	54,589,200				
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.					
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	10,769,755	49,188,089					
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	1,007	806,116	
1907.	Tons.	Tons.	Tons.	Tons.	Tons.					
Wheat	294,298	50,808	130,818	4,429	480,303					
Coru	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	12,040	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		

1 GEORGE V., A. 1911

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.
	567	432,623	149	64,034	428	319,030	36	19,866	1180	835,553
1908.	Tons.		Tons.		Ton.		Tons.		Tons.	
Wheat	505,151		39,001		183,101		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					40				40	
Rye.....	742				5,925				6,667	
Coal.....	39,733		42,656		57,448		8,344		148,181	
Merchandise	26,815		14,783		14,410		13,686		69,694	
Firewood			70		1,173				1,243	
Sawed lumber					17,572,070		6,578,545		24,150,615	
Square timber	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.	
Wheat	415,208		34,903		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					63				63	
Rye.....	33								33	
Coal.....	160,475		53,681		21,097		630		235,883	
Merchandise	52,994		14,782		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	1,001	987,646
1910.	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.....	136,743				490				136,233	
Pease					123				123	
Rye.....										
Coal.....	216,779		114,671		29,646		894		361,990	
Merchandise	39,149		15,231		21,818		20,466		96,664	
Sawed lumber	3,630		800		16,932				21,362	
Square timber.....	1,930		5,000		800				7,730	
Shingles.....					525				525	
Unenumerated.....	74,434		1,772		24,031				100,237	
Total	986,207		160,250		389,466		21,360		1,557,283	

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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 1910 is as follows:—

Summary.	Tons.	Tons.
In Canadian steam vessels.....	352,468	
" sail.....	4,551	
Total quantity in Canadian vessels.....		357,019
In United States steam vessels.....	356,183	
" sail vessels.....	11,034	
Total in United States vessels.....		367,217
Grand total freight passed Up the Welland Canal in Canadian and United States vessels.....		724,236

STATEMENT of the Quantity of Through Freight passed Up and Down the Welland Canal during the Season of Navigation in 1910.

Summary.	Tons.	Tons.
In Canadian steam vessels up.....	352,468	
" " down.....	986,207	
Total in Canadian steam vessels.....		1,338,675
In Canadian sail vessels up.....	4,551	
" " down.....	160,250	
Total in Canadian sail vessels.....		164,801
Total quantity in Canadian vessels.....		1,503,476
In United States steam vessels up.....	356,183	
" " down.....	389,466	
Total in United States steam vessels.....		745,649
In United States sail vessels up.....	11,034	
" " down.....	21,360	
Total in United States sail vessels.....		32,394
Total quantity in United States vessels.....		778,043
Total in Canadian and United States vessels.....		2,281,519
	Down on East Bound.	Up or West Bound.
In Canadian vessels.....	1,146,457	357,019
In United States vessels.....	410,826	367,217
Total.....	1,557,283	724,236

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 1898 to 1910.

Articles.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Cement and water lime.	52	15	15				35	22				5,652	484
Clay, lime and sand.					50		8,170	10					
" pig.	6,217	5,063	4,292	1,178	5,785	2,542	1,651	384	269	124	553	12,689	7,154
" all other	1,351	3,000	5,420				16	48					
Steel.													
Stone, for cutting													
Apples.	3,960	596	1,288			2,206	1			9,936			
Barley.	310,498	150,999	109,359	14,319	1,719	123,864	9,697	43,607	21,196	105,984	24,318	19,143	20,000
Corn.	5,687			4,965		3,643	55,021	84,204	55,559		10,454	17,137	77,612
Flaxseed.	653	4,229	1,595	1,400	6,755	16,151	24,682	15,694	80,570	49,159	27,500	19,634	6,607
Flour.				35		348	57	14,571	9,174	3,730	5,028	21,905	27,081
Meal, all kinds.						2,438		270	60		156		
Oats.	3,975	10,250	8,922	1,584	1,442	2,438	23,404	23,404	37,164	66,941	28,081	65,624	129,900
Oil cake.				1,083		462	7,846	9,229					
Pense.	260		115			63						30	
Rye.	15,488	923	3,978	2,961	4,079	4,260		1,711	1,405	2,266	6,662	120	
Salt.	144	200		50		132		168	75	143	419		
Seed, all kinds.													
Hay, pressed.		36		246									
Tobacco, raw.				23									
Wheat.	184,154	169,978	121,896	132,702	200,975	223,746	133,528	190,505	280,611	450,446	686,626	550,775	562,149
All other agricultural products, vegetables.	56	32											
Hides, skins, horns and hoofs.							10					5,876	
Horses.		1							2				
Lard and lard oil.				1,155				2,847	4,810				
Meats, all kinds.				114									
Pork.				34									
Tallow.						3		53					
All other agricultural products, animal.							1					366	
Total, class 3.	532,499	345,565	256,491	161,849	220,805	382,858	241,522	384,727	499,895	688,749	790,321	718,951	841,310

C.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canal to Lake Erie, during the Seasons of Navigation in 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910 and 1910.

Articles.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1909.	1910.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>												
Bricks.....	70	24	49	196	22	80	115	132	556			
Brimstone.....				5	20	23	12					
Cement and water lime.....	906	997	1,931	2,916	178	3,924	39	181	88	13	400	17,565
Clay, lime and sand.....	144	8	4	2	1	181				100		
Cotton, raw.....						23						
Fish.....	9	10	8	8		8	4			39		
Gypsum.....		4										
Iron, railway.....				74	11,735	39,641	283	126	7,289	4,119	7,655	2,069
" pig.....				3	558	273		312	680		7,231	
" all other.....	690	1,318	1,428	4,950	2,904	5,845	3,782	3,633	8,285	6,987		540
Salt.....	35		48	75	4	87	99	150	17			
Steel.....	19	18		3	11	332	58	192	111	2,561	35,153	
Stone for cutting.....							41					
Flour.....				16				18				
Hay.....										30	255	
Meals.....						17	25					1,113
Oats.....												
Potatoes.....												
Seeds, all kinds.....	56	121	218	302	58	325	164	35	17			
Tobacco, raw.....					1	2						
Agricultural products, not enumerated, vegetable.....				1	1							
Hides and skins.....					16	6						
Horses.....	1											
Lard and lard oil.....	2				11						1	
Meats other than pork.....												
Pork.....			1			1	25					
Wool.....												
All other articles not enumerated.....												
Total, class 3.....	2,031	2,500	3,764	9,222	15,520	50,768	4,617	4,934	16,437	22,076	43,039	21,278

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<i>Class 4.</i>												
Agricultural implements	33						2	291	155	5		
Ashes, pot and pearl		5					32	294	456			
Crockery and earthenware			1				5	2	35			
Dye woods, &c.		456					1,207	1,641	3,534	90		
Furniture	150	249						34	93			
Glass, all kinds								1,671	37			
Manilla												
Marble												
Molasses							6					
Nails	229	518					2,878	3,061	4,011	50		
Oil, in barrels	15	21					16	120	148		80	
Paint	35	2					158	202	412	246		
Pitch and tar	37	6					58	199	5	239		
Rags		14					29	15		50		
Resin		15					1			25		
Soda ash	88	108					264	387	28	310		
Stops, wrought	31											
Sugar	566	1,596					204	52	1,168	1,153	40	
Tin	237	139					209	362	928	1,365		
Turpentine							1					
White lead							2					
Whiting	93	89					80	82	80	304	283	
Whisky, beer, &c.	98	178					22	33	158	93	18	
Merchandise not enumerated	793	482					452	482	384	483	1,040	
Total, class 4	2,405	3,491					3,674	6,200	15,360	11,707	21,359	15,129
<i>Class 5.</i>												
Barrels, empty							9,294	13,379	23,566	23,116	21,620	19,510
Firewood in vessels												
Pulpwood												
Lumber, sawn, in vessels												
Railway ties in vessels												
Woodenware							611					
Total, class 5							40,637	40,425	43,982	57,218	126,861	121,572
<i>Special Class.</i>												
Coal												
Iron ore								10,200				
Total, special class								2,861				
Grand total	4,436	5,991					100,659	71,512	72,482	96,791	191,510	172,360

H.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Seasons of Navigation from 1898 to 1910 inclusive.

Articles.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 2.</i>													
Bricks.....													2,000
Cement and water lime.....	300		18							20			
Fish.....													
Iron, railway.....	770				30					30			
" " all other.....	324	1,008	714										
Salt.....	549			105									
Steel.....	2,951	13,522	3,110							509	9,086		
Stone for cutting.....									2				
Apples.....													
Barley.....	6,909	2,424	2,402	7,119	7,418	11,433	16,621	9,197	9,266	2,812	7,148	4,224	3,840
Corn.....	130,667	81,777	60,545	55,531	66,111	108,917	60,964	93,622	135,240	124,474	99,830	100,967	126,938
Flour.....	4,212	6,118	7,966	17,168	13,785	6,082	8,556	24,054	15,215	18,898	17,694		11,859
Hay, pressed.....								200					
Meal, all kinds.....	22,636	18,198	14,244	14,016	12,675	13,546	13,076	9,606	10,668	21,976	21,353		8,621
Marble.....								87					
Nails.....													
Oil cake.....			2,705	1,302	110	740	16,497	228		114			
Oats.....	12,729	19,526	39,706	26,344	10,006	6,112	3	10,892	11,323	4,741	2,070		
Pease.....	45		4			22		76	11	25	40	63	123
Potatoes.....													
Rye.....	1,197	923	2,149			4,174				2			
Flax seed.....		200				1,594			756			15,452	
Seeds, all kinds.....	44	11			10	27		43	3	17			
Tobacco.....				23									
Wheat.....	11,268	12,926	18,771	23,537	32,639	15,436	14,269	15,483	13,410	21,892	24,651	17,940	10,717
Agricultural products, vegetable.....			6	10		1			1	7		21	233
Hides and skins, &c.....													
Horses.....	2		1			2							
Lard and lard oil, &c.....	3,671	864	1,588	1,680	2,413				22	86			
Meats, other than pork.....													
Pork.....	1,271	343	117	970	632	152	379	273	268	429			
Sheep.....	359	201	631	119							190		
Tallow.....	89	130		3	752	482	134	21	89	30		157	233
Wool.....													
Total, class 3.....	219,434	158,720	154,680	147,947	146,581	168,720	130,499	163,784	196,301	196,062	182,085	161,738	164,564

1 GEORGE V., A. 1911

L—STATEMENT of the quantity of Grain Transhipped to the following Ports for the season of 1910.

