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- ☒ Additional comments /
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In Sessional paper No. 10, Annual report of the Department of Railways and Canals ... 30th June, 1897, page xxiv is incorrectly numbered page xxvi.

In Sessional paper No. 10, Part I, pages 117 & 165 are incorrectly numbered pages 111 & 15.

SESSIONAL PAPERS

VOLUME 8

THIRD SESSION OF THE EIGHTH PARLIAMENT

OF THE

DOMINION OF CANADA

SESSION 1898



OTTAWA

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See also Numerical List, page 4.

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OF THE

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1. Report of the Auditor General for the year ended 30th June, 1897. Presented 10th February, 1898, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 2.

2. Public Accounts of Canada, for the fiscal year ended 30th June, 1897. Presented 8th February, 1898, by Hon. W. S. Fielding*Printed for both distribution and sessional papers.*
- 2a. Estimates of sums required for the service of the Dominion, for the year ending on the 30th June, 1899. Presented 28th March, 1898, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.
- 2b. Supplementary Estimates for the year ending 30th June, 1898. Presented 17th May, 1898, by Hon. W. S. Fielding*Printed for both distribution and sessional papers.*
- 2c. Supplementary Estimates for the year ending 30th June, 1899. Presented 30th May, 1898, by Hon. W. S. Fielding*Printed for both distribution and sessional papers.*
- 2d. Further Supplementary Estimates for the year ending 30th June, 1899. Presented 7th June, 1898, by Hon. W. S. Fielding.....*Printed for both distribution and sessional papers.*
- 2e. Further Supplementary Estimates for the year ending 30th June, 1898. Presented 7th June, 1898, by Hon. W. S. Fielding*Printed for both distribution and sessional papers.*
3. List of Shareholders of the Chartered Banks of Canada, as on the 31st December, 1897. Presented 10th June, 1898, by Hon. W. S. Fielding.*Printed for both distribution and sessional papers.*
- 3a. Report of dividends remaining unpaid, and unclaimed balances in the Chartered Banks of Canada, for five years and upwards, prior to 31st December, 1897.
Printed for both distribution and sessional papers.

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4. Report of the Superintendent of Insurance, for the year ended 31st December, 1897.
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- 4a. Preliminary statements of the business of Life Insurance Companies in Canada, for the year ended 31st December, 1897. Presented 9th June, 1898, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.
- 4b. Abstract of Statements of Insurance Companies in Canada, for the year ended 31st December, 1897. Presented 9th June, 1898, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*

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5. Report of the Department of Trade and Commerce, for the fiscal year ended 30th June, 1897. Presented 22nd February, 1898, by Sir Richard Cartwright.
Printed for both distribution and sessional papers.

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6. Tables of the Trade and Navigation of Canada, for the fiscal year ended 30th June, 1897. Presented 7th February, 1898, by Hon. W. Paterson.*Printed for both distribution and sessional papers.*

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7. Inland Revenues of Canada. Excise, &c., for the fiscal year ended 30th June, 1897. Presented 7th February, 1898, by Sir Henri Joly de Lotbinière.
Printed for both distribution and sessional papers.
- 7a. Inspection of Weights, Measures, Gas and Electric Light, for the fiscal year ended 30th June, 1897. Presented 7th February, 1898, by Sir Henri Joly de Lotbinière.
Printed for both distribution and sessional papers.
- 7b. Report on Adulteration of Food, for the fiscal year ended 30th June, 1897. Presented 16th February, 1898, by Sir Henri Joly de Lotbinière.*Printed for both distribution and sessional papers.*
8. Report of the Minister of Agriculture, for the calendar year 1897. Presented 9th March, 1898, by Hon. S. A. Fisher.*Printed for both distribution and sessional papers.*
- 8a. Report of the Director and Officers of the Experimental Farms, for the year 1897. Presented 7th June, 1898, by Hon. S. A. Fisher.*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 7.

- 8b. Report on Canadian Archives, 1897.*Printed for both distribution and sessional papers.*
- 8c. Report of the Commissioner of Agriculture and Dairying.
Printed for both distribution and sessional papers.
- 8d. Criminal Statistics for the year 1897*Printed for both distribution and sessional papers.*

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9. Annual Report of the Minister of Public Works, for the fiscal year ended 30th June, 1897. Presented 3rd May, 1898, by Hon. J. I. Tarte.*Printed for both distribution and sessional papers.*
10. Annual Report of the Department of Railways and Canals, for the fiscal year ended 30th June, 1897. Presented 7th March, 1898, by Hon. A. G. Blair.
Printed for both distribution and sessional papers.

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11. Annual Report of the Department of Marine and Fisheries (Marine) for the fiscal year ended 30th June, 1897. Presented 3rd February, 1898, by Sir Louis Davies.
Printed for both distribution and sessional papers.
- 11a. Annual Report of the Department of Marine and Fisheries (Fisheries), for the fiscal year ended 30th June, 1897. Presented 1st March, 1898, by Sir Louis Davies.
Printed for both distribution and sessional papers.
- 11b. Report of the expedition to Hudson Bay and Cumberland Gulf in the steamship "Diana," under the command of William Wakeham, Marine and Fisheries, Canada, 1897. Presented 21st April, 1898, by Sir Louis Davies.*Printed for both distribution and sessional papers.*
- 11c. Report of the Chairman of the Board of Steamboat Inspection, etc., for calendar year ended 31st December, 1897.*Printed for both distribution and sessional papers.*

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12. Report of the Postmaster General, for the year ended 30th June, 1897. Presented 31st March, 1898, by Hon. W. Mulock.*Printed for both distribution and sessional papers.*
13. Annual Report of the Department of the Interior, for the year 1897. Presented 21st April, 1898, by Hon. C. Sifton*Printed for both distribution and sessional papers.*

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- 13a.** Summary Report of the Geological Survey Department, for the year 1897. Presented 20th May, 1898, by Hon. C. Sifton. *Printed for both distribution and sessional papers.*
- 14.** Annual Report of the Department of Indian Affairs, for the year ended 30th June, 1897. Presented 9th March, 1898, by Hon. C. Sifton. *Printed for both distribution and sessional papers.*

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- 15.** Report of the Commissioner of the North-west Mounted Police Force, 1897. Presented 14th April, 1898, by Sir Wilfrid Laurier. *Printed for both distribution and sessional papers.*
- 16.** Report of the Secretary of State of Canada, for the year ended 31st December, 1897. Presented 24th March, 1898, by Sir Wilfrid Laurier. *Printed for both distribution and sessional papers.*
- 16a.** Reports of the Canadian members of the International Commission on the Deeper Waterways from the Great Lakes to the Atlantic. Presented 9th June, 1898, by Hon. A. G. Blair. *Printed for both distribution and sessional papers.*
- 16b.** Civil Service List of Canada, 1897. Presented 7th February, 1898, by Hon. C. Fitzpatrick. *Printed for both distribution and sessional papers.*
- 16c.** Report of the Board of Civil Service Examiners, for the year ended 31st December, 1897. Presented 26th April, 1898, by Sir Wilfrid Laurier. *Printed for both distribution and sessional papers.*
- 16d.** Annual Report of the Department of Public Printing and Stationery, for the year ended 30th June, 1897. Presented 3rd June, 1898, by Hon. S. A. Fisher. *Printed for both distribution and sessional papers.*
- 17.** Report of the Joint Librarians of Parliament, for the year 1897. Presented 3rd February, 1898, by the Hon. The Speaker *Printed for sessional papers.*

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- 18.** Report of the Minister of Justice as to Penitentiaries of Canada, for the year ended 30th June, 1897. Presented 3rd June, 1898, by Hon. C. Fitzpatrick. *Printed for both distribution and sessional papers.*
- 19.** Report of the Department of Militia and Defence of Canada, for the year ended 31st December, 1897. Presented 23rd March, 1898, by Hon. F. W. Borden. *Printed for both distribution and sessional papers.*
- 20.** Copy of an order in council relative to the issue of licenses to United States fishing vessels. Presented 3rd February, 1898, by Sir Louis Davies *Not printed.*
- 20a.** Return to an order of the House of Commons, dated 12th April, 1897, for a return showing the number of fishing licenses granted to fish in Lake Erie, opposite East and West Elgin, and their location, whether pound net, gill net or seine license, and to whom granted during the years 1895 and 1896. Also the names of all applicants for licenses for the year 1897, giving the names of those applicants who were granted licenses and the amount paid by each of them. Also all telegrams, letters, reports and correspondence of every description in any way relating to the granting or refusal of such licenses. Presented 13th April, 1898.—*Mr. Ingram.* *Not printed.*
- 21.** Return to an order of the House of Commons, dated 12th April, 1897, for a return showing all mail contracts that were cancelled and all that expired in East and West Elgin since 15th July, 1896; also all correspondence, reports, tenders received and entered into for carrying the mail since 15th July, 1896, giving names and amounts. Presented 4th February, 1898.—*Mr. Ingram.* *Not printed.*
- 21a.** Return to an order of the House of Commons, dated 5th May, 1897, for copies of correspondence and papers cancelling the contract with Mr. Finkle for carrying the mail from Newburgh to Kingston by the way of Camden East, Wilton, Odessa, etc. Also copies of tenders for carrying the mail from Newburgh to Kingston by the way of Camden East, Wilton, Odessa, etc.; together with all correspondence, reports and papers in connection with this contract. Presented 4th February, 1898.—*Mr. Wilson.* *Not printed.*
- 21b.** Return to an order of the House of Commons, dated 3rd May, 1897, for copies of all papers and correspondence relating to tenders for the mail contract from Shubenacadie to Dean, in the province of Nova Scotia, including a statement of the tenders received and the reason for awarding the contract to one Guild. Presented 4th February, 1898.—*Sir C. Hibbert Tupper.* . . . *Not printed.*

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- 21c. Return to an order of the House of Commons, dated 3rd May, 1897, for a return showing: 1. Each contract for carrying the mails cancelled since 7th July, 1896, showing the locality covered by each contract and the county and province in which situated. 2. The name of each contractor. 3. The price of each contract at the time of cancellation. 4. If new contracts entered into, the contract price of each new contract. 5. The reason for the cancellation of each contract. Presented 4th February, 1898.—*Mr. Cameron*.....*Printed for sessional papers.*
- 21d. Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all orders in council, correspondence, reports, tenders, if any, and papers relating to the carrying of the mail between Golden, B.C., and St. Eugene since July, 1896, the number of trips made by each courier and the amount paid to each. Presented 31st May, 1898.—*Mr. Foster*.....*Not printed.*
22. Return of Treasury Board Over-rulings of Auditor General's decisions between the second session of the eighth parliament, 1897, and the session of 1898. Presented 7th February, 1898, by Hon. W. S. Fielding.....*Not printed.*
23. General Rules and Orders of the Exchequer Court of Canada. Presented 7th February, 1898, by Hon. C. Fitzpatrick.....*Not printed.*
- 23a. General Order No. 87 of the Supreme Court. Presented 25th March, 1898, by Hon. C. Fitzpatrick.
Not printed.
24. Return to an order of the House of Commons, dated 7th June, 1897, for copies of all correspondence of record in the department of the interior in regard to the keeping of government horses by S. J. Donaldson, of Prince Albert, Saskatchewan, from October, 1894, until May, 1895, and referring in any way to the transferring of the keeping of said horses from Joseph Letellier de St. Just to the said S. J. Donaldson; together with all accounts received from S. J. Donaldson in connection with keeping of said horses and caring for other government property. Presented 7th February, 1898.—*Mr. Davis*.....*Not printed.*
25. Copy of the order in council and the contract entered into between Her Majesty and Messrs. Mackenzie and Mann for the construction of a railway from the Stikine River to Teslin Lake. Presented 8th February, 1898, by Hon. A. G. Blair.....*See "Votes and Proceedings," page 37.*
26. Statement of Governor General's Warrants issued since last session of parliament, on account of fiscal year 1897-98. Presented 8th February, 1898, by Hon. W. S. Fielding.....*Not printed.*
27. Report of the Commissioner, Dominion Police Force, for the year 1897. Presented 8th February, 1898, by Hon. C. Fitzpatrick.....*Not printed.*
28. Statement of expenditure on account of miscellaneous unforeseen expenses from 1st July, 1897, to 3rd February, 1898. Presented 10th February, 1898, by Hon. W. S. Fielding.....*Not printed.*
29. Return to an order of the House of Commons, dated 17th May, 1897, for copies of all papers, reports and correspondence respecting the illegal fishing by foreigners in the waters of British Columbia, and also all papers, reports and correspondence respecting smuggling on the coast of British Columbia. Presented 11th February, 1898.—*Mr. Prior*.....*Not printed.*
30. Report of Mr. W. T. Jennings, C.E., on routes to the Yukon. Presented 11th February, 1898, by Hon. C. Sifton.....*Printed for both distribution and sessional papers.*
- 30a. Return showing the approximate amount of gold taken out of the Yukon district from 1886 to 1897, inclusive. Presented 15th February, 1898, by Hon. C. Sifton.....*Printed for sessional papers.*
- 30b. Copies of the following papers: 1. Particulars of the standard and gauge of the Kaslo and Slocan Railway. 2. Proposal of J. Wesley Allison representing a syndicate for construction of Skagway and Lake Bennett and Dawson City Railway. 3. Proposal from a syndicate represented by Lord Charles Montague, Mr. Clarence H. Mackay and Mr. H. Maitland Kersey for construction of a railway from Stikine River to Teslin Lake. 4. Letters to the minister of the interior from Mr. H. Maitland Kersey, bearing date the 22nd and 23rd January, 1898. Presented 15th February, 1898, by Hon. C. Sifton.....*Printed for sessional papers.*
- 30c. Return to an order of the House of Commons, dated 22nd February, 1898, for copies of all papers respecting any proposal made by Mr. Hamilton Smith, for the construction of a railway towards the Yukon. Presented 22nd February, 1898, by Sir Wilfrid Laurier.
Printed for sessional papers.