Ports.	Wheat.	Oats.	Barley.	Corn.	Other Grain.	Total.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.
Kingston.....	9,481,700	3,848,235	438,250	375,428	1,360	14,144,973	371,699
Prescott.....	85,527	32,016	.....	62,711	.....	180,254	5,010
Ogdensburg.....	.....	.....	.....	15,000	.....	15,000	420
Total Bushels....	9,567,227	3,880,251	438,250	453,139	1,360	14,340,227
Total Tons.	287,017	66,558	10,768	12,738	48	377,129

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M—The quantity of Coal passed through the Welland Canal during a series of years from 1885 to 1910 inclusive, as follows :—

Years.	From Canadian Ports to Canadian Ports.		From United States Ports to United States Ports.		From United States Ports to Canadian Ports		Total.
	Up.	Down.	Up.	Down.	Up.	Down.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1885.....			193,442	4,974	10,321	31,350	240,037
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.....	80		116,616	615	17,280	22,781	202,372
1891.....			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	223,445
1897.....		4	165,143		1,277	9,799	176,223
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	147,687
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

1 GEORGE V., A. 1911

N.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence Canals during the seasons of 1885 to 1910, 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	469,695	483,238
1910.	7,351	746,926	754,277

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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.
1899.	Tons.	Tons.	Tons.
Barley	568	.....	1,828
Corn	150,999	16,594	43,854
Oats	10,250	1	13,139
Pease .....	.....	.....	.....
Rye	923	.....	.....
Wheat	169,978	24,602	9,190
Total grain	† 332,736	40,197	68,011
Other articles	21,739	68,671	104,727
Total	354,485	108,958	172,732
1900.			
Barley	1,288	563	1,598
Corn	109,358	9,844	44,406
Oats	8,925	348	30,840
Pease	115	.....	4
Rye	3,078	160	300
Wheat	121,896	6,610	7,541
Total grain	**244,661	17,525	84,589
Other articles	43,670	95,680	98,287
Total	288,231	113,205	177,876
1901.			
Barley .....	.....	.....	.....
Corn	14,319	4,528	49,609
Oats	1,584	853	25,704
Pease .....	.....	.....	.....
Rye	2,961	.....	.....
Wheat	132,702	8,051	9,057
Total grain	†151,566	13,732	83,370
Other articles	32,834	128,614	91,799
Total	184,420	142,346	175,169
1902.			
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

1 GEORGE V., A. 1911

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.
1903.	Tons.	Tons.	Tons.
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.....	\$351,936	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.....	53,021	3,950	57,473
Oats.....	.....	.....	16,497
Pease.....	.....	.....	3
Rye.....	.....	.....	.....
Wheat.....	*133,528	18,998	11,929
Total grain.....	198,246	23,711	102,523
Other articles.....	77,031	80,092	138,475
Total.....	375,277	193,803	240,998
1905.			
Barley.....	43,607	2,628	9,197
Corn.....	84,204	3,095	93,622
Oats.....	21,404	3,776	16,892
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
1906.			
Barley.....	21,196	984	9,266
Corn.....	53,559	15,688	140,558
Oats.....	37,164	819	11,323
Pease.....	.....	11	.....
Rye.....	1,495	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

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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.
	Tons.	Tons.	Tons.
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	1686,626	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
1910.			
Barley	20,000		1,575
Corn	77,612	49,326	103,042
Oats	129,900	6,333	
Pease			123
Rye			
Wheat	562,149	7,988	10,747
Total grain	789,661	63,657	115,457
Other articles	380,500	152,325	55,683
Total	1,170,161	215,982	171,140

TABLE 1.—Comparative Statement of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation, 1909 and 1910.

Canals.	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.	Up.	Down.	Canadian.	United States.	
															Up.	Down.	Up.	Down.
1909.															
South St. Marie.....	641,601	1,567,940	46,041	512,293	1,736,801	22,188,888	1,000,300	167,881	3,424,743	24,436,502	27,861,245	3,366,495	24,494,750		
Welland.....	217,737	618,718	164,304	16,469	248,581	196,838	11,467	551,837	642,089	1,383,862	2,025,951	1,050,241	975,710		
St. Lawrence.....	533,658	932,101	242,954	36,547	.....	.....	3,759	661,557	780,421	1,630,208	2,410,629	1,710,797	699,832		
Chambly.....	5,480	11,475	606,466	.....	.....	.....	.....	128,696	611,946	140,171	752,117	623,421	128,696		
St. Peter's.....	27,169	52,052	.....	.....	.....	.....	629	.....	27,798	52,052	79,850	79,150	700		
Murray.....	72,034	7,244	406	.....	.....	.....	672	21,935	73,112	29,179	102,291	79,254	23,037		
Ottawa.....	49,131	240,150	150	42,333	.....	.....	5,175	.....	54,456	282,483	336,939	331,104	5,835		
Rideau.....	44,120	33,033	334	252	.....	.....	1,827	12,148	46,341	45,433	91,774	77,643	14,131		
Trent.....	17,819	42,133	.....	.....	.....	.....	.....	.....	17,819	42,133	59,952	59,952	.....	
Grand total.....	1,608,659	3,504,849	1,040,715	607,894	1,985,522	22,385,226	1,023,829	1,544,054	5,678,725	28,042,023	33,720,748	7,378,057	26,342,691		
1910.															
South St. Marie.....	779,961	1,567,285	28,648	565,335	3,035,290	29,332,862	969,248	117,038	4,813,147	31,582,510	36,395,687	3,378,268	33,017,419		
Welland.....	265,790	742,908	154,617	6,983	288,198	197,301	16,229	654,264	724,834	1,601,456	2,326,290	1,196,946	1,129,344		
St. Lawrence.....	596,833	1,123,520	286,075	22,235	.....	.....	777	770,978	844,019	1,916,733	2,760,752	1,377,311	787,311		
Chambly.....	383,148	12,307	130,245	.....	.....	.....	.....	143,599	513,393	155,906	669,299	525,700	143,599		
St. Peter's.....	33,482	52,240	.....	.....	.....	.....	.....	.....	33,711	52,240	85,951	85,722	229		
Murray.....	161,737	8,546	555	.....	.....	.....	.....	.....	162,292	15,649	177,941	170,680	7,261		
Ottawa.....	49,923	266,519	61,013	.....	.....	.....	7,806	.....	57,729	327,532	385,261	377,268	7,993		
Rideau.....	58,049	57,218	4	5,870	.....	.....	1,460	12,280	59,513	75,368	134,881	121,048	13,838		
Trent.....	15,065	30,598	.....	.....	.....	.....	.....	.....	15,065	30,598	46,263	46,263	.....	
St. Andrew's.....	8,152	131	.....	.....	.....	.....	.....	.....	8,152	131	8,283	8,283	.....	
Grand total.....	2,312,740	3,861,272	600,144	661,436	3,323,822	29,530,163	995,749	1,705,282	7,232,455	35,758,153	42,990,608	7,883,614	35,106,994		

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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 1910.

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.....	2,744	1,192,124	1,209,938	100,620	120,788	76,096	89,461	270,561	113,906	1,639,401	1,534,093	3,173,494
Welland.....	1,862	528,479	476,520	175,646	18,839	18,839	157	15,633	246,825	738,497	723,062	1,461,499
St. Lawrence.....	8,884	1,452,888	1,198,749	10,104	260	216		1,361	249,817	1,464,569	1,445,826	2,910,395
Chambly.....	619	39,386	39,210	12,081					7,170	51,417	46,380	97,797
Ottawa.....	2,189	203,069	206,805		1,033					203,069	207,838	410,907
Rideau.....	2,749	83,284	81,867	4,351	605				6,340	87,635	88,812	176,447
St. Peter's.....	1,466	53,893	52,349							53,893	52,349	106,242
Trent Valley.....	3,442	85,400	86,685							85,400	86,685	172,085
Murray.....	1,240	230,714	182,879	10,954	2				3,488	241,668	136,369	378,037
St. Andrew's.....	202	22,426	22,461							22,426	22,461	44,887
Total Canadian.....	25,337	3,891,613	3,504,463	313,656	122,688	95,151	89,618	287,555	627,046	4,587,975	4,343,815	8,931,790
UNITED STATES VESSELS.												
Sault Ste. Marie.....	5,228	74,922	17,785	26,865	270,188	5,220,109	14,268,834	266,890	42,111	5,588,786	14,598,918	20,187,704
Welland.....	1,392	41,235	27,148	165,640	8,041	12,059	977	12,317	214,727	231,251	250,893	482,144
St. Lawrence.....	692	89	1,319	57,999	2,430	277,249	218,745	927	128,260	336,264	350,754	687,018
Chambly.....	3,600		1,206	177,848					190,395	177,848	191,601	369,449
Ottawa.....	4,412	771	1,120		22,203			17,568	301	18,339	23,634	41,963
Rideau.....	66	1,715	1,031	2,313	2,313			1,736		3,451	3,344	6,795
St. Peter's.....	4	134	522		155					134	677	811
Trent Valley.....												
Murray.....	68	356	367	350			9	24	307	730	683	1,413
St. Andrew's.....												
Total United States.....	11,462	119,222	50,498	428,702	305,330	5,509,417	14,488,565	299,462	576,101	6,356,803	15,420,494	21,777,297
Grand total Canadian and U.S.....	36,799	4,010,835	3,554,961	742,358	428,018	5,604,568	14,578,183	587,017	1,203,147	10,944,778	19,764,309	30,709,087

1 GEORGE V., A. 1911

TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

Vessels.	Total Number of trips.	From Canadian to Canadian Ports.		From Canadian to United States Ports.	
		Up.	Down.	Up.	Down.
SAULT STE. MARIE CANAL.					
Canadian vessels, steam.....	2,652	1,175,362	1,195,110	96,171	120,788
" " sail.....	92	16,762	14,828	4,449	.....
Total Canadian.....	2,744	1,192,124	1,209,938	100,620	120,788
United States vessels, steam.....	5,103	67,950	17,507	26,845	264,640
" " sail.....	125	6,972	278	20	5,548
Total United States.....	5,228	74,922	17,785	26,865	270,188
Grand total of Sault Ste. Marie Canal.....	7,972	1,267,046	1,227,723	127,485	390,976
WELLAND CANAL.					
Canadian vessels, steam.....	1,316	482,482	433,387	112,091	.....
" " sail.....	536	45,997	43,133	63,455	.....
Total Canadian.....	1,852	528,479	476,520	175,546	.....
United States vessels, steam.....	646	89	1,319	39,523	2,430
" " sail.....	46	.....	.....	18,476	.....
Total United States.....	692	89	1,319	57,999	2,430
Grand total, Welland Canal.....	2,544	528,568	477,839	233,545	2,430
ST. LAWRENCE CANALS.					
Canadian vessels, steam.....	4,251	831,546	632,368	5,562	98
" " sail.....	4,583	621,342	563,381	4,742	162
Total Canadian.....	8,834	1,452,888	1,195,749	10,104	260
United States vessels, steam.....	772	18,898	8,018	133,316	253
" " sail.....	620	22,337	19,130	50,324	7,788
Total United States.....	1,392	41,235	27,148	163,640	8,041
Grand total, St. Lawrence Canals.....	10,226	1,494,123	1,222,897	173,744	8,301
CHAMBLY CANAL.					
Canadian vessels, steam.....	299	34,053	34,105	.....	.....
" " sail.....	320	5,283	5,105	12,081	.....
Total Canadian.....	619	39,336	39,210	12,081	.....
United States vessels, steam.....	.....	.....	.....	.....	.....
" " sail.....	3,600	.....	1,206	177,848	.....
Total United States.....	3,600	.....	1,206	177,848	.....
Grand total, Chambly Canal.....	4,219	39,336	40,416	190,929	.....
OTTAWA CANALS.					
Canadian vessels, steam.....	972	97,812	102,043	569
" " sail.....	1,217	105,257	104,762	464
Total Canadian.....	2,189	203,069	206,805	1,033

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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.	
71,207	85,961	267,299	106,388	1,610,039	1,508,247	3,118,286
4,889	3,500	3,262	7,518	29,362	25,846	55,208
76,096	89,461	270,561	113,906	1,639,401	1,534,093	3,173,494
5,135,154	14,162,381	262,794	42,111	5,492,743	14,486,639	14,979,382
84,955	106,453	4,096	.....	96,043	112,279	208,322
5,220,109	14,268,834	266,890	42,111	5,588,786	14,598,918	20,187,704
5,296,205	14,358,295	537,451	156,017	7,228,187	16,133,011	23,361,198
18,471	157	13,031	179,130	626,075	612,674	1,238,749
368	.....	2,602	67,195	112,422	110,328	222,750
18,839	157	15,633	246,325	738,497	723,002	1,461,499
276,680	218,745	927	111,629	317,219	334,123	651,342
569	.....	.....	16,631	19,045	16,631	35,676
277,249	218,745	927	128,260	336,264	350,754	687,018
296,088	218,902	16,560	374,585	1,074,761	1,073,756	2,148,517
216	.....	145	192,780	837,269	825,246	1,662,515
.....	.....	1,216	57,037	627,300	620,580	1,247,880
216	.....	1,361	249,817	1,464,569	1,445,826	2,910,395
11,263	977	6,554	177,304	172,031	186,552	358,583
796	.....	5,763	37,423	59,220	64,341	123,561
12,059	977	12,317	214,727	231,251	250,893	482,144
12,275	977	13,678	464,544	1,695,820	1,696,719	3,392,539
.....	.....	.....	.....	34,053	34,105	68,158
.....	.....	.....	7,170	17,364	12,275	29,639
.....	.....	.....	7,170	51,417	46,380	97,797
.....	.....	.....	190,395	177,848	191,601	369,449
.....	.....	.....	190,395	177,848	191,601	369,449
.....	.....	.....	197,565	229,265	237,981	467,246
.....	.....	.....	.....	97,812	102,612	200,424
.....	.....	.....	.....	105,257	105,226	210,483
.....	.....	.....	.....	203,069	207,838	410,907

1 GEORGE V., A. 1911

Table 3.—STATEMENT Showing the Number, Tonnage and Nationality of Vessels

Vessels.	Total Number of Trips.	From Canadian to Canadian Ports.		From Canadian to United States Ports.	
		Up.	Down.	Up.	Down.
CHAMBLY CANAL.					
United States vessels, steam.....	6	180	240		280
" " sail.....	406	591	880		21,923
Total United States.....	412	771	1,120		22,203
Grand total, Ottawa Canals.....	2,601	203,840	207,925		23,236
RIDEAU CANAL.					
Canadian vessels, steam.....	2,105	57,602	56,987	4,351	
" " sail.....	644	25,682	24,880		605
Total Canadian.....	2,749	83,284	81,867	4,351	605
United States vessels, steam.....	2	9	9		
" " sail.....	64	1,706	1,022		2,313
Total United States.....	66	1,715	1,031		2,313
Grand total, Rideau Canal.....	2,815	84,999	82,898	4,351	2,918
ST. PETER'S CANAL.					
Canadian vessels, steam.....	310	17,414	15,570		
" " sail.....	1,156	36,479	36,779		
Total Canadian.....	1,466	53,893	52,349		
United States vessels, steam.....	2	134	37		
" " sail.....	2		485		155
Total United States.....	4	134	522		155
Grand total, St. Peter's Canal....	1,470	54,027	52,871		155
TRENT VALLEY CANALS.					
Canadian vessels, steam.....	2,794	68,746	68,336		
" " sail.....	648	16,654	18,349		
Total Canadian.....	3,442	85,400	86,685		
United States vessels, steam.....					
" " sail.....					
Total United States.....					
Grand total, Trent Valley Canals	3,442	85,400	86,685		
MURRAY CANAL.					
Canadian vessels, steam.....	845	194,763	101,957	3,085	
" " sail.....	395	35,951	30,922	7,869	2
Total Canadian.....	1,240	230,714	132,879	10,954	2
United States vessels, steam.....	47	87	329	243	
" " sail.....	21	269	38	107	
Total United States.....	68	356	367	350	
Grand total, Murray Canal.....	1,308	231,070	133,246	11,304	2

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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.	
		17,568	301	180 18,159	520 23,104	700 41,263
		17,568	301	18,339	23,624	41,963
		17,568	301	221,408	231,462	452,820
				6,122 218	61,953 25,703	125,062 51,385
				6,340	87,635	176,447
		1,736		9 3,442	9 3,335	18 6,777
		1,736		3,451	3,344	6,795
		1,736	6,340	91,086	92,156	183,242
				17,414 36,479	15,570 36,779	32,984 73,258
				53,893	52,349	106,242
				134	37 640	171 640
				134	677	811
				54,027	53,026	107,053
				68,746 16,654	68,336 18,349	137,082 35,003
				85,400	86,685	172,085
				85,400	86,685	172,085
				1,083 2,405	197,848 33,329	300,888 77,149
				3,488	241,668	378,087
		9	24	254 53	354 376	592 467
		9	24	307	730	1,413
		9	24	3,795	242,398	379,450

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TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

Vessels.	Total Number of Trips.	From Canadian to Canadian Ports.		From Canadian to United States Ports.	
		Up.	Down.	Up.	Down.
ST. ANDREW'S CANAL.					
Canadian vessels, steam	180	21,489	21,425		
" " sail	22	937	1,036		
Total Canadian.....	202	22,426	22,461		
United States vessels, steam.....					
" " sail.....					
Total United States.....					
Grand total, St. Andrew's Canal.	202	22,426	22,461		

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passed through the several Canals during the season of Navigation in 1910—*Concluded.*

From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
Up.	Down.	Up.	Down.	Up	Down.	
				21,489	21,425	42,914
				937	1,036	1,973
				22,426	22,461	44,887
				22,426	22,461	44,887

TABLE 4.—COMPARATIVE STATEMENT of all the Canals for the Years ended December 31, 1909 and 1910.