CONTENTS OF VOLUME 13—*Continued.*

- 30d.** Return to an address of the Senate to his excellency the Governor General, dated 17th March, 1898, for a return showing all offers received by the government for building the Stikine-Teslin Railway or for building any railway or tramway to connect the head waters of the Yukon with the Pacific ocean, and all plans, specifications and other documents in connection therewith, and all correspondence upon this subject. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Wood. . . Not printed.*
- 31.** Supplementary return to an address of the Senate to his excellency the Governor General, dated 9th April, 1897, for a statement showing for each department of the civil service, the names, ages, offices and salaries of such persons employed either in the inside or outside divisions thereof; and of such persons not in the civil service employed by the government in any department, who, since the 13th July, 1896, and in cases where no commission of investigation was appointed, as have been removed from office by dismissal, superannuation or otherwise, specifying in each case the manner of, the grounds for such removal, and the length of notice given to the persons removed, and the amount of superannuation or gratuity granted, if any; also showing the name, age, office and salary or remuneration of any and every person appointed to the civil service in the place of, or as a consequence of any such removal. Presented (Senate) 16th March, 1898.—*Hon. Mr. Kirchhoffer. Printed for sessional papers.*
- 31a.** Partial return to an address of the Senate to his excellency the Governor General, dated 9th April, 1897, for a return showing: 1. The number of commissions issued, and the number and names of all commissioners appointed by order in council or otherwise, since the 11th July last, to inquire into and report upon charges preferred against any employee of the government, whether permanent or temporary, of offensive partisanship during the last Dominion election, or at any other time. 2. The number of commissions issued, and the number and names of all commissioners appointed to inquire into and report upon charges preferred, or upon the conduct of any officer or other employee of the government, permanent or temporary, other than those mentioned in the preceding paragraph. 3. The number and names of all commissioners appointed to investigate and report upon any claim or claims preferred against the government, and the finding of such commissioner or commissioners thereon. 4. The date of, and copy of each commission issued, and the date of the appointment of each commissioner, his name, residence and designation. 5. The time occupied in each investigation by each commissioner or commissioners. 6. The amount paid or to be paid to each commissioner, in fees, *per diem* allowance, salary, travelling expenses, and incidentals of all kinds. 7. The number of witnesses summoned in each case to appear before the investigating commissioner or commissioners. 8. The amount paid or to be paid, to each witness, in fees, *per diem* allowance, travelling expenses, or for any other services rendered. 9. The number of bailiffs and constables employed in each case, and the amount paid or to be paid to each for his services in any capacity. 10. The number and names of all lawyers retained or engaged in any way by the crown to conduct each case, the amount paid or to be paid to each lawyer or counsel so engaged. 11. A copy of all reports made to heads of departments, or to his excellency the governor general in council, by any commissioner or commissioners, together with his or their findings in each case; and a statement showing the action taken thereon by any head of a department, or by the governor general in council. 12. The name, age, office and salary of any and every person appointed to any office or employment under the government, in the place of, or in consequence of any person's removal or dismissal, as a result of the finding of any commissioner or commissioners. Presented (Senate) 16th March, 1898.—*Hon. Sir Mackenzie Bowell. Printed in abstract form.*
- 31b.** Supplementary return to No. 31a. Presented (Senate) 25th March, 1898.—*Hon. Sir Mackenzie Bowell. See 31a.*
- 31c.** Supplementary return to No. 31a. Presented (Senate) 18th May, 1898.—*Hon. Sir Mackenzie Bowell. See 31a.*
- 31d.** Supplementary return to No. 31a. Presented (Senate) 27th May, 1898.—*Hon. Sir Mackenzie Bowell. See 31a.*
- 31e.** Supplementary return to No. 31a. Presented (Senate) 31st May, 1898.—*Hon. Sir Mackenzie Bowell. See 31a.*
- 32.** Statement in reference to fishing bounty expenditure for 1896-97. Presented 15th February, 1898, by Sir Louis Davies. *Not printed.*
- 33.** Statement of all superannuations and retiring allowances in the civil service during year ended 31st December, 1897, giving name, rank, salary, service, allowance and cause of retirement of each person superannuated or retired, also whether vacancy filled by promotion or new appointment, and salary of any new appointee. Presented 16th February, 1898, by Hon. W. S. Fielding. *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

34. Detailed statement of all bonds and securities registered in the department of the secretary of state of Canada, since the last return, 5th April, 1897, and submitted to parliament in accordance with section 23 of chapter 19 of the Revised Statutes of Canada. Presented 16th February, 1898, by Hon. C. Fitzpatrick *Not printed.*
35. Statement in pursuance of section 17 of the Civil Service Insurance Act, for the year ended 30th June, 1897. Presented 18th February, 1898, by Hon. W. S. Fielding..... *Not printed.*
36. Return to an order of the House of Commons, dated 22nd February, 1898, for copies of all papers respecting the establishment of a line of vessels between Canada and France. Presented 22nd February, 1898, by Sir Wilfrid Laurier..... *Printed for sessional papers.*
37. Return to an address of the House of Commons to his excellency the Governor General, dated 17th May, 1897, for copies of all depositions, declarations, reports, orders in council, correspondence, etc., concerning the dismissal of M. P. Laberge, late deputy postmaster at the city of Quebec. Presented 2nd March, 1898.—*Mr. Cosgrain*..... *Not printed.*
- 37a. Return to an address of the House of Commons to his excellency the Governor General, dated 14th February, 1898, for copies of all correspondence, charges, evidence and reports in connection with the case of Benjamin Palmer, formerly lighthouse keeper at Palmer's Point, King's county, N.B. Presented 3rd March, 1898.—*Mr. Foster*..... *Not printed.*
- 37b. Return to an address of the House of Commons to his excellency the Governor General, dated 14th March, 1898, for copies of the report made to the government by Mr. Jean B. B. Prévost, who was appointed to inquire into the conduct of Mr. D. Desroches, collector of revenue for the excise division of Terrebonne. Presented 22nd March, 1898.—*Mr. Chauvin*..... *Not printed.*
- 37c. Supplementary return to an order of the House of Commons, dated 5th April, 1897, for a return giving the names of all commissioners appointed by the government or any of the ministers to hear charges and make investigations into the conduct of civil servants and employees of the government or any of the departments since July, 1896, together with the rate of pay and allowances of each and the length of time each has been employed, and the full amount paid; also copies of all reports made by them to the government, or any member thereof, and copies of the authorization and instructions under which they acted. Presented 25th March, 1898.—*Mr. Foster*..... *Not printed.*
- 37d. Return to an order of the House of Commons, dated 14th March, 1898, for copies of all correspondence and papers touching the appointment of R. S. Thompson to the position of postmaster in the town of Oxford, Cumberland county, Nova Scotia, and the dismissal of Henry Smith from said office, the applications for the said position and correspondence respecting the same; also copies of all reports or charges, if any, made against R. S. Thompson for selling liquor contrary to the provisions of the Scott Act, and for smuggling or other charges; and all papers showing what, if any, action has been taken on these complaints. Presented 28th March, 1898.—*Sir C. Hibbert Tupper*..... *Not printed.*
- 37e. Return to an order of the House of Commons, dated 14th March, 1898, for a return of all papers, correspondence and reports connected with the dismissal of S. R. Griffin, Isaac's Harbour, Nova Scotia, from his position of postmaster, including a petition signed by seven-eighths (more or less) of the electors of said district, in favour of the retention in the service of an officer who had served for twenty-two years and a half. Presented 12th April, 1898.—*Sir C. Hibbert Tupper*..... *Not printed.*
- 37f. Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all papers, letters, correspondence, depositions, reports, documents, etc., in relation to the suspension from office of Victor J. A. Venner, as Indian agent for the Restigouche band of Indians. Presented 12th April, 1898.—*Mr. McAlister*..... *Not printed.*
- 37g. Return to an order of the House of Commons, dated 18th April, 1898, for copies of all letters, papers and correspondence or reports between the minister of the interior or any of his departmental employees, and any Indian agent or agents regarding the dismissal of Dr. George T. Orton as medical superintendent of Indians in the province of Manitoba. Presented 27th April, 1898.—*Mr. Sproule*..... *Not printed.*
- 37h. Return to an order of the House of Commons, dated 30th March, 1898, for copies of all correspondence between any minister of the crown and other persons respecting the dispensing with the services of John Walker as caretaker of the Cave and Basin Baths at Banff, North-west Territories. Presented 27th April, 1898.—*Mr. Davin*..... *Not printed.*

 CONTENTS OF VOLUME 13—*Continued.*

- 37i.** Return to an order of the House of Commons, dated 14th March, 1898, for copies of all papers, reports and official correspondence in any way connected with the dismissal of David Ross, fishery officer for N. E. Margaree, in the island of Cape Breton. Presented 28th April, 1898.—*Sir C. Hibbert Tupper*..... *Not printed.*
- 37j.** Return to an order of the House of Commons, dated 30th March, 1898, for copies of papers, correspondence and orders concerning the dismissal of François Corbeil, formerly wharfinger on the Lachine canal. Presented 4th May, 1898.—*Mr. Bergeron*..... *Not printed.*
- 37k.** Return to an order of the House of Commons, dated 14th March, 1898, for copies of reports, correspondence and papers relating to the dismissal of Charles Hoar, an employee of the Intercolonial Railway at Pictou, Nova Scotia. Presented 4th May, 1898.—*Sir C. Hibbert Tupper*..... *Not printed.*
- 37l.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for a return giving: (a.) The names of employees relieved from duty by the government by dismissal or otherwise upon the Welland canal and Welland canal feeder, from the 13th of July, 1896, to the 1st of March, 1898. (b.) The years of service of each employee so relieved of duty. (c.) The amount of retiring allowance, if any. (d.) The cause of dismissal in each case. (e.) The amount of pay per annum of which each employee had been in receipt. (f.) The names of new employees appointed, whether permanently or temporarily, between the same dates. (g.) The amount to be paid to each of such new temporary or permanent employee per month. Presented 5th May, 1898.—*Mr. Montague*..... *Not printed.*
- 37m.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, giving: (a.) The names of employees relieved from duty by the government by dismissal or otherwise upon the Lachine canal, from 13th July, 1896, to 1st March, 1898. (b.) The years of service of each employee so relieved of duty. (c.) The amount of retiring allowance, if any. (d.) The cause of dismissal in each case. (e.) The amount of pay per annum of each employee at date of dismissal. (f.) The names of new employees appointed, whether permanently or temporarily, from 13th July, 1896, to 1st March, 1898. (g.) The amount to be paid to each such new temporary or permanent employee per month. Presented 5th May, 1898.—*Mr. Quinn*..... *Not printed.*
- 37n.** Return to an order of the House of Commons, dated 30th March, 1898, for copies of all reports, correspondence and papers relating to the dismissal of R. H. Simmonds, an employee of the Intercolonial Railway, in the general offices at Moncton, N.B. Presented 5th May, 1898.—*Mr. Powell*..... *Not printed.*
- 37o.** Return to an order of the House of Commons, dated 18th April, 1898, for copies of all letters, telegrams and correspondence with respect to the dismissal of Thomas Walton, late Indian agent of the Parry Island band; also report of investigation regarding the same. Presented 6th May, 1898.—*Mr. McCormick*..... *Not printed.*
- 37p.** Return to an address of the Senate to his excellency the Governor General, dated 14th March, 1898, for: 1. Copies of all complaints, whether by affidavit or otherwise, made against Mr. John Taylor, late postmaster of the city of Belleville. 2. Copies of all orders in council authorizing the reducing of the post office in Belleville from that of a city to a town office. 3. The names of the employees of said office who were dismissed, their ages, length of time each was in the service of the government, the amount of gratuity paid to each who had not served ten years, over the amount of superannuation allowance allowed to each clerk who had served for ten years and over. 4. The names of those who were reappointed, and the salaries now paid them, in addition to their superannuation allowance. 5. The reasons why Miss I. M. Newberry and W. B. Walker were not re-employed, and two new and inexperienced clerks appointed in their stead. 6. And copies of all correspondence between members of the reform association of Belleville or any other person or persons, in relation to the reduction of said office from a city to a town office, the removal or dismissal of the postmaster or any of the clerks of said office, and copies of all records, if any, of the deputations which visited Ottawa in connection with the business of the said office. Presented (Senate) 3rd May, 1898.—*Hon. Sir Mackenzie Bowell*..... *Not printed.*
- 37q.** Return to an order of the House of Commons, dated 30th March, 1898, for copies of information, evidence of investigation and report, correspondence and papers relating to the dismissal of Thomas H. Miller from the office of shipping master for the port of Bear River, Annapolis county, N.S., and the appointment of Albert Harris. Presented 9th May, 1898.—*Mr. Mills*..... *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

- 37r.** Return to an order of the House of Commons, dated 14th March, 1898, for copies of all correspondence, evidence taken by commissioners, reports, recommendations and other papers relating to the dismissal of Joseph Steeves, late postmaster at Elgin, Albert county, New Brunswick, and to the appointment of his successor to that office. Presented 12th May, 1898.—*Mr. McInerney.*
Not printed.
- 37s.** Return to an address of the House of Commons to his excellency the Governor General, dated 25th April, 1898, for copies of all orders in council, reports of the inspector or other officers of the post office department, and correspondence respecting the dismissal or retirement of Mr. M. G. McLeod from the postal mail service in Nova Scotia. Presented 13th May, 1898.—*Sir C. Hibbert Tupper.*
Not printed.
- 37t.** Return to an order of the House of Commons, dated 14th March, 1898, for copies of all papers, reports and correspondence referring to or connected with the dismissal of D. Bain, Esq., station agent at Port Mulgrave, Intercolonial Railway. Presented 17th May, 1898.—*Sir C. Hibbert Tupper.*
Not printed.
- 37u.** Return to an address of the House of Commons to his excellency the Governor General, dated 2nd May, 1898, for copies of all orders in council, complaints, depositions, reports, correspondence, papers and other documents in relation to the dismissal of Mr. Elzéar Lanouette, postmaster of Ste. Anne de la Pérade, and to the appointment of his successor. Presented 18th May, 1898.—*Mr. Marcotte.*
Not printed.
- 37v.** Return to an order of the House of Commons, dated 14th March, 1898, for copies of all correspondence, reports of evidence, recommendations and other papers relating to the dismissal of Joshua L. Steeves, lately collector of customs at Hillsboro', Albert county, New Brunswick, and to the appointment of his successor. Presented 25th May, 1898.—*Mr. McInerney.*
Not printed.
- 37w.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all orders in council, papers, correspondence, evidence and reports connected with the inquiry into the charges made against Mr. A. F. Cameron, of the customs service at Sherbrooke, Nova Scotia, and his dismissal from office. Presented 25th May, 1898.—*Sir C. Hibbert Tupper.*
Not printed.
- 37x.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all correspondence, orders in council and petitions with the names attached thereto, relative to the dismissal of James M. Aitken, sub-collector of customs at the outport of Montague, Prince Edward Island, together with reasons for which he was dismissed. Presented 25th May, 1898.—*Mr. Macdonald (King's).*
Not printed.
- 37y.** Return to an address of the House of Commons to his excellency the Governor General, dated 9th May, 1898, for copies of all papers in connection with the dismissal of John F. Tennant, late collector of customs at Gretna, Manitoba. Presented 30th May, 1898.—*Mr. Quinn.*
Not printed.
- 37z.** Return to an order of the House of Commons, dated 25th April, 1898, for a return showing: 1. The names of all persons who, having been in the employ of the government in the North-west Territories, have ceased to be in that employ since June, 1896. 2. The date at which their services were dispensed with and the reasons for their dismissals in each case. Presented 2nd June, 1898.
Mr. Davin.
Not printed.
- 37aa.** Return to an order of the House of Commons, dated 3rd June, 1898, showing all the changes that have been made in the officials and employees of the customs department in the county of Cape Breton since June, 1896, and giving copies of all letters, papers, petitions, telegrams, recommendations and correspondence relating to such changes. Presented 3rd June, 1898.—*Hon. W. Paterson.*
Not printed.
- 37bb.** Return to an address of the Senate to his excellency the Governor General, dated 17th June, 1897, for a copy of all correspondence exchanged between the different departments, or employees thereof, and Mr. Choquette, member of the house of commons for Montmagny, on the subject of the dismissal of the following persons: Charles Bouffard, postmaster at Berthier; Louis Lavoie, postmaster at l'Île aux Grues; Joseph Bossinotte, postmaster at Cap St. Ignace; Michel St. Pierre, postmaster at St. Paul du Buton; Mde. Cyp. Dionne, postmistress at St. Pierre, Rivière du Sud; Napoléon Dugal, postmaster at Beaubien; Cléophas Bélanger, postmaster at Landvilla; Mde. Ignace Mercier, postmistress at Mercier; Alfred Dubé, employee on the Intercolonial Railway; J. B. Proulx, employee on the Intercolonial Railway; Xavier Simoneau, employee on the Intercolonial Railway; Xavier Poitras, employee on the Intercolonial Railway; Sifroid Fortin, employee on the Intercolonial Railway; Téléphore Gendreau, harbour master at Montmagny; Maxime Dubé, customs officer (preventive officer); Téléphore Gendreau, guardian of the wharf at St. Thomas. Presented (Senate) 7th June, 1898.—*Hon. Mr. Landry.*
Not printed.