Articles.	1909.	1910.	Increase.	Decrease.
<i>Class No. 1.</i>				
	Tons.	Tons.	Tons.	Tons.
Canadian vessels, steam	6,150,224	6,927,062	776,838	
" sail	1,661,354	2,004,728	343,374	
United States vessels, steam	15,726,035	20,991,142	5,265,107	
" sail	733,287	786,135	52,868	
Total, class No. 1	24,270,900	30,709,087	6,438,187	
<i>Class No. 2.</i>				
	No.	No.	No.	No.
Passengers.	272,222	320,574	48,352	
<i>Class No. 3.</i>				
	Tons.	Tons.	Tons.	Tons.
Barley	176,577	161,016		15,561
Buckwheat	6,789	1,048		5,741
Corn	180,203	336,592	156,389	
Oats	432,769	565,430	132,661	
Rye	7,688	4,272		3,416
Flax	206,750	85,654		121,096
Peas	326	340	14	
Wheat	3,397,567	3,222,862		174,705
Flour	324,044	362,187	39,143	
Hay	36,503	42,846	6,343	
Other mill products	57,288	55,003		2,285
Fruit and vegetables	15,036	16,026	990	
Potatoes	9,457	7,082		2,375
Live stock	1,635	2,250	615	
Poultry, game, fish	3,064	2,815		249
Dressed meats	573	148		425
Other packing house products	3,201	1,205		1,996
Hides and leather	594	1,261	667	
Wool	287	675	388	
All other animal products	14,947	12,169		2,778
Total, class No. 3	4,875,298	4,881,881	337,210	330,627
<i>Class No. 4.</i>				
Agricultural implements	18,836	28,358	9,522	
Cement, bricks, lime	489,745	728,453	238,708	
Household goods and furniture	2,517	3,797	1,280	
Iron, pig and bloom	98,667	115,997	17,330	
" and steel, all other	309,188	252,061		57,127
Petroleum and other oils	99,980	106,191	6,211	
Sugar and salt	104,474	101,003		3,471
Wines, liquors and beers	18,314	28,316	10,002	
Merchandise not enumerated	723,680	861,361	137,681	
Total, class No. 4	1,865,401	2,225,587	429,734	60,598

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TABLE 4.—COMPARATIVE STATEMENT of all the Canals for the Years ended December 31, 1909 and 1910—*Concluded.*

Articles.	1909.	1910.	Increase.	Decrease.
<i>Class No. 5.</i>	Tons.	Tons.	Tons.	Tons.
Pulpwood	883,937	777,427	.....	106,510
Sawed lumber	668,780	735,589	66,809	.....
Squared timber	31,772	58,633	26,861	.....
Shingles	8,992	11,475	2,483	.....
Other woods	95,665	98,294	2,629	.....
Total, class No. 5.	1,689,146	1,681,418	98,722	106,510
<i>Class No. 6.</i>				
Hard coal	933,234	1,208,722	275,488	.....
Soft "	3,090,799	4,429,222	1,338,423	.....
Coke	1,456	792	.....	664
Copper ore	8,329	37,986	29,657	.....
Iron "	21,204,848	28,494,716	7,289,868	.....
Other "	52,237	30,334	.....	21,903
Total, class No. 6.	25,290,908	34,201,772	8,933,436	22,567
Grand total	33,720,748	42,990,608	9,790,162	520,302

Net increase, 9,269,860.

TABLE 5.—STATEMENT OF Traffic on the Undermentioned Canals during the Season of Navigation in 1910.

Articles.	Sault Ste. Marie.		Welland.		St. Lawrence.		Chambly.		Ottawa.		Rideau.		St. Peter's.		Trent Valley.		Murray.		St. Andrew's		
	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	
<i>Class No. 1. Vessels.</i>																					
Canadian vessels.	3,188,286		1,238,749		1,602,515		68,138		200,424		125,062		32,984		187,082		300,888		42,914		
" " " " " " " "	55,298		222,750		1,247,880		29,639		210,482		51,385		73,385		35,063		77,149		1,973		
United States vessels.	19,979,382		651,342		338,583		369,449		700		18		171				946				
" " " " " " " "	208,322		35,676		123,561				41,263		6,777		610				407				
Total, Class One.	23,361,198		2,148,517		3,392,539		467,246		452,870		183,242		107,653		172,085		379,450		44,887		
<i>Class No. 2.</i>																					
Passengers.	33,291		1,655		129,732		2,399		26,458		26,040		633		69,186		33,782		6,398		
<i>Class No. 3.</i>																					
Barley	117,687		21,575		21,654		23		19		45		7		6						
Buckwheat					1,038		2		3				5								
Corn	4,879		259,980		101,258		99		36		316		3		2						
Oats	282,369		136,233		110,709		522		583		426		1,569		18						
Rye	3,780				461				4		2		19		6						
Flax	69,782		6,942		8,919						1										
Peas			123		146		33														
Wheat	2,051,889		587,493		582,426		101		59		642				229		20				
Flour	283,126		41,152		34,650		1,117		773		348		1,935		86						
Hay	5,667		841		11,743		18,801		2,234		379		2,996		50						
Other mill products.	14,252		18,149		20,267		247		916		307		62		148						
Fruit and vegetables.	314		50		6,895		2,697		449		400		974		62						
Potatoes	2				685		22		18		18		5,736		132						
Live stock	47				1,003		233		649		13		35		270						
Poultry, game and fish.			202		168		12		88		7										
Dressed meats	12				47		98		2		50		19		1						
Other packing house products.	903		248		365		267		205		205		206		52						
Hides and leather	394		258		11		1		11		4		6		12						
Wool	12				7,825		60				1,841				147						
All other animal products.									2,225												
Total, Class Three.	2,835,125		1,043,226		940,365		24,071		8,834		5,009		19,470		1,063		4,564		154		

TABLE 6—SUMMARY Statement of Traffic on the undermentioned Canals during the Season of Navigation, ended December 31, 1910, showing the total quantity of each description of property passed through.

	Sault Ste. Marie.	Welland.	St. Lawrence	Chambly.	Ottawa.	Rideau.	St. Peter's.	Murray.	Trent Valley.	St. Andrew's
Vessels of all kinds.....	Tons, 23,361,198	Tons, 2,148,517	Tons, 3,392,539	Tons, 467,246	Tons, 452,870	Tons, 183,242	Tons, 107,053	Tons, 379,450	Tons, 172,085	Tons, 44,887
Passengers.....	No., 33,291	No., 1,655	No., 129,752	No., 2,399	No., 26,458	No., 26,040	No., 633	No., 33,782	No., 69,186	No., 6,398
<i>Forest Produce of Wood.</i>										
Pulwood.....	Tons, 10,350	Tons, 123,143	Tons, 264,062	Tons, 364,717	Tons, 2,049	Tons, 2,049	Tons, 2,049	Tons, 915	Tons, 5,963	Tons, 6,228
Sawed lumber.....	64,163	21,372	259,667	130,365	218,230	29,472	8,168	2,113	1,782	317
Squared timber.....	13,285	8,097	28,776	19	6,605	788	431	89	543	.....
Shingles.....	9,141	525	545	14	65	110	886	.....	189	.....
Other woods.....	3,674	1,600	11,278	1,064	43,299	7,607	639	.....	27,372	1,407
Totals.....	100,613	154,737	564,328	496,119	268,199	40,026	10,124	3,471	35,849	7,952
<i>Animals and Produce of Animals.</i>										
Live stock.....	47	.....	1,003	233	649	13	35	.....	270	.....
Poultry, game and fish.....	.....	202	168	12	88	7	2,328	.....	10	.....
Dressed meats.....	.....	.....	47	.....	2	.....	19	.....	29	.....
Other packing house products.....	12	.....	363	98	267	206	206	.....	52	.....
Hides and leather.....	903	248	77	.....	11	6	6	.....	12	.....
Wool.....	394	238	29	1	.....	1	2	.....	5	.....
All other animal products.....	12	.....	7,825	60	2,225	1,844	3	.....	53	.....
Total.....	1,368	688	9,514	404	3,242	2,124	2,599	149	435	.....
<i>Agricultural Products.</i>										
Barley.....	117,687	21,575	21,654	23	19	45	7	.....	6	.....
Buckwheat.....	.....	.....	1,038	9	3	.....	5	.....	.....	.....
Corn.....	4,879	223,980	101,258	90	55	316	3	.....	.....	.....
Oats.....	282,369	134,233	140,709	522	583	426	4,569	18	1
Rye.....	3,780	461	2	6
Flax.....	69,792	6,942	8,919	4	1	19

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Peas.....	123	146	23	1	37	20	37
Wheat.....	587,493	582,426	104	642	229	20	229
Flour.....	41,152	34,650	1,117	348	86	348	86
Hay.....	841	11,743	18,801	1,935	50	125	50
Other mill products.....	18,149	20,267	247	2,214	62	148	62
Fruits and vegetables.....	50	6,895	2,697	400	132	4,247	28
Potatoes.....	2	685	22	5,736	18	.....	132
Total.....	1,042,538	930,851	23,667	16,871	628	4,415	154
<i>Manufactures.</i>							
Agricultural implements.....	13,624	246	118	196	462	2	74
Cement, bricks and lime.....	149,561	191,531	5,714	50,268	60,392	149,860	7,306
Household goods and furniture.....	1,184	1,700	62	227	260	121	46
Iron, pig and bloom.....	72,929	21,101	114	333	343	667	72
Iron, steel all other.....	145,788	63,963	843	1,108	1,212	1,412	23
Petroleum and other oils.....	8,176	37,287	152	956	912	372	24
Sugar and salt.....	30,332	43,668	669	4,332	3,636	277	11
Wines, liquors and beers.....	4,898	10,902	73	966	697	543	23
Merchandise not enumerated.....	436,034	153,341	14,039	13,908	8,385	9,232	1,003
Total.....	862,526	497,007	21,834	72,294	76,299	162,506	8,672
<i>Products of Mines.</i>							
Hard coal.....	601,208	278,184	99,128	4,500	9,662	.....	92
Soft ".....	3,508,357	476,093	357	29,287	3,642	7,400	183
Coke.....	.....	300	.....	300	.....	.....	.....
Copper ore.....	35,806	.....	.....	.....	.....	.....	.....
Iron ".....	28,440,952	164	23,547	.....	.....	.....	30
Other ".....	11,160	4,311	4,243	1,843	243	.....	374
Total.....	32,597,423	759,052	127,275	35,934	13,547	7,400	679
<i>Grand totals (passengers and tonnage of vessels not included).....</i>							
	36,395,687	2,760,752	669,299	385,261	134,881	177,941	46,263
					85,951		8,283