CONTENTS OF VOLUME 13—*Continued.*

- 38.** Commission of Major Walsh as executive officer of the Yukon district. Presented 4th March, 1898, by Sir Wilfrid Laurier. *Printed for sessional papers.*
- 38a.** Copy of the orders in council of the 17th and 26th August, 1897, appointing James Morrow Walsh, Esquire, chief executive officer of the government in the Yukon territory. Presented 7th March, 1898, by Hon. C. Sifton. *Printed for sessional papers.*
- 38b.** Return to an address of the Senate to his excellency the Governor General, dated 17th March, 1898, for copies of all letters and reports received by the government or any department thereof, from Commissioner Walsh, while on his way to the Yukon district, or since his arrival there. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Ferguson.* *Printed for sessional papers.*
- 38c.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of orders in council, commission, instructions, correspondence and papers relating to the appointment and duties of Major Walsh, commissioner of the provisional district of Yukon, including any directions concerning his duties on the way to Dawson city as well as those after his arrival there. Presented 23rd May, 1898.—*Sir C. Hilbert Tupper.* *Printed for sessional papers.*
- 39.** Return to an address of the House of Commons to his excellency the Governor General, dated 7th March, 1898, for copies of the correspondence between Sir Wilfrid Laurier and Mr. Foster, of the United States of America, following the meeting of the experts on the Behring Sea seal question. Presented 7th March, 1898.—*Sir Wilfrid Laurier.* *Printed for both distribution and sessional papers.*
- 40.** Statement of the affairs of the British Canadian Loan and Investment Company, as on 31st December, 1897. Presented 7th March, 1898, by the Hon. The Speaker. *Not printed.*
- 41.** Copy of the order in council of 15th July, 1897, under which a lease of the right of subaqueous mining on the North Saskatchewan river was issued to Mr. G. A. Drolet, and in which are set forth the conditions of the said lease. Presented 7th March, 1898, by Hon. C. Sifton. *Printed for sessional papers.*
- 41a.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copy of the mining lease granted to Chevalier Drolet. Presented 27th April, 1898.—*Mr. Davin.* *Not printed.*
- 42.** Return showing reductions and remissions made during the fiscal year ended 30th June, 1897, under section 141 as added to the Indian Act by section 8, chapter 35, 58-59 Victoria. Presented 7th March, 1898, by Hon. C. Sifton. *Not printed.*
- 43.** Return of all lands sold by the Canadian Pacific Railway Company, from the 1st October, 1896, to the 1st October, 1897. Presented 7th March, 1898, by Hon. C. Sifton. *Not printed.*
- 43a.** Return of correspondence, etc., respecting the affairs of the Canadian Pacific Railway Company, which the department of the interior has had since the previous return was presented to parliament under the resolution of the 20th February, 1882. Presented 7th March, 1898, by Hon. C. Sifton. *Not printed.*
- 44.** Return of orders in council which have been published in the *Canada Gazette*, in accordance with the provisions of clause 91 of the Dominion Lands Act, chapter 54 of the Revised Statutes of Canada, and its amendments. Presented 7th March, 1898, by Hon. C. Sifton. *Not printed.*
- 44a.** Return of orders in council which have been published in the *Canada Gazette* and in the *British Columbia Gazette*, in accordance with the provisions of subsection (d) of section 38 of the regulations for the survey, administration, disposal and management of Dominion lands within the 40-mile railway belt in the province of British Columbia. Presented 7th March, 1898, by Hon. C. Sifton. *Not printed.*
- 45.** Return of orders in council which have been published in the *Canada Gazette*, in accordance with the provisions of the North-west Irrigation Act, being 57-58 Victoria, chapter 30, etc. Presented 7th March, 1898, by Hon. C. Sifton. *Not printed.*
- 46.** Return of the names and salaries of all persons appointed to, or promoted in the civil service during the calendar year 1897, specifying the office to which each has been appointed or promoted. Presented 10th March, 1898, by Sir Henri Joly de Lotbinière. *Printed for sessional papers.*
- 47.** Correspondence, etc., relative to the establishment of an agency or agencies of the Canadian Bank of Commerce in the Yukon district. Presented 10th March, 1898, by Hon. W. S. Fielding. *Printed for distribution.*
- 48.** Return to an address of the House of Commons to his excellency the Governor General, dated 17th May, 1897, for copies of all correspondence, tenders asked for and received, orders in council and papers in connection with the fast Atlantic service. Presented 14th March, 1898.—*Sir Adolphe Caron.* *Not printed.*

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49. Return to an order of the House of Commons, dated 14th March, 1898, for a return of the number of acres seeded, the nature of the seed sown, and the amount of crops grown in each Indian reserve in the North-west Territories. Presented 24th March, 1898.—*Mr. Davin*.... *Not printed.*
- 49a. Return to an order of the House of Commons, dated 14th March, 1898, for a return showing the number of acres reserved for settlement in the North-west Territories; the number thus reserved in Manitoba; the number of acres in the North-west Territories sold to railways; the number reserved for railways; the number reserved for the government; the number of acres settled on; the number of acres in Manitoba sold to railways; the number reserved for railways in Manitoba; the number reserved for the government in Manitoba, and the number of acres in Manitoba settled on. Presented 27th April, 1898.—*Mr. Davin*..... *Not printed.*
50. Return to an order of the House of Commons, dated 14th February, 1898, for reports, recommendations, etc., of the council of the Montreal bar, addressed to the minister of justice, concerning the judges of the province of Quebec. Presented 24th March, 1898.—*Mr. Bergeron*.... *Not printed.*
51. Return to an address of the Senate to his excellency the Governor General, dated 18th February, 1898, for the number of permits that have been granted to persons for the purpose of taking spirituous and intoxicating liquors into the Yukon district, the date of such permits, together with the name of the person to whom the permit has been granted, and the number of gallons covered by such permit, and the fee charged by the government per gallon. Presented (Senate) 29th March, 1898.—*Hon. Mr. Perley*..... *Not printed.*
- 51a. Return to an address of the Senate to his excellency the Governor General, dated 11th March, 1898, for all correspondence by letters or telegrams between the federal government, at Ottawa, and his honour the lieutenant-governor of the North-west Territories, in reference to the granting of liquor permits or the introduction of liquor into the Yukon district during the last six months; also any correspondence with the government of the North-west Territories regarding the rights of the North-west Territories in regard to issuing liquor permits for the taking of intoxicating liquor into the Yukon district. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Perley*.
Printed for sessional papers.
52. Return to an order of the House of Commons, dated 7th June, 1897, for a return of the number of tons of bituminous steam coal and of bituminous slack coal imported from the United States in 1896, at several ports of entry, and amount of duty collected at such ports, and duty paid by Grand Trunk and Canadian Pacific Railways. Presented 31st March, 1898.—*Mr. Roche*.... *Not printed.*
53. Return to an address of the House of Commons to his excellency the Governor General, dated 3rd May, 1897, for a copy of Schedule B, showing recommendations of the treasury board as submitted by report of council to his excellency the governor general on the 6th and 7th July, 1896, and intended to be approved by him, laid upon the table of the house last session, with a statement of the action taken by the government on each of these appointments as made by the said order in council approved by his excellency, or, where no action has been taken, the reason for such a course. Presented 13th April, 1898.—*Sir Charles Tupper*..... *Printed for sessional papers.*
54. Return to an address of the House of Commons to his excellency the Governor General, dated 17th May, 1897, for copies of all correspondence, etc., not already brought down, between the government of Canada and the government of Newfoundland, in reference to the admission of Newfoundland into the union with Canada; also copies of all correspondence between the government of Canada and that of Newfoundland in reference to the establishment of freer trade relations between Newfoundland and Canada. Presented 13th April, 1898.—*Mr. Martin*.
Printed for sessional papers.
55. Return to an order of the House of Commons, dated 30th March, 1898, for a return showing the number of bushels of wheat graded into elevators at Fort William from 15th September, 1897, to 15th January, 1898, and the grades of the same as allowed by the government grain inspector at that point; also the number of bushels of wheat graded out of the above mentioned elevators during the same period, and the grades of the same as allowed by the said government inspector. Presented 13th April, 1898.—*Mr. Richardson*..... *Not printed.*
- 55a. Return to the Senate, dated 11th March, 1898, for a statement showing the quantity of wheat imported into the Dominion since 30th June last, the quantity exported during the same period, and the quantity exported from Manitoba during the like period. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Wark*..... *Not printed.*
56. Correspondence on the subject of Japanese immigration. Presented 13th April, 1898, by Sir Wilfrid Laurier..... *Not printed.*

 CONTENTS OF VOLUME 13—*Continued.*

- 57.** Return of copies of all agreements, not hitherto laid upon the table of the house, entered into by the department of railways with the Grand Trunk Railway Company in connection with the Montreal extension of the Intercolonial Railway. Presented 19th April, 1898, by Hon. A. G. Blair.
Printed for both distribution and sessional papers.
- 58.** Return to an address of the House of Commons to his excellency the Governor General, dated 14th March, 1898, for copies of all correspondence between the British government and the government of Canada, in reference to the conference of colonial premiers held in London in June, 1897, in accordance with Mr. Chamberlain's invitation of January 28th preceding, with the report of the proceedings of the same. Presented 20th April, 1898.—*Mr. Foster*...*Printed for sessional papers.*
- 59.** Return to an address of the House of Commons to his excellency the Governor General, dated 14th March, 1898, for copies of all depositions and papers in connection with the case of the Queen against H. B. Cameron for libel, either before the police magistrate or the court of queen's bench at Montreal, including a copy of the judgment of Hon. Mr. Justice Wurtle upon the motion for the discharge of the bail bond. Presented 20th April, 1898.—*Mr. Bostock*.....*Not printed.*
- 60.** Return to an order of the House of Commons, dated 14th February, 1898, showing the cost of "Hansard" for each year from and including 1890 to 1897—the return to cover the cost of reporting, transcribing, translating, printing, binding, circulating through the post office or express offices and all other expense connected with the present system of reporting and publishing the debates of the house. Presented 21st April, 1898.—*Mr. Ellis*.....*Not printed.*
- 61.** Return to an order of the House of Commons, dated 7th June, 1897, for copies of all applications or recommendations for positions as mail carriers in the city of Brantford, in connection with the free postal delivery by the postmaster general. Presented 21st April, 1898.—*Mr. Clancy*...*Not printed.*
- 62.** Return to an order of the House of Commons, dated 30th March, 1898, for a return showing : (a) The names and appointments of members of the staff and employees of the royal military college of Canada who have been struck off the strength between the 30th June, 1896, and 31st December, 1897. (b) The corresponding dates. (c) The respective conditions of engagement as regards duration. (d) The respective lengths of service completed. (e) The respective retiring allowances, if any, granted. (f) The grounds upon which the respective grants were made, and the principles regulating them, with explanation of variation, if any. (g) The appointments which having been vacated, have since been refilled, with dates thereof. (h) The extra public expenditure involved by the respective new appointments other than those caused by deaths, including travelling, lodging and all other charges met or to be met on this account. (i) In cases of vacancies caused by death, the amounts granted to the families of deceased employees. Presented 21st April, 1898.—*Mr. Tyrwhitt*.....*Not printed.*
- 62a.** Return to an order of the House of Commons, dated 30th March, 1898, for copies of all correspondence and reports, direct or indirect, and of minutes of verbal communications between Imperial government authorities, Canadian government authorities, and the commandant royal military college of Canada, relating to the granting in the years 1898 and 1899 of commissions in her majesty's regular forces, to cadets of the royal military college of Canada. Presented 21st April, 1898.—*Mr. Tyrwhitt*.....*Not printed.*
- 63.** Return to an address of the House of Commons to his excellency the Governor General, dated 5th April, 1897, for copies of all memorials, statements and other documents from the government of the province of Manitoba in relation to an unsettled claim resulting from that province being charged with the cost of the erection of public buildings ; with copies of all correspondence in connection therewith. Presented 21st April, 1898.—*Mr. LaRivière*.....*Printed for sessional papers.*
- 64.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all orders in council, reports, correspondence and papers in any way relating to the claim of E. J. Walsh, Esq., against the government of the Leeward Islands. Presented 25th April, 1898.—*Sir U. Hibbert Tupper*.....*Not printed.*
- 65.** Return to an order of the House of Commons, dated 30th March, 1898, for copies of all papers connected with the discharge from the mounted police of William J. Spencer, who, on May 14, 1885, was wounded while patrolling through the Eagle Hills with a party attached to Col. Otter's column ; the report of the board which sat on his case, and its recommendation. Presented 25th April, 1898.—*Mr. Davin*.....*Not printed.*

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66. Report of the commissioners appointed to investigate, inquire into and report upon the state and management of the St. Vincent de Paul Penitentiary. Presented 26th April, 1898, by Hon. C. Fitzpatrick. *Not printed.*
67. Return to an address of the House of Commons to his excellency the Governor General, dated 14th February, 1898, for copies of all correspondence, estimates, tenders, reports and petitions addressed to the government concerning the yearly flooding of farm land at Ste. Geneviève, in the county of Jacques Cartier, consequent upon public works in the Ottawa river. Presented 26th April, 1898.—*Mr. Monk.* *Not printed.*
68. Return to an address of the House of Commons to his excellency the Governor General, dated 14th February, 1898, for copies of all correspondence, estimates, tenders, reports and petitions addressed to the government in regard to the construction of a wharf at Point Claire in the county of Jacques Cartier. Presented 26th April, 1898.—*Mr. Monk.* *Not printed.*
- 68a. Return to an order of the House of Commons, dated 30th March, 1898, for correspondence between the department of public works and Mr. L. H. Masson, of St. Anicet, concerning the government wharf at that place. Also correspondence between the same department and citizens of St. Anicet regarding the building of a pier at said wharf. Presented 28th April, 1898.—*Mr. Bergeron.* *Not printed.*
69. Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, for copies of all correspondence, reports, orders in council and papers relating to the giving the work of printing the Klondike Official Guide to Mr. Daniel Rose of Toronto. Presented 27th April, 1898.—*Mr. Foster.* *Printed for sessional papers.*
70. Return to an address of the House of Commons to his excellency the Governor General, dated 14th March, 1898, for copies of the following documents and papers: (a.) The commission issued to Mr. Rothwell, law clerk in the department of the interior, Ottawa, authorizing him to investigate the grievances of certain settlers residing within the Esquimalt and Nanaimo Railway Company's land belt on Vancouver Island. (b.) All evidence taken under the said commission at Nanaimo, Victoria, or elsewhere. (c.) All reports made by the said Mr. Rothwell on all matters inquired into by him under the said commission. Presented 27th April, 1898.—*Mr. McInnes.* *Not printed.*
71. Return to an order of the House of Commons, dated 14th March, 1898, for a return of copies of all papers connected with the letting of the contract for the construction of the railway bridge at Edmonton, including advertisements, specifications, the tenders, the contract; any subsequent modifications of the same; correspondence; and return respecting forfeitures connected with the said contract and the action of the government thereon, and a further return stating the conditions of the work at present. Presented 28th April, 1898.—*Mr. Davin.* *Not printed.*
72. Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all papers and correspondence (such as can be properly brought down) between the Imperial government and the government of Canada, in relation to the improvement of the defences of Canada. Presented 2nd May, 1898.—*Mr. Casgrain.* *Not printed.*
73. Return to an order of the House of Commons, dated 14th March, 1898, for copies of all correspondence between the mayor and corporation of Gananoque, or any other person, with the government in reference to the removal of the drill shed at Gananoque. Also all correspondence in reference to the sale or purchase of a new site. Also all offers made by the president of the agricultural society of Gananoque, or any other person, offering to rent or sell a suitable building in which to store the arms and clothing; and also all other correspondence with the government, dealing with this question. Presented 4th May, 1898.—*Mr. Taylor.* *Not printed.*
- 73a. Supplementary return to No. 73. Presented 11th May, 1898.—*Mr. Taylor.* *Not printed.*
- 73b. Return to an order of the House of Commons, dated 14th March, 1898, for a return showing: (a) What works or repairs have been executed on the drill shed at Montreal since the 1st of September, 1896. (b) The estimated cost of said works. (c) The names of those who executed said works, and the amounts paid to each by the government. (d) The mode of calling for tenders in reference to the execution of said works. Presented 11th May, 1898.—*Mr. Monk.* *Not printed.*
74. Return to an address of the Senate to his excellency the Governor General, dated 31st March, 1898, for copies of all correspondence, memoranda, papers and orders in council relating to the Manitoba school question, since the 1st of July, 1896, up to this date. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Bernier.* *Printed for both distribution and sessional papers.*

 CONTENTS OF VOLUME 13—*Continued.*

- 74a.** Return to an address of the Senate to his excellency the Governor General, dated 31st March, 1898, for a statement of the quantity of lands allotted for school purposes in Manitoba; the quantity of said lands sold, and the prices at which they have been sold; the amount received on that account the amounts still due to the government; the manner in which this fund is invested and administered; the amount already paid to the province of Manitoba, how much on the capital, if any, and how much on the interest; the amount still at the credit of the province, whether on the capital or on the interest; the dates of payment in each case, and the amount of each payment; and also all the correspondence, papers, memoranda and orders in council relating thereto, up to date. Presented (Senate) 31st May, 1898.—*Hon. Mr. Bernier.*
Printed for both distribution and sessional papers.
- 75.** Return to an address of the Senate to his excellency the Governor General, dated 25th March, 1898, for copies of all correspondence between J. A. J. McKenna, the representative of the department of the interior, and any member of the British Columbia government in respect to the proposed removal of the Indians from the Songhees reserve in the city of Victoria, British Columbia. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Templeman.*.....*Not printed.*
- 76.** Return to an address of the Senate to his excellency the Governor General, dated 9th April, 1897, for a return showing the number of railway tickets sold during the year 1896 by the various railway companies of the Dominion, those under the rate of two cents per mile, and those over the rate of two cents per mile. Also the number of life insurance policies in force, dividing them as follows: \$500.00 and upwards, \$1,000.00, \$2,000.00, \$5,000.00, \$10,000.00, \$25,000.00, \$50,000.00. And also the number of infantile insurance and amount. Presented (Senate) 3rd May, 1898.—*Hon. Mr. Boulton.*.....*Not printed.*
- 77.** Return to an address of the Senate to his excellency the Governor General, dated 28th March, 1898, for copies of all papers, letters, telegrams, reports, recommendations, contracts, payments and correspondence, between the department of militia and any person or persons whatsoever, and also all reports and orders in council in connection with the equipment of the militia force, referring to the Oliver, the Lewis and the Merrian patents. Presented (Senate) 4th May, 1898.—*Hon. Mr. Landry.*.....*Not printed.*
- 77a.** Supplementary return to No. 77. Presented (Senate) 30th May, 1898.—*Hon. Mr. Landry.*
Not printed.
- 78.** Return to an order of the House of Commons, dated 18th April, 1898, for copies of all tariffs of every kind, supplementary, regular and special, in force from time to time on the Intercolonial Railway since the appointment of Mr. Harris. Presented 5th May, 1898.—*Mr. Foster.*.....*Not printed.*
- 78a.** Return to an order of the House of Commons, dated 30th March, 1898, for copies of all papers and correspondence, including copy of advertisement, connected with the letting of Intercolonial Railway contract for farm gates in the winter of 1896-97, Intercolonial Railway contract with one McNeil, of New Glasgow, Nova Scotia, and copies of tenders and deposits by the different parties tendering for the same. Presented 5th May, 1898.—*Sir C. Hibbert Tupper*.....*Not printed.*
- 79.** Return to an order of the House of Commons, dated 14th March, 1898, for copies of all papers and correspondence respecting a fire claim of D. Connors, Esq., Bayfield, Antigonish, between officers of the department of railways and canals and other departments, as well as between the claimant and others and the department. Presented 5th May, 1898.—*Sir C. Hibbert Tupper.*.....*Not printed.*
- 80.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, for a copy of the report forwarded to the government by Mr. Wilfrid Mercier, appointed to hold an investigation into the conduct of employees on the St. Ann lock on the Ottawa river. Presented 5th May, 1898.—*Mr. Monk.*.....*Not printed.*
- 81.** Return to an order of the House of Commons, dated 18th April, 1898, for copies of accounts of Mr. H. H. Robertson, registrar of the election court in the election trial held at the city of London in the fall of 1897, contesting the right of Thomas Beattie, Esq., to sit as member for the city of London, in connection with the said trial, with vouchers and certificates, and all correspondence relating thereto. Presented 10th May, 1898.—*Mr. Calvert.*.....*Not printed.*
- 82.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, for copies of all petitions, reports, applications, letters, telegrams, evidence, depositions, arguments, papers, writings, correspondence, judge's charge, judge's report, orders in council, and other documents of every kind relating to the commutation of the sentence pronounced

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- by Mr. Justice Ritchie of the supreme court of Nova Scotia, upon Lyman Dart, or to the pardoning of the said Lyman Dart, or to any application for such commutation or pardoning, and including all documents which were taken into consideration by the minister of justice or by the solicitor general, or by his excellency the governor general in council in connection with such commutation or pardon. Presented 10th May, 1898.—*Mr. Borden (Halifax)*. *Not printed.*
83. Return to an address of the House of Commons to his excellency the Governor General, dated 14th February, 1898, for copies of all correspondence, advertisements for tenders and answers thereto, reports and orders in council, and a list of all permits, licenses or leases granted, containing names of the grantees and extent of territory given and conditions attached to each, the amount paid and to be paid therefor in respect of gold placer mining or gold dredging areas in the North-west Territories and the Yukon district. Presented 11th May, 1898.—*Mr. Foster*.
Printed for both distribution and sessional papers.
- 83a. Return to an address of the Senate to his excellency the Governor General, dated 18th March, 1898, for a return of all dredging leases made by the government during the last eighteen months on the Saskatchewan river and its branches, also particulars of the parties to whom made, the rental to be paid and the amount paid, the extent of work, if any, done under same, together with the official reports, if any, which induced the government to grant said leases upon the terms contained therein. Presented (Senate) 18th May, 1898.—*Hon. Mr. Lougheed*.
Printed for sessional papers.
84. Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, for copies of orders in council, correspondence, claims, memoranda, statements, memorials, etc., in connection with the government of Prince Edward Island and a delegation, consisting of Mr. Warburton, premier of the province, Mr. H. C. Macdonald, attorney-general of the province and others in regard to questions at issue between the government of Prince Edward Island and the dominion of Canada. Presented 12th May, 1898.—*Mr. Martin*.
Printed for sessional papers.
85. Return to an order of the House of Commons, dated 7th June, 1897, for copies of all petitions, letters and documents respecting the claims made by the veterans of the rebellion of 1837-8 for pensions or other compensation, and for all departmental replies thereto and all other papers connected therewith. Presented 12th May, 1898.—*Mr. Cameron*. *Not printed.*
86. Return to an order of the House of Commons, dated 30th March, 1898, for copies of all petitions, reports, letters, correspondence and papers, including all letters, communications or correspondence between the different departments of the government, particularly the letter from the minister of marine and fisheries, under the late government, to the then minister of public works, and the letter of the Hon. Mr. Dickey, in said letter referred to, referring to the removal of the remains of piers of the old bridge at the mouth of Bear river, N.S. Presented 13th May, 1898.
Mr. Mills. *Not printed.*
87. Return to an order of the House of Commons, dated 18th April, 1898, for a copy of the report of W. L. M. King respecting the manufacture of militia clothing in Canada. Presented 16th May, 1898.—*Mr. Belcourt*. *Printed for distribution.*
- 87a. Return to an order of the House of Commons, dated 14th March, 1898, for a return showing: (1.) All contracts for military clothing entered into by the government of Canada since the 1st of September, 1896. (2.) The name of each contractor and the amount of his contract. (3.) The mode of calling for tenders in each case, and the names and amounts mentioned by each tenderer. Presented 6th June, 1898.—*Mr. Monk*. *Not printed.*
88. Return to an order of the House of Commons, dated 7th June, 1897, for copies of all correspondence, telegrams and replies thereto, between the minister of agriculture or any member of the government and any person in reference to the withdrawal, or proposed withdrawal of government aid or control from cheese and butter factories in Prince Edward Island. Also all correspondence, etc., between any member or official of the government and any person, representing or on behalf of any cheese or butter factory proposed to be erected and operated in Prince Edward Island. Presented 16th May, 1898.—*Mr. Martin*. *Not printed.*
89. Return to an order of the House of Commons, dated 3rd May, 1897, for copies of all letters, papers and correspondence relating to the closing in March last of the post office at Oak Bay Mills, Quebec. Presented 17th May, 1898.—*Mr. McAlister*. *Not printed.*
- 89a. Return to an order of the House of Commons, dated 25th April, 1898, for copies of all correspondence, papers, telegrams, etc., in possession of the government, or any member or official of the government, in reference to closing the post office at St. Mary's Road East, in Prince Edward Island. Presented 18th May, 1898.—*Mr. Martin*. *Not printed.*