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Sawed lumber.....	2,230	2,357	22,179	884	34,605	1,908	90	5,022	59,141	64,163	49,733	14,430
Shingles.....	7,051	555	160	11,527	8,831	3,912	894	11,123	9,141	9,141	5,085	3,456
Square timber.....	17,590	85	1,075	60	713	3,275	30	30,217	2,162	13,285	9,048	4,237
Sugar and salt.....		1,073,176	461,054		475,063				115	30,332	25,612	4,720
Wheat.....	4,419	15	364	60	40			4,843	2,051,889	2,051,889	1,809,211	242,678
Wines, liquors and beers.....					394				55	4,898	4,648	230
Wool.....					394				394	394	394	
Total freight.....	779,961	1,567,285	28,648	3,035,290	29,332,862	969,248	117,058	4,813,147	31,582,540	36,395,087	3,378,268	33,017,419

TABLE 7 (No. 2)—GENERAL STATEMENT showing the Quantity of each Article Transported on the Welland Canal during the Season of Navigation in 1910.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	13,624								13,624				13,624	
All other animal.....														
Barley.....		17,735										21,375	17,735	3,840
Buckwheat.....														
Cement, bricks, &c.....	99,541	8,954	292		2,000		200		101,833	9,154			108,287	2,700
Coal, hard.....	2,045		197,482		15,974				215,501				215,501	
" soft.....					357,579				361,990				361,990	
Coke.....							192		192					192
Corn.....					126,938		103,012		229,980				229,980	
Dressed meats.....														
Flax.....		6,297		645					645	6,942			6,942	6,942
Flour.....		28,593					700		700	41,152			29,293	11,859
Fruits and vegetables.....					50				50					50
Hay.....	841								841				841	
Hides and leather.....	15								15	233			15	233
Household goods.....	141								141	3			144	
Iron, pig and bloom.....	17,376	386	1,419				993		18,995	1,379			19,393	981
Iron and steel, all other.....	18,483	1,217	1,944				15,113		20,877	16,339			22,214	14,993
Lime stock.....														
Live stock.....	101,604	23,023	21,240	1,289	52,080	15,478	255	7,488	175,179	47,373			146,520	75,982
Merchandise.....		133,856							136,233	17,036			136,233	
Oats.....		471							1,113				1,584	
Other mill products.....														
" packing house products.....														
" woods.....	17								17	1,583			1,600	1,600
Orc, all other.....	800								800	1,352			800	1,552
" copper.....										2,180				2,180
" iron.....										29,779				29,779
Peas.....										123				123
Petroleum.....	129	27,302	1,049		8				1,186	56,621			57,807	26,869
Poultry, game and fish.....					202				202				202	202
Potatoes.....														
Pulpwood.....	1,035		129,577		1,531				123,143				122,383	760
Rye.....														

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Sawed lumber.....	4,440	5,194	11,738	21,372	8,402	12,970
Shingles.....	3,417	500	29	525	500	25
Square timber.....	80	.....	.....	4,600	8,017	2,367	5,730
Sugar and salt.....	5,969	1,954	.....	625	1,022	8,754	34,914
Wheat.....	486,309	.....	10,717	90,407	587,493	514,282	73,211
Wines, liquors and beers.....	3,440	4,379	122	1,616	2,127	9,759	399
Wood.....	.....	5	233	.....	233	5	233
Total freight.....	265,790	154,617	197,301	654,264	1,601,456	1,196,946	1,120,344
	742,908	6,983	288,198	16,229	2,326,290		

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Sugar and salt	5,969	397	1,954	34,723	629	42,646	1,022	43,668	8,754	34,914
Wheat	479,680	511	4,379	10,717	90,467	7,941	580,864	580,864	507,653	73,211
Wines, liquors and beers	3,440	5	5	233	1,616	5	2,127	10,068	9,759	309
Wool				288,198			233	238		233
Total freight	265,192	706,153	154,617	6,983	10,229	724,236	1,557,283	2,281,519	1,159,783	1,121,926

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Sawed lumber.....	10	10	10	10	10	10	10	10	10
Shingles.....	80	287	80	287	80	287	80	287	367
Square timber.....									
Sugar and salt.....									
Wheat.....		6,629		6,629		6,629		6,629	6,629
Wines, liquors and beers.....									
Wood.....									
Total freight.....	598	36,755	598	44,173	598	44,173	598	44,771	37,333
			7,418						7,418

TABLE 7 (No. 5). GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Lawrence Canals during the Season of Navigation in 1910.

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.	U. States.
Agricultural implements.	228	18							228	18			246
All other animal.	1,163	6,657					3		1,166	6,657			7,823
Barley	1,523	20,131							1,523	20,131			21,654
Buckwheat.	614	304							614	304			1,038
Cement, bricks, &c.	100,829	90,709							100,829	90,709			191,531
Coal, hard.	9,114	2			350	208,718			9,464	208,720			278,181
" soft.	115,918	11,554				318,591			145,948	330,145			476,093
Coke.	300								300				300
Corn	1,174	22,495							1,474	22,495			23,969
Dressed meats.	26	21							26	21			47
Flax.	1,321	7,598							1,321	7,598			8,919
Flour	2,043	32,607							2,043	32,607			34,650
Fruits and vegetables.	283	6,612							283	6,612			6,895
Hay.	6,514	5,229							6,514	5,229			11,743
Hides and leather	41	56							41	56			97
Household goods	662	1,036					2		662	1,038			1,700
Iron, pig and bloom.	20,692	243					16		20,842	259			21,101
Iron and steel, all other.	51,570	6,016					6,120		51,827	12,136			63,963
Live stock.	84	919							84	919			1,003
Merchandise	110,251	27,517			184	8,210			117,616	35,727			153,343
Oats.	4,490	136,229			329				4,480	136,229			140,709
Other mill products.	8,306	7,112					1,549		8,306	11,961			20,267
" packing house products	292	75							292	73			365
" wood.	127	8,829			240				2,449	8,829			11,278
Ore, all other.	4,063	248							4,063	248			4,311
" copper.													
" iron.	10	154							10	154			164
Peas.	101	45							101	45			146
Petroleum	4,292	15,355					17,060		4,872	32,415			37,287
Poultry, game and fish.	78	90							78	90			168
Potatoes.	91	594							91	594			685
Pulpwood									264,062				264,062

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 1910.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.	7								7				7	
All other animal.		4,457								4,457			4,457	
Barley.	5	20,000							5	20,000			20,000	
Buckwheat.		372								372			372	
Cement, bricks, &c.	20,995	484							20,995	484			21,479	
Coal, hard.	650								650	257,996			258,646	
" soft.	6,701								6,701	308,334			315,035	
Coke.													6,701	308,334
Corn.		323								77,612			323	77,939
Dressed meats.	10								10				10	
Flax.	645	6,607							645	6,607			7,252	
Flour.	187	27,081							187	27,081			27,268	
Fruits and vegetables.	35	6,087							35	6,087			6,122	
Hay.	216	7							216	7			223	
Hides and leather.	39								39				39	
Household goods.	382	805							382	808			1,188	2
Iron, pig and bloom.	20,060	12	150						20,210	28			20,222	16
Iron and steel, all other.	20,505	3,811	257						20,762	9,931			24,573	6,120
Live stock.	2								2	24			26	
Merchandise.	95,726	20,564	6,616						102,342	28,245			122,587	7,681
Oats.	90	130,997							90	130,997			129,370	1,717
Other mill products.	1,229	5,809							1,229	10,358			5,355	6,232
" packing house products.	40	25							40	25			65	
" woods.		2	2,082						2,082	2			2,084	
Ore, all other.														
" copper.														
" iron.	10								10				10	
Peas.	90								90				90	
Petroleum.	925	15,021	580						1,505	32,081			16,526	17,060
Poultry, game and fish.														
" potatoes.	5	7							5	7			12	
Pulpwood.			264,062								264,062		264,062	
Rye.														
Sawed lumber.			10,577						10,577	487			10,577	487

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 1910.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	221	18							221	18			239	
All other animal.....	1,158	2,200					3		1,161	2,200			3,361	3
Barley.....	1,523	131							1,654	131			1,654	
Buckwheat.....	644	22							644	22			666	
Cement, bricks, &c.....	79,827	90,225					350		79,827	90,225			170,052	2,320
Coal, hard.....	8,464								8,814	10,724			8,292	11,246
" soft.....	139,247	11,554							139,247	21,811			150,801	10,257
Coke.....	300								300				300	
Corn.....	1,474	22,172							1,174	22,172			23,646	
Dressed meats.....	16	21							16	21			37	
Flax.....	676	991							676	991			1,667	
Flour.....	1,856	5,256							1,856	5,256			7,382	
Fruits and vegetables.....	248	525							248	525			773	
Hay.....	6,298	5,222							6,298	5,222			11,520	
Hides and leather.....	2	36							2	36			38	
Household goods.....	280	250							280	230			510	
Iron, pig and bloom.....	632	231							632	231			863	
Iron and steel, all other.....	31,065	2,205							31,065	2,205			33,270	
Live stock.....	82	835							82	835			377	
Merchandise.....	14,525	6,953	236		184	529			15,274	7,482			18,468	4,288
Oats.....	4,390	5,232							4,390	5,232			9,622	
Other mill products.....	7,077	1,613							7,077	1,603			8,680	
" packing horse products.....		252								48			300	
" woods.....	127	8,827			240				367	8,827			8,924	240
Ore, all other.....	4,063	248							4,063	248			4,311	2,860
" copper.....													154	
" iron.....	11	154							11	154			56	
Peas.....	11	45								45			56	
Petroleum.....	3,367	334							3,367	334			3,701	2,440
Poultry, game and fish.....	78	90							78	90			168	
Potatoes.....	86	587							86	587			673	
Pulpwood.....														
Rye.....	140	321							140	321			461	