 CONTENTS OF VOLUME 13—*Continued.*

- 90.** Return to an order of the House of Commons, dated 18th April, 1898, for a return of all correspondence, letters, or telegrams, reports in possession of the government in connection with the death from diphtheria of Macdonald and Fraser, who contracted the disease when employed on the construction of the Crow's Nest Pass Railway; also with the holding of an inquest on bodies of said Macdonald and Fraser, and the adjournment of said inquest, and issuing of an injunction to prevent Coroner Mead, of Pincher Creek, from proceeding with such adjourned inquest. Presented 17th May, 1898.—*Mr. Bell (Pictou)*.....*See 90a.*
- 90a.** Report of the commissioners appointed to inquire into complaints respecting the treatment of labourers on the Crow's Nest Pass Railway. Presented 2nd June, 1898, by Hon. C. Sifton.
Printed for both distribution and sessional papers.
- 91.** Return to an order of the House of Commons, dated 18th April, 1898, for a return showing names of parties from whom lands were purchased for new improvements on Iroquois section of Galops canal, and amounts paid to each person for property so purchased from them, also quantity of land purchased from each person. Also a similar statement for the lands purchased for the Cardinal section of the Galops canal. Presented 17th May, 1898.—*Mr. Broder*.....*Not printed.*
- 92.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all reports to his excellency, orders in council, papers and correspondence, record of the judgment of the supreme court of Canada referring to the condemnation and release of the United States fishing vessel "Frederick J. Gerring." Presented 18th May, 1898.—*Sir C. Hibbert Tupper*.....*Not printed.*
- 93.** Return to an address of the House of Commons to his excellency the Governor General, dated 14th February, 1898, for copies of all correspondence, calls for tenders, tenders received, reports and orders in council, contracts entered into and all related papers in respect to the winter steamship service from St. John and Halifax to Great Britain since 1st July, 1897. Presented 26th May, 1898.—*Mr. Foster*.....*Not printed.*
- 94.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, for a copy of the report of the committee appointed by the Imperial government in 1896 to consider the question of a telegraph cable between Canada and Australasia; also of any reports or correspondence to the Canadian government from the Canadian representatives on said committee, or Sir Sandford Fleming in regard to the same subject. Presented 25th May, 1898.—*Mr. Casey*.....*Printed for both distribution and sessional papers.*
- 95.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th April, 1898, for copies of all petitions, papers, correspondence, orders in council, commission, instructions, evidence, reports and documents relating to the inquiry into the conduct of Judge Spinks, judge of the county court of Yale, by the Honourable Mr. Justice McColl of the supreme court of British Columbia. Presented 25th May, 1898.—*Sir C. Hibbert Tupper*.....*Not printed.*
- 96.** Return to an address of the House of Commons to his excellency the Governor General, dated 30th March, 1898, for copies of all papers and correspondence respecting the enforcement of coasting laws of Canada on the Pacific or Atlantic coasts. Presented 26th May, 1898.—*Sir C. Hibbert Tupper*.....*Printed for distribution.*
- 97.** Return to an order of the House of Commons, dated 14th March, 1898, for a return showing: (a) What contracts for military harness or saddlery have been given by the government of Canada since the 1st September, 1896. (b) To whom such contracts were awarded and where they were executed. (c) What amounts were paid for the execution of such contracts. (d) For which of the said contracts tenders were called publicly, and the amount of tender in each case, and all correspondence had by the department of militia in reference to the execution of said contracts. Presented 8th June, 1898.—*Mr. Monk*.....*Not printed.*
- 98.** Return to an address of the Senate to his excellency the Governor General, dated 15th March, 1898, for copies of all correspondence and telegrams between the minister of agriculture or any other member of the administration, or any officer of the government, with the owners or agents of steamers or the board of trade, Charlottetown, relating to the establishment of a cold storage service on steamers between Charlottetown and ports in Great Britain or the West Indies, and in reference to the erection of cold storage premises in Charlottetown. Presented (Senate) 12th May, 1898.—*Hon. Mr. Ferguson*.....*Not printed.*
- 99.** Regulations concerning the Stikine river and its connecting rivers and lakes. Presented (Senate) 18th May, 1898, by Hon. R. W. Scott.....*Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

100. Return to an address of the Senate to his excellency the Governor General, dated 4th June, 1897, for a copy of all correspondence exchanged between the Imperial government and that of the Dominion on the subject of the French treaty. Presented (Senate) 25th May, 1898.—*Hon. Mr. Landry* *Not printed.*
101. Return to an address of the Senate to his excellency the Governor General, dated 17th March, 1898, for a detailed account by the department of the interior of the items of the expenses allowed to W. H. Sowden during the period of his employment as immigration agent, and also the names of all or any persons, who, in consequence of Mr. Sowden's work in the Midland Counties, went to the Canadian North-west, and who, as stated by the leader of the government in the senate, it is believed by the government would otherwise have gone to the United States, and the residences of such persons prior to their departure to the North-west, and the places where they settled in the North-west. Presented (Senate) 25th May, 1898.—*Hon. Mr. Kirchhoffer* *Not printed.*
102. Return to an address of the Senate to his excellency the Governor General, dated 5th May, 1898, for copies of all correspondence and orders in council in respect to the occupancy of a portion of the Songhees Indian reserve at Victoria, British Columbia, by the Esquimalt and Nanaimo Railway Company. Presented 26th May, 1898.—*Hon. Mr. Templeman* *Not printed.*
103. Return to an address of the Senate to his excellency the Governor General, dated 18th March, 1898, for any correspondence that has taken place between the government and the home authorities re repatriation of the 100th Royal Canadian Regiment. Presented (Senate) 26th April, 1898.—*Hon. Mr. Boulton* *Not printed.*
104. Return to an order of the House of Commons, dated 14th March, 1898, for a copy of all entries and clearances of Canadian ports by United States steamship "Yantic" on her voyage up the river St. Lawrence in 1897; also a copy of any papers or correspondence respecting her passage through the said river or St. Lawrence canals. Presented 30th May, 1898.—*Sir C. Hibbert Tupper* *Not printed.*
105. Return to an order of the House of Commons, dated 30th May, 1898, for a copy of a letter from Major General Gascoigne, relating to certain statements made in parliament, reflecting upon him as commanding officer of the Canadian militia. Presented 30th May, 1898.—*Sir Wilfrid Laurier*.
Printed for both distribution and sessional papers.
106. Return to an order of the House of Commons, dated 25th April, 1898, for a return of all papers, receipts and documents in possession of the government relating in any way to a claim presented to the government by Hugh Richardson, Esq., the justice of the supreme court, North-west Territories, for losses sustained at Battleford during the North-west rebellion of 1885. Presented 31st May, 1898.—*Mr. Davis* *Not printed.*
107. Return to an order of the House of Commons, dated 9th May, 1898, for copies of all reports and plans respecting or in any way relating to a route through and from the North-west Territories to the Yukon district via Prince Albert, Saskatchewan, Green Lake, Isle La Crosse and the Clearwater river and Fort McMurray on the Athabasca. Presented 31st May, 1898.—*Mr. Davis*.
Not printed.
108. Return to an address of the Senate to his excellency the Governor General, dated 15th March, 1898, for copies of all reports made to the department of marine and fisheries by the officers in charge of the steamer "Petrel" having reference to the service performed by that steamer during the winter of 1896-97, and also detailed statements of the expenditure incurred for that service and receipts for freight and passengers. Presented (Senate) 30th May, 1898.—*Hon. Mr. Ferguson* *Not printed.*
109. Return to an order of the House of Commons, dated 2nd May, 1898, for copies of correspondence and reports addressed to the militia department concerning accidental shooting at Côte St. Luc ranges, of a farmer named Larose of the parish of St. Laurent, in Jacques Cartier county. Presented 1st June, 1898.—*Mr. Monk* *Not printed.*
110. Return to an address of the House of Commons to his excellency the Governor General, dated 14th February, 1898, for copies of all correspondence, calls for tenders, tenders received, reports and orders in council, permits, licenses or leases, with the names of the parties receiving them and the conditions attached thereto, and generally all papers in connection with the disposal of timber berths or areas in the North-west Territories, including the Yukon, since 1st July, 1897. Presented 3rd June, 1898.—*Mr. Foster* *Not printed.*

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- 111.** Return to an order of the House of Commons, dated 18th April, 1898, for copies of all reports, correspondence, documents and papers in relation to a claim by one Amable Frigon, of Montreal, for an indemnity for an injury received by him at the military camp of Laprairie in September, 1891. Presented 3rd June, 1898.—*Mr. Casgrain*..... *Not printed.*
- 112.** Return to an order of the House of Commons, dated 4th June, 1898, for copies of all correspondence relating to the transportation of supplies for 1898-9, for the North-west mounted police and the officials of the department of the interior to the Yukon district. Presented 4th June, 1898.—*Hon. C. Sifton* *Not printed.*
- 113.** Return to an address of the Senate to his excellency the Governor General, dated 26th May, 1898, for a copy of the contract between the government and the Beaver Line Company for the carriage of the mails across the Atlantic, together with all memorials, letters, correspondence whatsoever connected with the said contract or its execution, or bearing upon the refusal of the company to allow its boats to stop at Quebec. Presented (Senate) 1st June, 1898.—*Hon. Mr. Landry*.
Not printed.
- 114.** Return to an address of the Senate to his excellency the Governor General, dated 11th May, 1898, for copies of all the correspondence which took place in relation to the permission first refused and afterwards given to Captain and Brevet Major P. Belanger, of the 61st Battalion, to resign his commission and to retain the rank of major on retirement, as shown by the Militia General Orders, No. 55, of the year 1894, and by the *Canada Gazette* of 18th December, 1897; together with all papers, reports and orders in connection with such matter. Presented (Senate) 1st June, 1898.—*Hon. Mr. Landry*..... *Not printed.*
- 115.** Return to an address of the Senate to his excellency the Governor General, dated 25th May, 1898, for a statement of the tenders received by the department of militia and defence for the work on the rifle range on the Ottawa river, east of the city of Ottawa, and a statement of the estimated quantities on which tenders were figured out; a statement of the date and amount of each cheque sent in with each tender. A copy of the tender of J. Lyons, and a copy of the cheque which accompanied the same, showing date of acceptance by the bank. Presented (Senate) 3rd June, 1898.—*Hon. Mr. Macdonald (Victoria)*..... *Not printed.*
- 116.** Statement concerning prices paid to the Bate Co. for articles of food supplies for the military force sent to the Yukon district last month. Presented (Senate) 3rd June, 1898, by *Hon. D. Mills*.
Printed for sessional papers.
- 117.** Return to an order of the House of Commons, dated 25th April, 1898, for copies of all reports, papers and correspondence relating to the removal of postal mail clerks from their former places of residence in the province of Nova Scotia in 1897 and 1898. Presented 7th June, 1898.—*Sir C. Hibbert Tupper* *Not printed.*
- 118.** Return to an order of the House of Commons, dated 14th March, 1898, for a return showing the names of all parties furnishing supplies for the military camp at Aldershot, King's county, Nova Scotia, since July, 1896, the rate of allowance or payment of each class of articles supplied, the names of the tenderers, the amount asked by each tenderer, and the amount allowed. Also a schedule of prices paid for each class of supplies for the camp at Aldershot, from 1888 to 1897, inclusive, and the names of the parties supplying each class of articles. Presented 9th June, 1898.—*Sir C. Hibbert Tupper*..... *Not printed.*
- 119.** Return to an address of the Senate to his excellency the Governor General, dated 22nd April, 1898, for copies of all correspondence between the departments of militia, public works, agriculture and any person or persons whatsoever, in connection with the Quebec exhibition of 1894, and with the forthcoming exhibition of 1898. Presented (Senate) 7th June, 1898.—*Hon. Mr. Bernier*.
Not printed.
- 120.** Return to an address of the Senate to his excellency the Governor General, dated 12th May, 1898, for a copy of each of the following documents relating to the reletting of contracts for the construction of sections 1, 2, 4, 5, 6 and 7 of the Soulanges canal: 1. Copy of notice calling for tenders for the reletting of sections 4, 5, 6 and 7 of the Soulanges canal. 2. Copy of the specifications for the reletting of sections 4, 5, 6 and 7, Soulanges canal. 3. Copy of the tender of J. M. Hogan. 4. Copy of the tender of Andrew Onderdonk. 5. Copy of the order in council or report of the minister of railways and canals, or chief engineer of railways and canals, shortening the time for the completion of sections 4, 5, 6 and 7 from the end of October, 1899, to the end of October, 1898. 6. Minute or memorandum of the agreement or conversation had with Andrew Onderdonk, con-

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tractor for sections 4, 5, 6 and 7 of the Soulanges canal by the minister of railways and canals or chief engineer, between the dates 17th March, 1897, and 20th March, 1897, both days inclusive, or at a subsequent date to the effect that if J. M. Hogan, the lowest tenderer for sections 4, 5, 6 and 7, refused to sign the contract that A. Onderdonk would take it at the prices named in his (Onderdonk's) tender and agree to complete the work by the end of October, 1898. 7. Copy of letter or telegram to J. M. Hogan between dates 17th March, 1897, and 22nd March, 1897, both days inclusive, notifying him that he was the lowest tenderer for sections 4, 5, 6 and 7. 8. Letter from J. M. Hogan to the department of railways and canals between the dates 17th March, 1897, and 22nd March, 1897, both days inclusive, refusing to sign the contract for sections 4, 5, 6 and 7 for which he was the lowest tenderer. 9. Copy of contract of A. Onderdonk for sections 4, 5, 6 and 7, Soulanges canal. 10. Copy of the order in council cancelling the contract of Archibald Stewart for sections 1 and 2, Soulanges canal. 11. Copy of order in council about reletting of sections 1 and 2, Soulanges canal. 12. Copy of public advertisement or other printed notice calling for tenders for the reletting of sections 1 and 2, Soulanges canal. 13. Copy of notice sent to Hugh Ryan asking him to tender for reletting of sections 1 and 2, Soulanges canal. 14. Copy of notice sent to John Ryan asking him to tender for reletting of sections 1 and 2, Soulanges canal. 15. Copy of notice sent to Allan R. McDonnell asking him to tender for reletting of sections 1 and 2, Soulanges canal. 16. Copy of notice sent to W. J. Poupore asking him to tender for reletting of sections 1 and 2, Soulanges canal. 17. Copy of notice sent to one Cleveland asking him to tender for reletting of sections 1 and 2, Soulanges canal. 18. Copy of notice sent to M. P. Davis, or Wm. Davis & Sons, asking him or them to tender for reletting of sections 1 and 2, Soulanges canal. 19. Copy of notices sent to other contractors asking them to tender for reletting of sections 1 and 2, Soulanges canal. 20. Copy of specification and form of tender for reletting of sections 1 and 2, Soulanges canal. 21. Copies of all tenders *verbatim et literatim* for reletting sections 1 and 2, Soulanges canal. 22. Copy *verbatim et literatim* of the contract of Ryan & Macdonell for sections 1 and 2, Soulanges canal. 23. Copy of notice or information furnished to tenderers of sections 1 and 2, Soulanges canal, as to the plant which tenderers would have the use of and the terms on which they would have such use. 24. Statement of the amount and nature of the security given by Ryan & Macdonell for the completion of their contract for sections 1 and 2, Soulanges canal. 25. Copy of notice to tenderers for reletting of sections 1 and 2, Soulanges canal, that the government would furnish a quarry for the use of contractors. 26. Copy of the agreement with Ryan & Macdonell as to the quarry at Rockland. 27. Statement of the royalty to be paid by Ryan & Macdonell to the department on stone to be quarried at Rockland quarry. 28. Copy of the order in council dated between the dates 15th May, 1897, and 29th May, 1897 (both dates inclusive), for the payment of \$10,000 to Archibald Stewart. 29. Copy of letter or telegram from the department of railways and canals to one C. W. Ross, a clerk in the department of railways and canals, in the month of December, 1897, or January, 1898, instructing him to break into the office of Archibald Stewart, at his quarry in Rockland. 30. Copies of letters or telegrams to one Middleton, government inspector at Rockland, from the department of railways and canals, during the month of December, 1897, and up to 13th of January, 1898. Presented (Senate) 11th June, 1898.—*Hon. Mr. Loughheed* *Not printed.*

61 Victoria.

Sessional Papers (No. 9.)

A. 1898

CANADA

REPORT

OF THE

MINISTER OF PUBLIC WORKS

ON THE

WORKS UNDER HIS CONTROL

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1897

SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 36, SECTION 37,
OF THE REVISED STATUTES OF CANADA

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY

1898

[No. 9—1898.]

Department of Public Works.

*To the Right Honourable Sir John Campbell Hamilton-Gordon, Earl of Aberdeen ;
Viscount Formartine, Baron Haddo, Methlic, Tarves and Kellie, in the Peerage of
Scotland ; Viscount Gordon of Aberdeen, in the Peerage of the United Kingdom ;
Baronet of Nova Scotia, &c., &c., Governor General of Canada.*

MY LORD,

I have the honour to lay before Your Excellency the Report of the Department
of Public Works of Canada, for the fiscal year ended 30th June, 1897.

I have the honour to be,

My Lord,

Your Excellency's most obedient servant,

J. ISRAEL TARTE,

Minister of Public Works.

OTTAWA, April 12th, 1898.

Department of Public Works

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Names of Places, &c.	Nature of Work, &c., referred to.	Page in Report.	Pages in Appendices.
Papineauville, Que.	Dredging		9, 143
Parliament Buildings		XVI	5, 38, 217
do Grounds.		XVII	5, 38, 217
Parrsborough, N.S.	Repairs to breakwater		7, 58
Partridge Island, N.B.	Quarantine station		3, 25, 73
do	Wharf		8
Pembroke, Ont	Post office.		5, 16, 39
Penetanguishene.	Dredging, &c.		10, 95, 147
Percé, Que.	Boat landing.		9, 80
do	Opening and closing of navigation		242
Peterborough, Ont.	Custom-house		16, 39
do	Inland revenue.		16
do	Post office.		5, 16, 39
Petite Madeleine.	Boat landing.		80
Petite Rivière (St. François).	do		9, 80
Petrolia, Ont.	Post office.		5, 16, 39
Philipsburg, Que.	New pier		9, 83
Pickett's Pier, N.S.	Repairs to pier.		7, 58
Pictou, N.S.	Custom-house		3, 14, 24
do	Opening and closing of navigation		242
do	Post office.		3, 23, 70
Piers below Quebec			9
Pinette, P.E.I.	Repairs to pier.		8, 66
Pointe à Valois.	do wharf.		9, 83
Pointe à la Frégate	Boat landing.		9, 80
Pointe aux Trembles.	Dredging		9, 138, 143
Point Edward, Ont. (Sarnia).	Immigrant buildings		5
do do	Dredging		10, 147
Port Arthur, Ont.	do		10, 147
do	Immigrant buildings		5
do	Opening and closing of navigation		242
do	Post office, &c.		5, 16, 40
Port Colborne, Ont.	do		5, 16
Port Daniel, Que.	Repairs to pier and shed		9, 83
Port Dover, Ont.	Opening and closing of navigation		242
Port George, N.S.	Repairs to breakwater.		7, 59
Port Hood, N.S.	do pier.		7, 59
Port Hope, Ont.	Dredging and repairs to pier		10, 96, 148
do	Opening and closing of navigation		242
do	Post office.		5, 16, 40
Port Maitland, N.S.	Repairs.		7, 59
Port Mouton, N.S.	Dredging		7, 113
Port Selkirk, P.E.I.	Repairs to pier.		8, 67
Port Stanley, Ont.	Dredging and repairs to pier		11, 96, 148
do	Opening and closing of navigation		242
Portage la Prairie.	Post office, &c.		6, 41
Portland, N.B.	do		3, 14, 26
Pownal, P.E.I.	Repairs to pier.		8, 66
Prescott, Ont.	Custom-house		5, 16, 148
do	Dredging		11, 148
do	Post office.		5, 16
Prince Albert, N.W.T.	Court-house and jail		6, 17, 43
do	Crown lands and timber office.		17
do	Land and registry office.		6, 17, 44
do	Immigrant shed		17
Prince Edward Island.	Piers, &c.	XVII	62
do	Buildings	XVIII	21
do	Dredging	XVIII	114
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do	Leased by Department.		223
Public Buildings	British Columbia	VII	7
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do	Ontario.		5
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Public Works Agency	British Columbia		13
Pugwash, N.S.	New wharf		8, 60
Purvis Mill, St. John, N.B.	Dredging		11, 116
Quaco, N.B.	Repairs to piers		8, 73

Names of Places, &c.	Nature of Work, &c., referred to.	Page in Report.	Pages in Appendices.
Quebec.	Citadel buildings.		4, 15, 29
do	Clerk of works office.		4, 15
do	Cullers' office.		15
do	Custom-house.		4, 15, 29
do	Dredging.		9
do	Drill hall.		4
do	Engineer's office.		15
do	Examining warehouse.		4, 15, 29
do	Immigrant building, Louise Embankment.		4, 15, 29
do	Marine and immigration agency.		29
do	Navigation, opening and closing.		242
do	Observatory.		4, 15
do	Post office.		4, 15, 29
do	Quarantine station.		15
do	Queen's wharf building.		4, 15
do	Weights and measures office.		4
do	Piers, &c.	XVIII	74
do	Buildings.	XIX	27
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Rainy River.	Construction of wing dam.		4, 11, 96
Red Deer.	Dominion Lands office.		17
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Red River, mouth of.	Dredging Lake Winnipeg.		11, 164
Regina.	Clerk of Works office.		6, 17
do	Court house.		6, 17, 44
do	Dominion Lands office.		6, 17, 44
do	Government offices.		6
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do	Lieut. Governor's residence.		6, 17, 44
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Restigouche, N.B.	Dredging at the Traverse.		117
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Richmond, Que.	Post office.		4, 30
Rimouski, Que.	do		4, 30
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Rivière du Loup (Fraserville).	Post office.		4, 15
do (en bas).			10
River du Sud.	Protection works.		10, 85
do Blanche.	Repairs to wharf.		9, 83
do Chateauguay.	Dredging.		10
do Gatineau.	Protection works.		10
do Kaministiquia.	Dredging.		11
do L'Assomption.	Improvement.		10, 85
do Ouelle.	Wharf.		10, 86
do Richelieu, Belœil channel.	Guide pier.		86
do do	Ice piers.		10, 87
do Thames.	Dredging.		11, 149
do Ste. Anne de la Pérade.	Improvement, River Ste. Anne.		10, 87
do Ste. Anne du Saguenay.	New pier works.		10, 89
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do St. Jean, Port Joli.			10, 91
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do St. Jean des Chaillons.			10
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do St. Irénée.			10, 90
do St. Lawrence.	Ship channel.		10
do St. Louis.	Head gates.		10
do St. Maurice, between Grandes Piles and Latuque.			10, 88
do Michel de Bellechasse.			10
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Roberval, Que.	Erection of freight shed, &c.		9, 88
Rustico, North, P.E.I.	Opening and closing of navigation.		242

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Sapper's Bridge.			189
Sarnia, Ont.	Opening and closing of navigation.		243
Sault Ste. Marie, Ont.	do do	VIII	243
Seaside, N.S.	New wharf		8, 60
Shediac (Pointe du Chêne)	Opening and closing of navigation.		243
Sherbrooke, Que.	Post office, &c.	VIII	4, 15, 31
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do	Dumoine river.	XXI	12
do	Gatineau river.		12
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do	Petewawa river.	XXI	12
do	Generally.		180
do	Newcastle district.		12, 187
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Sorel, Que.	Opening and closing of navigation.	XXI	243
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Sorel, Que.	Repairs to Knight's Point breakwater.		8, 67
Souris, P.E.I.		XXI	8
South Gut, N.S.	Dredging.		10, 150
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Spoon Island, St. John river.	Boat landing	XXI	9, 80
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St. Catharines, Ont.	Repairs to wharf.		90
St. Famille, P.Q.	do	XXI	4, 15, 30
St. Henri, P.Q.	do		4, 15
St. Hyacinthe, P.Q.	Repairs, &c., to pier.		90
St. Irenée, P.Q.	Boat landing.	XXI	9, 80
St. Ivon and Pointe Séche.	Post office, &c.		4, 15, 30
St. Jérôme, P.Q.	do		4, 15, 30
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St. Mary's Bay, P.E.I.	Opening and closing of navigation.	XXI	243
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St. Peter's Bay, P.E.I.	Custom house.		15
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St. Roch de Québec.	do		3, 14, 26
St. Stephen, N.B.	do		6, 16, 40
St. Thomas, Ont.	New pier.	XXI	91
St. Valentin, P.Q.	Penitentiary.		4
St. Vincent de Paul.	Repairs.		8
Stoney Island, N.S.	Post office.	XXI	4, 16, 40
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Strathroy, Ont.	do		3, 14, 21
Summerside, P.E.I.	Opening and closing of navigation.	XXII	243
do	Post office.		13, 192
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Names of Places, &c.	Nature of Work, &c., referred to.	Part in Report.	Page in Appendices.
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Three Rivers, P.Q.	Custom house		4, 15, 31
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Tignish, P.E.I.	Repairs to breakwater.		8, 68
Toronto, Ont.	Assistant Receiver General.		6
do	Civil Service Examination offices.		6, 16
do	Custom house		6, 16, 40
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do	Examining warehouse.		6, 16, 40
do	Harbour works.		11, 97
do	Inland Revenue office.		6, 17, 41
do	Opening and closing of navigation.		243
do	Post office.		6, 17, 41
Tracadie, N.B.	Lazaretto.		3, 14
Trenton, Ont.	Post office.		6, 17
Trout Cove, N.S.	Repairs to breakwater.		8, 60
Truro, N.S.	Post office, &c.		3, 14, 24
Valleyfield, P.Q.	do		4, 15
Vancouver, B.C.	Custom house.		18
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Vernon River, P.E.I.	Repairs to pier.		8, 68
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do	Appraiser's office.		18
do	Barracks.		18
do	Custom house.		7, 18, 45
do	Drill hall.		7, 18
do	Engineer's office.		7, 18
do	Examining warehouse.		18
do	Harbour.		11, 170
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do	Marine hospital		7
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do	Savings bank.		7
do	Weights and Measures office.		18
Victoria, P.E.I.	Repairs to pier.		8, 64
Victoriaville, P.Q.	Post office.		4
Walkerton, Ont.	Post office		6, 17
Wallace Harbour, N.S.	Construction ferry wharf.		8, 61
do	Dredging		113
Water Supply	Public buildings		46
West Farnham, P.Q.	Post office		4, 15
West Selkirk, Man.	Dredging on west slough.		165
Westfield, N.B.	Landing wharf, St. John river.		8, 74
Webster's Corner, P.E.I.	Dredging on East river.		116
Wetaskiwin.	Dominion lands office		17
Whitby, Ont.	Dredging.		11, 150
Warton, Ont.	Opening and closing navigation.		243
William's Head, B.C.	Quarantine station.		7, 11, 18, 46, 110
Windsor, N.S.	Post office		3, 14, 24
do Ont.	Opening and closing navigation.		243
Winnipeg.	Clerk of works office.		6, 17
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do	Custom house.		6, 17, 42
do	Dominion lands office		6, 17
do	Engineer's office.		17
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Names of Places, &c.	Nature of Work, &c., referred to.	Part in Report.	Page in Appendices.
Winnipeg	Immigration shed.....		6, 17, 42
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do	Opening and closing navigation.....		243
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Wolseley	Court house.....		6, 18, 44
Woodstock, N.B.	Post office		3, 14, 27
Yamaska, P.Q.	Lock		10, 200
Yarmouth, N.S.	Post office.....		3, 14, 24
do	Repairs to protection works.....		8, 61, 114
York Factory, N.W.T.	Opening and closing of navigation.....		243
Yorkton	Dominion lands office.....		18

Department of Public Works.

REPORT

OF THE

DEPUTY MINISTER OF PUBLIC WORKS

FOR THE FISCAL YEAR 1896-97.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 2nd April, 1898.

The Honourable J. ISRAEL TARTE,
Minister of Public Works.

SIR,—I have the honour herewith to submit the report of the Department of Public Works for the fiscal year ended 30th June, 1897.

EXPENDITURE.

The expenditure during the year was as follows:—

Harbours, rivers, bridges, &c.....	\$ 695,438 87
Public buildings.....	865,889 33
Telegraphs	64,720 01
Miscellaneous, including salaries, &c	118,606 00
	<hr/>
	\$ 1,744,654 21

Compared with the previous year, the expenditure for 1896-97 shows an increase, yet it is still far below the figures of the five years immediately preceding.

Expenditure—1890-91... ..	\$ 2,762,020 98
do 1891-92.....	2,084,644 38
do 1892-93.....	2,274,448 47
do 1893-94.....	2,315,021 67
do 1894-95.....	2,033,219 53
do 1895-96.....	1,583,409 35

REVENUE.

The revenue of the Department amounted to \$109,966.01, an amount considerably in excess of 1894-95 and 1895-96.

Revenue for 1890-91.....	\$ 136,154 88
do 1891-92.....	100,929 71
do 1892-93.....	126,186 25
do 1893-94.....	119,779 36
do 1894-95.....	101,846 27
do 1895-96.....	102,439 12

The sources from which the revenue was derived are as follows:—

Slides and booms, Ottawa district.....	\$ 51,818 17	
do St. Maurice district . . .	22,090 50	
		\$ 73,908 67
Esquimalt Graving Dock.....	\$ 7,514 89	
Lévis do	12,346 57	
Kingston do	6,360 60	
		26,222 06
Rivière du Lièvre Lock.....	\$ 198 45	
River Yamaska Lock.....	264 91	
		463 36
Telegraphs.....		9,371 92
		<u>\$ 109,966 01</u>

It will be observed that the revenue from slides and booms, graving docks and locks, exceeded that of the previous year by \$5,585.44. The collections from the Ottawa district were \$2,180.52 in advance of 1895-96, and from the St. Maurice district, \$731.76 in advance; the returns being the largest ever derived from these works.

The revenue from the Esquimalt graving dock was \$7,514.89, or \$2,706.79 less than in the previous year. While the tonnage of vessels docked was larger than in 1895-96, the period for which they remained in dock was less. This dock also suffers very much from the competition of the Marine Railway, which accommodates vessels up to 2,500 tons, at so much lower rates, as to make it an object to wait even weeks for it. One outcome of the Yukon discoveries will be to bring to British Columbia ports, vessels of a larger class which, when necessary, will have to take the government dock.

The revenue from Lévis graving dock was \$12,346.57, an excess over the previous year of \$3,511.18, and from the Kingston graving dock \$6,360.60, an increase of \$2,405.82 over 1895-96.