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Sawed lumber.....	40,653	185,710	22,235	5	40,658	207,945	248,603	248,598	5
Shingles.....	500	45	500	45	545	545
Square timber.....	14	26,962	.....	.....	14	26,962	26,976	26,967	.....
Sugar and salt.....	5,343	720	.....	.....	5,343	720	6,063	5,895	168
Wheat.....	15,823	4,334	.....	.....	15,823	4,334	20,157	20,157	.....
Wines, liquors and beers.....	984	12	.....	.....	984	12	996	996	.....
Wool.....	6	8	.....	.....	6	8	14	14	.....
Total freight.....	371,452	384,439	235	334	372,799	428,182	800,981	757,154	33,827

TABLE 7 (No. 8)—GENERAL STATEMENT showing the Quantity of each Article Transported on the Chambly Canal during the Season of Navigation in 1910.

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.	Canadian.	United States.
Agricultural implements.	116	2							116	2			118	
All other animal.	2	58							2	58			60	
Barley.	21	2							21	2			23	
Buckwheat.	2	2							2	2			4	
Cement, bricks, &c.	201	40							201	5,543			5,744	
Coal, hard.	5	207							5	99,123			99,128	
Coal, soft.										357			357	
Coke.										4			4	
Corn.	95	4							95				99	
Dressed meats.														
Flax.														
Flour.	1,083	34							1,083	34			1,117	
Fruits and vegetables.	628	2,052						17	628	2,059			2,687	
Hay.	11,775	7,026							11,775	7,026			18,801	
Hides and leather.														
Household goods.	40	22							40	22			62	
Iron, pig and bloom.	97	17							97	17			114	
Iron and steel, all other.	840	3							840	3			843	
Live stock.	7	292						4	7	296			303	
Merchandise.	2,039	1,008							2,039	12,020			14,059	
Oats.	34	488							34	488			522	
Other mill products.	240	7							240	7			247	
" packing house products.	80	18							80	18			98	
" woods.	20	1,044							20	1,044			1,064	
Ore, all other.										4,243			4,243	
" copper.														
" iron.														
Peas.	27	6							27	6			33	
Petroleum.	152								152				152	
Poultry, game and fish.	2	10							2	10			12	
Potatoes.	22								22				22	
Pulpwood.	364,717								364,717				364,717	
Rye.														
Sawed lumber.	37	23							130,282	23			130,305	

TABLE 7 (No. 9).—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Peter's Canal during the Season of Navigation in 1910.

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.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	11	1							11	1			12	
All other animal.....	2	1							2	1			3	
Barley.....	7								7				7	
Buckwheat.....	5								5				5	
Cement, bricks, &c.....	409	2,230							409	2,230			2,639	
Coal, hard.....	218							229	447				218	
" soft.....	17	41,896							17	41,896			41,913	229
Coke.....	3								3				3	
Corn.....	19								19				19	
Dressed meats.....														
Flax.....														
Flour.....	1,934	1							1,934	1			1,935	
Fruits and vegetables.....	974								974				974	
Hay.....	2,996								2,996				2,996	
Hides and leather.....	4	2							4	2			6	
Household goods.....	49								49				49	
Iron, pig and bloom.....	64								64				64	
Iron and steel, all other.....	254	251							254	251			505	
Live stock.....	35								35				35	
Merchandise.....	2,647	186							2,647	186			2,833	
Oats.....	4,569								4,569				4,569	
Other mill products.....	627								627				627	
" packing house products.....	206								206				206	
" woods.....	428	211							428	211			639	
Ore, all other.....	955	4,913							955	4,913			5,868	
" copper.....														
" iron.....	2	238							2	238			240	
Peas.....														
Petroleum.....	414	91							414	91			505	
Poultry, game and fish.....	128	2,200							128	2,200			2,328	
Potatoes.....	5,734	2							5,734	2			5,736	
Pulpwood.....														
Rye.....	19								19				19	
Sawed lumber.....	8,165	3							8,165	3			8,168	

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Shingles.....	886	886	886	886	886	886	886	886	886
Square timber.....	431	431	431	431	431	431	431	431	431
Sugar and salt.....	1,142	1,142	1,142	1,142	1,142	1,142	1,142	1,142	1,142
Wheat.....	128	128	128	128	128	128	128	128	128
Wines, liquors and beers.....	12	12	12	12	12	12	12	12	12
Wool.....	2	2	2	2	2	2	2	2	2
Total freight.....	33,482	33,711	52,240	52,240	85,951	85,722	85,722	85,722	229

TABLE 7 (No. 10)—GENERAL STATEMENT showing the Quantity of each Article Transported on the Murray Canal during the Season of Navigation in 1910.

Articles.	From Canadian to Canadian Ports.		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.	Up.	Down.		Canadian.	United States.
	Agricultural implements.		2								2			2
All other animal.		23							30	23			53
Barley.	30												
Buckwheat.									149,860		149,860		149,860
Cement, bricks, &c.	149,860												
Coal, hard.								7,103		7,400	7,400		7,103
" soft.		297											
Coke.													
Corn.										29			29
Dressed meats.		29											
Flax.													
Flour.	1,645	2,602							1,645	2,602	4,247		4,247
Fruit and vegetables.													
Hay.										50			50
Hides and leather.		50							71	667			667
Household goods.	71												
Iron, pig and bloom.	667								1,135	277			1,412
Iron and steel, all other.	1,135	277											
Lave stock.													
Merchandise.	5,514	3,738							5,514	3,738	9,252		9,250
Oats.													
Other mill products.	118	30							118	30	148		148
" packing house products.	10	42							10	42	52		52
" woods.	354								354		354		354
Ore, all other.													
" copper.													
" iron.													
Peas.													
Petroleum.	85	287							85	287	372		372
Poultry, game and fish.	10								10		10		10
Potatoes.													
Pulpwood.	360								915		915		915
Rye.													
Sawed lumber.	2,095	18							2,095	18	2,113		2,113

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Sawed lumber	459	162,062	60,681	459	222,743	223,202	223,202
Shingles	20	45	20	45	65	65
Square timber	2	1,633	.....	.....	2	1,633	1,633	1,633	.....
Sugar and salt	4,268	64	.....	.....	4,268	64	4,332	4,332	.....
Wheat	59	.....	.....	.....	59	.....	59	59	.....
Wines, liquors and beers	955	11	.....	.....	955	11	966	966	.....
Wool .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total freight	49,923	266,519	61,013	7,906	57,729	327,532	385,261	377,268	7,993

TABLE 7 (No. 12).—GENERAL STATEMENT showing the Quantity of each Article Transported on the Rideau Canal during the Season of Navigation in 1910.

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 implements.....	285	177							285	177	462		462
All other animal.....	518	1,826							518	1,826	1,844		1,844
Barley.....		45								45			45
Buckwheat.....													
Cement, bricks, &c.....	29,171	13,217	4				925	8,703	29,175	31,217	60,392		60,392
Coal, hard.....	8	26							933	8,729	9,662		9,662
" soft.....	227	16						3,899	227	3,415	3,642		3,413
Coke.....									5	311	316		256
Corn.....	5	311							4	18	22		22
Dressed meats.....	4	18								1			1
Flax.....		1								1			
Flour.....	88	260							88	260	348		348
Fruits and vegetables.....	325	75							325	75	400		400
Hay.....	361	18							361	18	379		379
Hides and leather.....	3	1							3	1	4		4
Household goods.....	132	128							132	128	260		260
Iron, pig and bloom.....	221	122							221	122	343		343
Iron and steel, all other.....	1,025	187							1,025	187	1,212		1,212
Live stock.....	8	5							8	5	13		13
Merchandise.....	4,818	2,854					535	178	5,353	3,032	8,385		7,672
Oats.....		426								426	426		426
Other mill products.....	42	265							42	265	307		307
" packing house products.....	199	34							199	34	233		233
" woods.....	6,599	1,008							6,599	1,008	7,607		7,607
Ore, all other.....	9	234							9	234	243		243
" copper.....													
" iron.....													
Peas.....	1								1		1		1
Petroleum.....	583	329							583	329	912		912
Poultry, game and fish.....	4	3							4	3	7		7
Potatoes.....	15	3							15	3	18		18
Pulpwood.....	552	1,497							552	1,497	2,049		2,049
Rye.....		2								2			2
Sawed lumber.....	8,384	15,218					5,870		8,384	21,088	23,472		23,472

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Shingles	96	14	96	14	96	110	110
Square timber	677	111	677	111	677	788	788
Sugar and salt	3,097	589	3,097	589	3,097	3,636	3,636
Wheat	17	625	17	625	17	642	642
Wines, liquors and beer	574	123	574	123	574	697	697
Wool	1	1	1	1	1	1	1
Total freight	58,049	57,218	59,513	58,870	59,513	134,881	121,043
		4	12,280	1,460	75,368		13,838

TABLE 7 (No. 13).—GENERAL STATEMENT showing the Quantity of each Article transported on the Trent Valley Canals during the Season of Navigation in 1910.

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.	Up.	Down.	Canadian.	United States.
Agricultural Implements														
All other animal														
Barley	21	53							21	53	74		71	
Buckwheat	93	58							93	58	151		151	
Cement, bricks, &c	6								6		6		6	
Coal, hard.	7,126	270							7,126	270	7,396		7,396	
" soft	92	115							92	115	207		207	
Coke	68	115							68	115	183		183	
Corn		2								2	2		2	
Dressed meats		1								1	1		1	
Flax	43	43							43	43	86		86	
Flour														
Fruits and vegetables														
Hay	48	2							48	2	50		50	
Hides and leather		12								12	12		12	
Household goods	37	9							37	9	46		46	
Iron, pig and bloom	32	40							32	40	72		72	
Lime stock	20	3							20	3	23		23	
Live stock	243	27							243	27	270		270	
Merchandise	650	353							650	353	1,003		1,003	
Oats	18	18							18	18	36		36	
Other mill products	16	46							16	46	62		62	
" packing house products														
" woods														
Ore, all other	5,770	21,602							5,770	21,602	27,372		27,372	
" copper		374								374	374		374	
" iron	30								30		30		30	
" iron	30	7							30	7	37		37	
Pears	19	5							19	5	24		24	
Petroleum														
Poultry, game and fish														
Potatoes	131	1							131	1	132		132	
Pulpwood	110	5,853							110	5,853	5,963		5,963	
Rye	6	6							6	6	12		12	

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Sawed lumber	720	1,062	720	1,062	1,782	1,782
Shingles	51	138	51	138	189	189
Square timber	26	517	26	517	543	543
Sugar and salt	11		11		11	11
Wheat	229		229		229	229
Wines, liquors and beers	19	4	19	4	23	23
Wool		1		1	1	1
Total freight	15,665	30,598	15,665	30,598	46,263	46,263

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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 5,142 tons	1	5,142	1	5,000 to ---- tons		
2	4,000 " 5,000 "	1	4,500	2	4,000 " 5,000 "		
3	3,000 " 4,000 "	2	7,000	3	3,000 " 4,000 "		
4	2,000 " 3,000 "	8	18,500	4	2,000 " 3,000 "		
5	1,000 " 2,000 "	64	80,506	5	1,000 " 2,000 "		
6	Under 1,000 "	50	12,090	6	Under 1,000 "	26	7,070
	Total	126	127,732		Total	26	7,070

WELLAND							
1	250 to 1,665 tons	65	72,766	1	250 to 1,226 tons	9	7,720
2	200 " 249 "	3	625	2	200 " 249 "	3	625
3	150 " 199 "	2	320	3	150 " 199 "	2	365
4	100 " 149 "	3	370	4	100 " 149 "	10	1,060
5	50 " 99 "	5	380	5	50 " 99 "	3	205
6	Under 50 "	24	634	6	Under 50 "	1	15
	Total	104	75,095		Total	28	9,990

ST. LAWRENCE							
1	250 to 1,665 tons	74	69,492	1	250 to 1,000 tons	104	51,965
2	200 " 249 "	4	820	2	200 " 249 "	8	1,620
3	150 " 199 "	14	2,400	3	150 " 199 "	75	12,030
4	100 " 149 "	15	1,810	4	100 " 149 "	92	10,340
5	50 " 99 "	56	3,885	5	50 " 99 "	42	3,260
6	Under 50 "	79	1,485	6	Under 50 "	17	608
	Total	242	79,892		Total	338	79,823

RIDEAU, OTTAWA							
1	250 to 492 tons	3	1,162	1	250 to 350 tons	1	350
2	200 " 249 "	2	400	2	200 " 249 "	7	1,480
3	150 " 199 "	4	650	3	150 " 199 "	49	7,970
4	100 " 149 "	5	575	4	100 " 149 "	44	5,595
5	50 " 99 "	7	470	5	50 " 99 "	14	895
6	Under 50 "	32	575	6	Under 50 "	12	290
	Total	53	3,832		Total	127	16,580

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passed through the following during the Season of Navigation in 1910.

MARIE CANAL.

UNITED STATES.							
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 6,498 tons	104	546,000	1	5,000 to — tons		
2	4,000 " 5,000 "	65	275,000	2	4,000 " 5,000 "	3	12,500
3	3,000 " 4,000 "	138	452,500	3	3,000 " 4,000 "	13	40,500
4	2,000 " 3,000 "	56	120,000	4	2,000 " 3,000 "	10	21,000
5	1,000 " 2,000 "	54	75,500	5	1,000 " 2,000 "	7	9,000
6	Under 1,000 "	93	112,750	6	Under 1,000 "	24	10,950
	Total	510	1,581,750		Total	57	93,950

CANAL.

1	250 to 1,691 tons	33	39,916	1	250 to 1,599 tons	3	3,908
2	200 " 249 "			2	200 " 249 "	1	200
3	150 " 199 "			3	150 " 199 "		
4	100 " 149 "	1	100	4	100 " 149 "		
5	50 " 99 "	9	630	5	50 " 99 "	1	75
6	Under 50 "	24	335	6	Under 50 "	4	71
	Total	67	40,981		Total	9	4,234

CANAL.

1	250 to 1,552 tons	24	21,331	1	250 to 1,590 tons	16	9,968
2	200 " 249 "			2	200 " 249 "	1	200
3	150 " 199 "	2	340	3	150 " 199 "		
4	100 " 149 "	5	590	4	100 " 149 "	45	4,670
5	50 " 99 "	7	460	5	50 " 99 "	75	6,925
6	Under 50 "	36	395	6	Under 50 "		
	Total	74	23,116		Total	137	21,763

AND CHAMBLEY CANALS.

1	250 to — tons			1	250 to 250 tons	1	250
2	200 " 249 "			2	200 " 249 "	1	200
3	150 " 199 "			3	150 " 199 "	11	1,710
4	100 " 149 "			4	100 " 149 "	382	40,260
5	50 " 99 "			5	50 " 99 "	254	23,905
6	Under 50 "			6	Under 50 "		
	Total				Total	649	66,325

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.	8½
Lake St. Louis and River St. Lawrence.	16
2. Soulanges canal.	14
Lake St. Francis and River St. Lawrence.	33
3. Cornwall canal.	11
River St. Lawrence.	5
4. Farran's Point canal.	1½
River St. Lawrence.	10
5. Rapide Plat canal.	3¾
River St. Lawrence.	4
6. Galops canal.	7½
River St. Lawrence and Lake Ontario.	236
7. Welland canal.	26¾
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie canal.	1¼
Lake Superior to Port Arthur.	266
Total.	1,223½
To Duluth.	1,357
Chicago.	1,286

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 2,200 statute miles. The distance to Duluth is 2,343 statute miles. The distance to Chicago, 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. 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 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 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 Farran's, 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 } at two locks.....	18 "
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 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 of the River St. Lawrence. They are 986 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 rapids and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges, the distance is sixteen miles.

CORNWALL CANAL.

First 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.....	100 "
Breadth of canal at water surface.....	164 "

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The old lift locks, 200 feet by 45 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 $32\frac{3}{4}$ 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	$1\frac{1}{2}$ miles.
Number of locks	1
New lock	800 feet by 45 feet
Old lock	200 “
Total rise or lockages	$3\frac{1}{2}$ 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	$3\frac{3}{4}$ miles.
Number of locks	2
Dimensions of locks	270 feet by 45 feet.
Total rise in lockage	$11\frac{1}{2}$ 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 $10\frac{1}{2}$ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

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GALOPS CANAL.

First commenced, 9 feet.....	1844
Opened.....	1846
Enlargement commenced.....	1888
" completed.....	1903
Length of canal.....	7½ miles.
Number of locks.....	3
Dimensions of locks. { one of which is }.....	2-270 by 45.
{ a guard lock. }.....	1-800 by 45.
Total rise of lockage.....	15½ 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 4½ 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.....	5½ miles.
Breadth at bottom.....	80 feet.
Breadth at water surface.....	120
Depth below lowest known lake level.....	11
No locks.	

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of 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.

Length of Canal.....	Old Line. 27½ miles	Enlarged or New Line. 26¾ miles
Pairs of guard-gates (formerly 3) .. ..	.. ..	2
Number of locks { lift.....	26	25
{ guard.....	1	1
Dimensions.....	{ 1 lock 200 x 45 1 lock 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 45 }	270 feet x 45 feet.
Total rise or lockage	326¾ feet	326¾ feet.
Depth of water on sills.. . . .	10¼ "	14 "
Construction commenced, 10 feet 3 inches.		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 200 by 45 feet.
Total rise or lockage . . . . .		7 to 8 feet.
Depth of water on sills	9 feet.

PORT WELLAND BRANCH.

Length of canal	1¼ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Total rise or lockage	7½ feet.
Depth of water on sills	11 "

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

From Port Dalhousie to 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 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL.

Construction commenced	1888
Opened for traffic	1895
Length of canal, between the extreme ends of the entrance piers	
	5,967 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	
	20 feet 3 inches.
Total rise or lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

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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 245½ miles.

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

Ottawa River Canals.

The Ste. Anne's lock.	Grenville canal.
Carillon 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	23
Ste. Anne's lock and piers.....	1	23
Ste. Anne's lock to Carillon canal.....	27	50
The Carillon canal.....	3	51
The Carillon to Grenville canal.....	6½	57
The Grenville canal.....	5½	63
From the Grenville canal to entrance of Rideau navigation.....	56	119
Rideau navigation ending at Kingston.....	126½	245

STE. ANNE'S LOCK.