The returns from the locks at Rivière du Lièvre and River Yamaska, were \$463.36, a falling off of \$51.37.

From telegraphs the returns were \$9,371.92, an increase of \$1,941.45 over the previous year.

PUBLIC BUILDINGS

The various public buildings throughout the Dominion have been maintained under the charge of the Department. Repairs and renewals have been carefully attended to, details of which will be found specified in the report of the acting chief architect, in Appendix II. Eighty-five of the buildings are lighted by gas, 65 by the incandescent electric light, 1 by natural gas, and the remainder by coal oil. Tenders were invited by public advertisement for the supply of coal at 138 of the buildings, and coal and wood were supplied to over 200 buildings in all. The usual quantity of coal (5,000 tons) was procured for the Ottawa buildings.

I regret to have to include in this report a record of the disastrous fire which occurred in the western block of the departmental buildings, in the city of Ottawa,

Department of Public Works.

on the evening of the 11th February, 1897. The fire, which originated under the flooring of a small room in the attic occupied by the Department of Railways and Canals and situated immediately opposite the elevator, was discovered a few minutes before 5 o'clock in the afternoon; although the fire extinguishers in the building were immediately put at work, the fire soon gained such headway that the city fire brigade was summoned. It responded immediately, but the inadequate supply of water and the lack of acquaintance of the firemen with the interior arrangement of the building, prevented a successful fight, and it was soon seen that the whole of the attic from the Mackenzie tower around over the Department of Public Works and the Department of Marine was doomed. Every effort was made to save the numerous plans, books, papers and documents which were in the several rooms occupied by the officials of this Department, the Mounted Police Department and the Department of Marine. Numerous willing hands voluntarily offered their help to transfer these valuable records to a place of safety. The lower portions of the building were little affected by the fire, but the quantity of water which was thrown on the building from 5 o'clock in the evening until about 6 o'clock next morning caused great damage, which compelled the departments occupying the building, with the exception of the Inland Revenue and the Department of Railways and Canals, whose offices were not damaged, to seek temporary refuge in other buildings. The work of cleaning the debris was carried on systematically and the restoration of the building was begun in order that the Departments might return to their offices as speedily as practicable. The Department of Public Works was the first to return on the 24th April following, and was soon followed by the Department of Marine, Department of Militia and the Department of Customs.

The work of providing a fire-proof floor for the attic part of the building, was then begun under the present chief architect, and brought to a satisfactory conclusion; and the contracts have been given for the supply and placing in position of the iron roof which, with its copper covering, will ensure the protection of the new story of the building against any possibility of fire in the future.

In order to better provide for the protection of the building, and for the water service required for such protection, 8-inch mains have been laid from the city main on Wellington street to the Parliament and Departmental buildings, and contracts have been entered into for the supply of powerful pumps worked by electricity which will be stationed in each building and which will always be at command at the first alarm of fire. New hose has also been provided for the whole of the buildings, and it is hoped that should the occasion arise, the precautions which have been taken will be sufficient to guard our valuable buildings against any such damage as was experienced when the fire of the 11th February occurred.

It is expected that the public buildings mentioned in last year's report as being in course of construction will be completed during the ensuing fiscal year, these buildings being the drill shed at Halifax and the new post office at Victoria, the latter building being nearly ready to be occupied by the Post Office Department.

The Rimouski post office was completed and occupied on the 14th February last, and the public buildings at Arnprior and Portage la Prairie are nearing completion.

The total expenditure on buildings, for construction, repairs and maintenance, was \$865,889.33.

DREDGING.

Dredging operations on the ship channel between Montreal and Quebec were continued during the fiscal year, four elevator dredges being employed in the work. The quantity of material removed amounted to 330,207 cubic yards; the cost of dredging depending on the nature of the material to be removed. Where hard-pan stones and boulders were displaced, the cost per cubic yard was 43.02 cents; in the case of hard-pan, gravel and stones, it was 43.7 cents; while clay and stones cost 10.21 cents, and soft clay and stone 11.11 cents.

In the Maritime Provinces, dredging was carried on at 21 points by 6 dredges, the "St. Lawrence," "Canada," "New Dominion," "Prince Edward," "George McKenzie" and "Cape Breton." The average cost per cubic yard, of material removed, ranged from 14.39 cents for the "St. Lawrence," to 67.09 cents for the "George McKenzie."

In Quebec, the dredges "St. Louis," "Nithsdale" and "Canal No. 1" worked at 10 points; the average cost of the "Nithsdale" being 34.46 cents a cubic yard, the "St. Louis" 24.45 cents, and the "Canal No. 1" 41.41 cents.

In Ontario, operations were conducted at 18 points by 5 dredges, viz.: the "Challenge," at a cost per cubic yard of 16.79 cents, the "Ontario," at a cost of 10.78 cents, the "Nipissing" at 12.98 cents, the "Queen" at 14.93 cents, and "Dredge No. 9" working on the Kaministiquia river and at Port Arthur, at the low rate of 4.70 cents.

The total number of yards removed by the whole fleet during the year, was 1,263,099 cubic yards.

HARBOURS AND RIVERS.

The contracts undertaken by the Department for the improvements of the various harbours and rivers mentioned in the appendices to this report, have been carried on under the superintendence of the various district engineers of this Department with marked success, and provision has been made in the estimates for the next year for the continuation of improvements at the most important points. Among the matters which have engaged, in the most serious manner, the attention of the Department during the past fiscal year may be mentioned the improvement of the port of Montreal, and of the channel in the River St. Lawrence between Montreal and Quebec, as well as the deepening of the entrance of the most important harbours in Ontario in order to provide the accommodation needed by shipping, for the grain-carrying trade and other branches of maritime commerce, which are of paramount importance, and are engaging the serious attention of the business men of the country.

The work in the ship channel between Montreal and Quebec has been prosecuted with great activity, and a new elevator dredge of the "Laval" type—the "Laurier"—with a new and powerful tug—the "St. Jean d'Iberville"—has been added to the dredging fleet of the St. Lawrence. The appendices of this report will show the various points in the several provinces of the Dominion where works have been executed, and a reference thereto will give a comprehensive idea of the care taken by the head of the Department to provide as far as possible, within the limits of the appropriations granted, for the needs of the trade and commerce of the country.

Department of Public Works.

TELEGRAPHS.

There are 2,754 $\frac{1}{2}$ miles of telegraph lines under the control of the Department, divided into 2,548 $\frac{1}{2}$ miles of land lines, and 206 $\frac{1}{2}$ miles of cables, as follows :—

	Land Lines.	Cables.
	Miles.	Miles.
In Newfoundland.....	14	
In Nova Scotia.....	238 $\frac{1}{2}$	22 $\frac{1}{2}$
In New Brunswick.....	76	10 $\frac{1}{2}$
In Quebec.....	931	164 $\frac{1}{2}$
In Ontario.....	24	8 $\frac{1}{2}$
In British Columbia.....	567	
In North-west Territories.....	698	
	2,548 $\frac{1}{2}$	206 $\frac{1}{2}$

The British Columbia lines are the Ashcroft-Barkerville, the Victoria to Cape Beale, the Nanaimo to Comox and the Alberni-Nanaimo connections. The line in Ontario gives connection between Leamington, Pelee Point and points on Pelee Island. The Quebec system of telegraph is divided into five sections, that from Baie St. Paul to Chicoutimi, the River and Gulf line from Murray Bay to Pointe aux Esquimaux, the Quarantine line from Quebec to Grosse Ile, and the Anticosti and Magdalen Islands systems. In New Brunswick, the Government lines give communication between Chatham and Escuminac, and also between Eastport and Campobello, Grand Manan, Cheney's and Whitehead Islands. The Nova Scotia lines extend from North Sydney to Meat Cove, whence connection is made with the Magdalen Islands and St. Paul's Islands by cables. There is also telegraphic communication under Government control between Mabou and Cheticamp, as well as between Barrington and Cape Sable. Lastly, may be mentioned the lines in the North-west Territories extending from Qu'Appelle to Edmonton and St. Albert, a distance of 607 $\frac{1}{2}$ miles, and that between Moosejaw and Wood Mountain, 90 $\frac{1}{2}$ miles.

These several lines of telegraph were, with few exceptions, maintained in good working order throughout the year.

Extension of the North Shore line beyond Point Esquimaux towards Belle Isle, as provided for last session, is now under construction. Piastre Bay, 43 miles below Point Esquimaux, was reached early in July, and a point 43 miles further down, and about 12 miles west of Little Natashquan, was reached in October; offices have been opened for business at both these places. It is proposed to continue the extension further down the coast next season.

A supply store has been opened at Quebec, and it is proposed to put sufficient quantities of everything needed in stock, in order to meet immediate calls.

GENERALLY.

The total volume of correspondence passing through the Department last year, was very large. The fire of the 11th February, 1897, destroyed one or two of the

record books of the secretary's branch, which prevents an absolutely correct statement being given. The total number of letters received would amount to about 32,000; there were 18,227 letters sent, and about 11,000 cheques mailed.

ACTS OF PARLIAMENT.

At Appendix No. 5, page 211, will be found a list of such Acts as were passed by the Parliament of Canada, at the session which closed on the 29th June, 1897, having reference to the Department of Public Works.

ART GALLERY.

Two additions were made to the art gallery during the year, oil paintings by Messrs. E. Wyly Grier, R.C.A., and J. C. Pinhey, R.C.A. These paintings were presented to the gallery by the Royal Canadian Academy, in accordance with the Act of Incorporation requiring diploma pictures to be deposited in the National Gallery.

Nineteen thousand three hundred visitors registered their names during the year, being a decrease of 3,361, as compared with the previous year.

The following table shows the number of visitors, each year since the gallery was inaugurated, according to the returns in the visitors book:—

1882-83.....	8,261
1883-84.....	9,928
1884-85.....	11,893
1885-86.....	8,792
1886-87.....	11,943
1887-88.....	16,593
1888-89.....	14,241
1889-90.....	18,048
1890-91.....	21,289
1891-92.....	20,026
1892-93.....	16,717
1893-94.....	13,366
1894-95.....	19,146
1895-96.....	22,961
1896-97.....	19,300

The report of the curator will be found at Appendix 13, page 273.

BRITISH COLUMBIA.

HARBOURS AND RIVERS.—The operations of the Department in connection with harbours and rivers in this province for the fiscal year were as follows:—

Columbia River above Golden.	Yale District.....	Improvement of navigable channel.
do at Revelstoke	do	Protection of river bank to prevent erosion.
do above Revelstoke	do	Removal of rocks.
Duncan River.....	do	Removal of snags and other obstructions.
Fraser River.....	do	Improvement of ship channel through sand heads.
Skeena River.....	New Westminster District.....	Removal of points of rock, snags, &c.
Williams Head Quarantine Station	Victoria District.....	Repairs to wharf and improvement of wat service.

See Appendix 3, page 98, &c.

Department of Public Works.

BUILDINGS:—The building operations in this province during the past year, were as follows :—

Nanaimo post office.—Sundry repairs to heating, plumbing and glazing.

New Westminster, drill hall.—Repairs to chimneys, &c.

New Westminster, post office.—Postal bag racks supplied and ordinary repairs.

Vancouver, public building.—Alterations in vaults and closets, new furniture supplied, sundry repairs.

Victoria, custom-house.—Minor repairs, fire hose supplied.

do new public building.—Approaching completion.

do post office.—Ordinary repairs, re-painting wood work, office furniture supplied.

Williams Head, quarantine station.—shelter sheds erected on wharf, buildings re-painted.

See Appendix 2, page 45, &c.

DREDGING:—During the fiscal year, the dredge “Mud Lark” was engaged from the 14th January to the close of the year in dredging in the harbour of Nanaimo, in the south channel, between the new Vancouver Coal Company's wharfs and the entrance to the harbour. During this time 418½ scow loads of material, aggregating 56,200 cubic yards were dredged at an expenditure of \$7,620.21.

Dredging operations were also carried on by the “Mud Lark” in Burrard Inlet, and during the nine days the dredge was at work, a berth 36 feet deep at low water, from the knuckle or bend at the centre of the railway wharf to the line of 30 feet depth beyond its eastern end was made, and the berth along the western portion of the wharf was improved. Some 2,520 cubic yards of mud, rock and rubbish were removed at a total cost of \$1,866.26.

The “Mud Lark” operated also in Victoria harbour with the view of deepening as much as the bed rock would allow of, along the wharf front in the inner harbour, between the custom-house and the railway bridge. Some 11,295 cubic yards of soft mud and stiff clay were removed at a total cost of \$3,462.20. For further particulars of these operations, *see Appendix 3, pages 167-173.*

COLLECTOR OF REVENUE.

The report of the Collector of Revenue appears on page 195, being Appendix No. 4. The gross collections, not including telegraph revenue, amounted to \$100,594.09, and exceeded those of the previous year by \$5,565.44.

CONTRACTS.

A recapitulation of all the contracts entered into by the Department during the year will be found at page 211, Appendix No. 5. At page 215, Appendix No. 6 will be found particulars of all the property purchased or sold during the year, and of all leases entered into by the Department.

CORRESPONDENCE.

The usual tables giving comparative annual statements of the volume of correspondence in the several branches are not so complete this year as could be desired. This is owing to the fire of February last, which destroyed the record of cheques transmitted through the secretary's branch. The other statements, however, which appear in this Appendix No. 14, page 277, disclose a steady increase in the volume of work.

DREDGING PLANT.

The following is a list of the dredging plant owned and operated by the Department in various parts of the Dominion.

MARITIME PROVINCES.

The propeller hopper dredge "St. Lawrence."
do do "Canada."
The dipper dredge "New Dominion" and 4 scows.
do "Prince Edward" do 3 do
do "Geo. McKenzie" do 4 do
do "Cape Breton" and 2 steel barges.
One stone lifter including boiler, engine and large grips.

QUEBEC AND ONTARIO.

The elevator dredge "No. 9," 2 scows and tug "Delisle."
dipper do "Queen" 2 do "Ottawa."
do do "Nipissing" 2 do "St. Paul."
do do "Ontario" 2 do "Sir John."
do do "St. Louis" 2 do "Sensation."
do do "Challenge" 2 do "Trudeau."
Stone lifter (Twin).

MANITOBA.

The dipper dredge "Winnipeg," tug "Sir Hector," 2 scows and coal barge.

BRITISH COLUMBIA.

The snag boat "Samson."
The dipper dredge "Mud Lark," 3 scows and tug "Princess."
The self propelling stern wheel clam shell dredge "Muskrat" and two scows.