Construction commenced.....		1814.
“ completed.....		1816
Rebuilt of wood.....		1833
“ in masonry.....		1843.
	Old Lock.	New Lock.
Length of canal.....	½ mile.	½ mile.
Number of locks.....	1	1
Dimensions of locks.....	190 x 45 feet.	200 x 45 feet.
Total rise or lockage.....	3 feet.	3 feet.
Depth of water on sills.....	6 “	9 “

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

THE CARILLON CANAL.

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 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. 446 $\frac{1}{2}$ feet		{ 232$\frac{1}{4}$ rise and 164 fall
Dimensions of locks.	134 x 33 feet.
Depth of water on sills.	5 feet.
Navigation depth through the several reaches.	4 $\frac{1}{2}$ "
Breadth of canal reaches at bottom.	{ 60 feet in earth. 54 feet in rock.
Breadth of canal at surface of water.	

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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 bottom.	40 "
Breadth of canal at surface of water.	40 " in rock. 60 " in clay.

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 sources of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Catarqui. 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 Catarqui. 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.	66	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.	$\frac{1}{2}$ mile.
Number of locks.	1
Dimensions of lock.	200 feet by 45 feet.
Total rise of lockage.	5 “
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.	7 “
Breadth of canal at bottom.	36 “
Breadth of canal at surface of water.	60 “

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

TRENT CANAL.

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

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

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

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

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

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these

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waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog to Port Perry, a distance of 190 miles from Trenton.

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

From Trenton, Bay of Quinté to Nine Mile rapids ..	—	9
Nine Mile rapids to Percy landing..	19½	—
Percy landing to Heeley's Falls dam..	—	14½
Heeley's Falls dam to Peterborough..	51¾	—
Peterborough to Lakefield..	—	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' x 33' x 5' 0" to 7' 6" depth water on mitre sill.
1	" Lindsay 134' x 33' x 5' 0" to 7' 6" " "
1	" Bobcaygeon 134' x 33' x 5' 8" to 7' 0" " "
1	" Buckhorn 134' x 33' x 5' 0" to 9' 0" " "
1	" Lovesick 134' x 33' x 5' 0" to 9' 4" " "
2	" Burleigh 134' x 33' x 6' 0" to 8' 0" " "
1	" Young's point. 134' x 33' x 5' 0" to 14' 0" " "
1	" Peterborough . 134' x 33' x 5' 0" to 10' 0" " "
1	" Hastings 134' x 33' x 7' 0" to 10' 6" " "
1	" Chisholms 134' x 33' x 5' 0" to 8' 6" " "

ST. PETER'S CANAL, CAPE BRETON.

Construction commenced.	1854
" completed.	1869
Enlargement begun.	1875
" completed.	1881
Length of canal.	About 2,400 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.	4 "

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 Bearharnois. 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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ST. LAWRENCE NAVIGATION—TABLE OF DISTANCES.

FROM STRAITS OF BELLE-ILE TO PORT ARTHUR, AT HEAD OF LAKE SUPERIOR
BY WATER.

From	To	Sections of Navigation.	Statute Miles.	
			Inter- mediate.	Total to Straits of Belle-Ile.
Straits of Belle-Ile	Cape Whittle	Gulf of St. Lawrence	240	240
Cape Whittle	West Point, Anticosti	"	201	441
West Point, Anticosti	Father Point	River St. Lawrence	202	643
Father Point	Rimouski	"	6	649
Rimouski	Bic.	"	12	661
Bic.	Isle Verte	"	39	700
Isle-Verte (opp. Saguenay)	Quebec	"	126	826
Quebec	Three Rivers	" to tide-water	74	900
Three Rivers	Montreal	"	86	986
Montreal	Lachine	Lachine Canal	8 $\frac{1}{2}$	994 $\frac{1}{2}$
Lachine	Cascade Point	Lake St. Louis	16	1,009 $\frac{1}{2}$
Cascade Point	Coteau Lauding	Soulanges Canal	14	1,021
Coteau Lauding	Cornwall	Lake St. Louis	30	1,053 $\frac{1}{2}$
Cornwall	Dickinson's Landing	Cornwall Canal	11 $\frac{1}{2}$	1,065 $\frac{1}{2}$
Dickinson's Landing	Farran's Point	River St. Lawrence	5	1,070 $\frac{1}{2}$
Farran Point	Upper end of Croyle's Island	Farran's Point	3 $\frac{3}{4}$	1,071
Upper end Croyle's Island	Williamsburg or Morrisburg	River St. Lawrence	10 $\frac{1}{2}$	1,081 $\frac{1}{2}$
Williamsburg	Rapide Plat	Rapide Plat Canal	4	1,085 $\frac{1}{2}$
Rapide Plat	Point Iroquois Village	River St. Lawrence	4 $\frac{1}{2}$	1,090
Point Iroquois Village	Upper end Presqu'Isle	Point Iroquois Canal	3	1,093
Presqu'Isle	Point Cardinal, Edwardsburg	Junction Canal	2 $\frac{3}{4}$	1,095 $\frac{3}{4}$
Point Cardinal	Head of Galops Rapids	Galops Canal	2	1,097 $\frac{3}{4}$
Galops Rapids	Prescott	River St. Lawrence	7 $\frac{3}{4}$	1,105
Prescott	Kingston	"	59	1,164
Kingston	Port Dalhousie	Lake Ontario	170	1,334
Port Dalhousie	Port Colborne	Welland Canal	26 $\frac{3}{4}$	1,360 $\frac{3}{4}$
Port Colborne	Amherstburg	Lake Erie	232	1,592 $\frac{3}{4}$
Amherstburg	Windsor	River Detroit	18	1,610 $\frac{3}{4}$
Windsor	Foot of St. Mary's Island	Lake St. Clair	25	1,635 $\frac{3}{4}$
Foot of St. Mary's Island	Sarnia	River St. Clair	33	1,668 $\frac{3}{4}$
Sarnia	Foot of St. Joseph Island	Lake Huron	270	1,938 $\frac{3}{4}$
Foot of St. Joseph's Island	Foot of Sault Ste. Marie	River Ste. Marie	47	1,985 $\frac{3}{4}$
Sault-Ste. Marie	Head of Sault Ste. Marie	Sault Ste. Marie Canal	1	1,986 $\frac{3}{4}$
Head of Sault Ste. Marie	Point aux Pins	River Ste. Marie	7	1,993 $\frac{3}{4}$
Pointe aux Pins	Port Arthur	Lake Superior	266	2,259 $\frac{3}{4}$
Port Arthur to Lake Shebandowan			45	
Lake Shebandowan to North-west Angle			312	
North-west Angle to Winnipeg			95	
Pointe aux Pins to Duluth			390	

Of the 2,259 $\frac{3}{4}$ miles from the Straits of Belle-Ile to the head of Lake Superior, 73 $\frac{1}{2}$ miles are artificial navigation, and 2,188 $\frac{3}{4}$ open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical or 2,234 statute miles.

The total fall from Lake Superior to tide-water is about 600 feet.

The steamboat voyage from Collingwood to Port Arthur is 532 miles.

" " Depot Harbour to Port Arthur is 510 miles; to Duluth is 644 miles; to Chicago 525 miles, and to Milwaukee, 442 miles.

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TABLE of distances of Stations between the cities of Ottawa and Kingston.

No. of Station.	Name of Station.	Distances from Ottawa.	Locks.		Dams.		Length of Artificial Canal at each Station in miles.	
			No.	Lift at Low water.	No.	Length.		Height.
				Ft. In.				
		Miles.		Rise.		Feet.		
				Ft. In.		Feet.		
1	Ottawa.....	0	8	82 0	3	230 1,320 1,616	13 33 14	
2	Hartwell's.....	4 $\frac{1}{2}$	2	22 0	..	100	28	
3	Hogsback.....	5 $\frac{1}{2}$	2	13 6	1	320	60	
4	Black Rapids.....	9 $\frac{1}{2}$	1	10 0	1	300	12	
5	Long Island.....	14 $\frac{3}{4}$	3	27 0	3	850	68	
6	Burritt's.....	40 $\frac{3}{4}$	1	10 6	1	240	14	
7	Nicholson.....	43 $\frac{3}{4}$	2	15 2	1	500	9	
8	Clowes.....	44 $\frac{1}{2}$	1	10 6	1	481	16	
9	Merrickville.....	46 $\frac{3}{4}$	3	25 0	1	150	6	
10	Maitland.....	55	1	4 9	1	270	8	
11	Edmunds.....	59 $\frac{3}{4}$	1	10 10	1	343	8	
12	Old Slys.....	60 $\frac{1}{2}$	2	15 6	1	250	20	
13	Smith's Falls.....	61 $\frac{1}{2}$	4	33 9	2	600	24	
14	First Rapids or Poonamadie.....	64	1	7 9	1	260	5	
15	Narrows.....	83 $\frac{1}{2}$	1	4 0	1	600	9	
	Total rise at low water.....			292 3				
				Fall				
16	Isthmus.....	87 $\frac{1}{2}$	1	4 0			1 25	
17	Chaffey.....	92	1	12 6			0 13	
18	Davis.....	94 $\frac{1}{2}$	1	9 0	1	300	15	
19	Jones' Falls.....	97 $\frac{3}{4}$	4	60 0	1	300	60	
20	Brewer's Upper Mills.....	108 $\frac{1}{2}$	2	19 0	1	200	20	
21	" Lower Mills.....	110	1	14 2	1	200	12	
22	Kingston Mills.....	120 $\frac{1}{2}$	4	46 8	1	6,042	14	
23	Kingston.....	126 $\frac{1}{2}$					0 25	
	Total fall at low water.....			165 4				
	Total.....		47		24	15,472	16 46	