SHIP CHANNEL, RIVER ST. LAWRENCE—BETWEEN MONTREAL AND QUEBEC.

Five elevator dredges "No. 8," "No. 11," "No. 12," the "Laval" and the "Laurier." Tugs "John Pratt," "St. James," "St. Francis," "C. J. Brydges," "M. F. Parsons," "Cartier," 2 stone lifters, 2 coal barges, 12 dump scows of 80 yards capacity, 2 scows of 150 yards capacity, 1 sounding scow, 2 coal scows and 2 winch scows.

Department of Public Works

NEW DREDGING PLANT.

One elevator dredge, the "Laurier"—sister dredge to the "Laval"—for the St. Lawrence Ship Channel.

One steel tug the "St. Jean d'Iberville" as tender to new dredge "Laurier."

One steel dipper dredge, the "Cape Breton," for the Maritime Provinces.

Two steel hopper barges, for dredge "Cape Breton."

Two 75 yard dump scows, for dredge "Nipissing."

The above vessels were completed during the fiscal year, 1896-97.

EXPENDITURE.

The Accountant's annual statement and classification of expenditure will be found in Appendix No. 1, page 1.

GRAVING DOCKS.

The Dominion Government owns and maintains three Graving Docks, viz.:—The Lorne, at Lévis, in the province of Quebec; the Kingston at Kingston, in the province of Ontario, and the Esquimalt at Esquimalt, near the city of Victoria, in British Columbia.

The Atlantic dock at Halifax is owned and controlled by the Halifax Graving Dock Co., Limited; its construction being secured by subsidies from the Imperial and Canadian Governments, and the city of Halifax.

The dimensions of the docks are as follows:—

THE LORNE—Commenced by the Harbour Commission of Quebec in 1878, was assumed and completed by this Department in 1889:—

	Feet.
Length.....	445
Width at coping level.....	100
do bottom.....	73
do entrance.....	62
Depth of water on sill at high water ordinary spring tides....	26½
do do do neap tides.....	20½

THE KINGSTON was built by this Department, having been completed in 1892:—

	Feet.
Length on the floor.....	*280
Width do.....	47
Width at coping level.....	79
Depth.....	20½
Depth of water on sill at low water.....	16
Width of entrance.....	55

(The level of Lake Ontario has a range of 3½ feet.)

This length can be increased 13 feet by placing the caisson on the apron line.

THE ESQUIMALT—Completed by this department in 1887:—

	Feet.
Length over keel blocks.....	430
Total length of dock.....	480.10 in.
Width at bottom.....	41
do coping level.....	90
do entrance.....	65
Depth of water on sill at high water, ordinary springs.....	26½

(Spring tides rise 7 to 10 feet, neaps 3 to 8.)

THE HALIFAX was built under agreement with and subject to the approval of this Department; completed 1889:—

	Feet.
Length.....	585
Width at coping level.....	102
do bottom.....	72
do entrance.....	89½
Depth of water on sill at ordinary spring tides.....	30

(Spring tides rise 6 feet, neaps 3 feet.)

A more extended description of these graving docks will be found in Appendix No. 3, page 175, and the revenue or income from each, in Appendix No. 4, page 199, &c.

OFFICIALS:—A complete list of all the officials employed in the operation and management of the graving docks, with age, date of appointment, salary, &c., is contained in Appendix No. 10, page 239.

MANITOBA.

WHARFS, LAKE WINNIPEG:—No expenditure has yet been incurred on account of the parliamentary appropriation of 1896, for the construction of wharfs on Lake Winnipeg. A project has been submitted to build a public wharf at Gimli, on the western shore of Lake Winnipeg, which would afford the inhabitants of the municipalities of Gimli, Woodlands and Rockwood proper facilities for carrying on the lumber trade and fishing industry.

See Appendix No. 3, page 98.

BUILDINGS:—Following is a summary of the work during the fiscal year, in connection with public buildings in this province:—

Portage la Prairie, new public building.—Under contract.

Brandon, public building.—Additions to heating surface, &c.

do immigration shed.—Minor repairs.

Elkhorn, Indian industrial school.—Plans in course of preparation.

Winnipeg post office.—Additional heating coils supplied; also a number of lock boxes; ordinary repairs.

do examining warehouse.—Sundry repairs and improvements.

do custom-house.—New sidewalks and platforms; sundry repairs and improvements.

do crown timber office.—Sundry repairs and improvements.

do immigration hall.—Repairs and improvements.

See Appendix No. 2, page 41.

Department of Public Works.

DREDGING:—During the year dredging was carried on at the mouth of the Red River, Lake Winnipeg, and in the West Slough, which is an arm of the Red River, at West Selkirk. For further particulars see Chief Engineer's Report, page 164, &c.

MAJOR'S HILL PARK.

This popular place of resort has been kept in excellent order, and improvements and repairs were made as required. Visitors are outspoken in their praises of the manner in which it is maintained.

NAVIGATION—OPENING AND CLOSING OF.

The usual tables furnishing this valuable information will be found at page 241, Appendix 11.

The several customs officials, to whom we are indebted for this information, and who readily respond to our annual requests for the same, are entitled to the thanks of the Department.

NEW BRUNSWICK.

The marine operations of the Department in this province during the year, were as follows:—

BREAKWATERS, WHARFS, &c.:—

Anderson's Hollow	Albert Co	Reconstruction of inner face of breakwater pier.
Cape Tormentine	Westmoreland Co.	Temporary repairs to worm eaten portions of harbour works, &c.
Gardner's Creek.....	St. John Co	New wharf completed.
Herring Cove.....	Albert Co	General repairs to breakwater.
Partridge Island	St. John Co	Cribwork foundation for quarantine buildings.
Quaco	St. John Co	General repairs to piers which form tidal harbour.
River St. John, including tributaries	St. John Co	Wharfs; assistance towards construction.
St. John Harbour.....	St. John City and Co.....	Protection of superstructure of Negro Point breakwater, with blocks of concrete, &c.
		Cribwork protection at base of Fort Dufferin, extended and repaired.

See Appendix No. 3, page 69.

BUILDINGS:—Necessary repairs and improvements were made to the under-mentioned public buildings:—

- Bathurst, post office.—Painting inside and outside woodwork; plastering repaired, ceilings whitened and other improvements.
- Chatham, post office.—Repairs to roof, alterations to furnace, new heating coil supplied.
- Fredericton, public building.—Kalsomining corridors and offices of customs and inland revenue sections, postal bag rack supplied to post office.
- Moncton, public building.—Repairs to plastering, floors and sidewalks, &c., rooms of annex ceiled in wood, renewals to furnace.
- Newcastle, public building.—New floor in post office.

Partridge Island, quarantine station.—Contract let for erection of building to contain steam disinjector, water tanks and baths.

Portland (St. John), post office.—Sundry repairs.

St. John, custom-house.—Repairing and refurnishing landing waiter's office after fire, renewals to boiler, new flooring laid, furniture and shelving supplied customs and inland revenue, gasfitting and furniture supplied marine, &c.

St. John, post office.—Asphalt floor relaid on basement driveway, painting, &c., walls and ceilings, renewals to boiler, repairs to building and furniture generally.

St. John, savings bank.—Alteration to entrance doors.

St. Stephen, public building.—New hot water heating furnace and sundry fittings supplied.

Sussex, public building.—Old lock boxes removed from post office, replaced by new boxes and drawers.

Woodstock, public building.—Roof and outside and inside woodwork painted, plastering, brickwork and masonry repaired.

See Appendix No. 2, page 25.

DREDGING :—During the year operations were carried on on the St. John River ; on the Jemseg, a short affluent of the St. John ; at Purvis' Mill, St. John harbour ; on the Richibucto bar ; at Spoon Island, wharf on the St. John River ; at the Traverse, which is a part of the Restigouche below Campbellton ; and in St. John harbour, dredging at the winter berths.

For full particulars, see Chief Engineer's report, page 116.

NORTH-WEST TERRITORIES.

The principal works which engaged the attention of the architect's branch, in the Territories during the year, were as follows :—

Calgary, court house.—Minor improvements.

Edmonton, registry land office.—Sundry supplies.

Lethbridge, public building.—Minor repairs, fitting up land agent's office.

Moosomin, court-house.—Contract for hot water heating apparatus, nearly completed, sundry fittings and improvement.

Prince Albert, court-house and jail.—Foundation and brickwork of court-house taken down and rebuilt, plans prepared for hot water heating apparatus, closets, bath, drainage, &c.

Medicine Hat, court-house.—Furniture and fittings to court room, judges' chambers and jury rooms ; building destroyed by fire, June, 1897.

Prince Albert, land and registry offices.—Sundry fittings and improvements.

Regina, court-house.—Cisterns put in basement and attic, other improvements.

Department of Public Works.

Regina, Dominion lands office.—Minor repairs to wood work.

do immigration shed.—Small repairs.

do Government House.—Furniture repaired throughout and partially renewed, general repairs inside and outside, carpets, linoleum, &c., supplied.

do post office.—Minor repairs.

Wolseley, court-house.—Storm doors and water tank supplied.

See Appendix 2, page 43, &c.

NOVA SCOTIA.

The following harbour and river works engaged the attention of the Department during the year:—

BREAKWATER, PIERS &C.

Arisaig.....	Antigonish County.....	Repairs to pier.
Avonport.....	Kings Co.....	Repairs to wharf.
Boularderie (Ross Ferry).....	Victoria Co.....	Construction of a new wharf.
Cheverie.....	Hants Co.....	Renewals and repairs on wharf.
Church Point.....	Digby Co.....	Extension of groyne. Reconstruction of dam with sluice gate. Repairs to wharf.
Cribbins Point.....	Antigonish Co.....	Repairs to wharf.
Digby.....	Digby Co.....	Works of construction and repair to pier.
East Jordan.....	Shelburne Co.....	Small repairs to breakwater.
Georgeville.....	Antigonish Co.....	Wharf extension.
Grand Etang.....	Inverness Co.....	Improvement of entrance channel to harbour, &c.
Hiltz Narrows.....	Lunenburg Co.....	Small repairs to breakwater.
Horton Landing (or Lower Horton).....	Kings Co.....	Repairs to wharf.
Joggins.....	Cumberland Co.....	Works of renewal and repair on breakwater.
Margaree.....	Inverness Co.....	Repairs to beach protection works.
Margaretville.....	Annapolis Co.....	Reconstruction of outer end of breakwater pier.
McNair's Cove.....	Antigonish Co.....	Breakwater, stone protection, slope.
Monk's Head.....	do.....	Repairs to bridge over boat channel, protection of its banks.
Morden.....	Kings Co.....	Renewals and repairs to breakwater.
Noel.....	Hants Co.....	Repairs to pile wharf.
Oyster Pond.....	Guysboro' Co.....	Repairs to breakwater, protecting entrance to pond.
Parrsboro'.....	Cumberland Co.....	Small repair to breakwater.
Picket's Pier.....	Kings Co.....	Repairs to pier.
Port George.....	Annapolis Co.....	Repairs to breakwater.
Port Hood.....	Inverness Co.....	Repairs and renewals to pier.
Port Maitland.....	Yarmouth Co.....	Extensive works of repair to breakwaters.
Pugwash.....	Cumberland Co.....	Construction of new wharf.
Sea side.....	Inverness Co.....	New wharf completed.
Trout Cove (Centreville).....	Digby Co.....	Works of reconstruction and repair on breakwater.
Wallace.....	Cumberland Co.....	Construction of ferry wharf of crib and pile work.
Yarmouth.....	Yarmouth Co.....	Repairs and additions to protection works on Stanwood Beach; marking out channel with dolphins.

See Appendix No. 3, page 52.

BUILDINGS.—The necessary works for repairs, &c., to the public buildings, were as follows:—

Amherst, public building.—New steel tubular boilers; heating pipes painted; improvements in post office.

Annapolis, public building.—Storm sashes supplied; woodwork, roof and furnace re-painted.

Antigonish, public building.—Plastering repaired; walls cleaned, inside woodwork painted.

Baddeck, post office.—Sundry improvements effected.

Dartmouth, public building.—Plastering repaired.

Halifax, drill hall.—Under construction.

Halifax, Dominion building.—Small repairs.

“ examining warehouse.—New closet, repairs to heating apparatus and dry goods hoist.

“ quarantine (deep water terminus).—Disinfecting apparatus from old building repaired and erected in new immigration building.

“ immigration building.—Now completed and occupied; heated by hot water.

Lunenburg, public building.—Minor improvements.

Pictou, post office.—Gas fixtures supplied; also flag and halyards and bag-rack.

“ custom-house.—Repairs to roof and heating surface; alterations and additions to heating apparatus.

Sydney, public building.—Repairs to plastering, ceilings whitened and tinted, roof painted.

North Sydney, public building.—Repairs to furnace.

Windsor, public building.—Repairs to brickwork and roof, window-sills and water pipes; improvements in post office.

Truro, public building.—Improvements in lobby and renewals to furnace.

Yarmouth, public building.—Improvements to post office; repairs to flooring stairs and plastering, ceilings whitened and woodwork re-painted.

See Appendix No. 2, page 22.

DREDGING.—Dredging was carried on during the year at Fourchu Harbour, Larry's River, Liverpool, Port Mouton, Wallace and Yarmouth. *See Appendix No 3, page 112.*

OFFICIALS.

The list of officials, published with the annual report, showing the names and terms of service of those who have filled the principal positions in the Department, from the time of its inauguration in 1841 to date, has been carefully revised and will be found to be more correct and of greater value than heretofore. *See Appendix No. 7, page 226.*

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ONTARIO.

In this province during the financial year, works of construction, improvement and repair were carried on as follows:

BREAKWATERS, PIERS, &c.:—

Burlington Channel.....	Wentworth Co.....	Repairs to protection piers.
Collingwood	Simcoe (North) Co	do breakwater.
Goderich	Huron (West) Co	Reconstruction of breakwater and repairs to pier.
Kincardine.....	Bruce (West) Co.....	Repairs to piers.
Kingsville	Essex (South) Co.....	do landing pier.
Lakes Simcoe and Couchiching.....	Prescott Co	Regulation of waters of lakes.
L'Original.....	Simcoe (East) Co	Reconstruction of wharf.
Penetanguishene.....	Durham (East) Co	Repairs to wharf.
Port Hope.....	Elgin (East) Co	Repairs to east pier.
Port Stanley.....	Algoma Co.....	Repairs to west breakwater pier, etc.
Rainy River.....	Toronto City, etc.....	Construction of wing dams, etc.
Toronto.....		Protection of eastern entrance to harbour by piers, etc.

See Appendix No. 3, page 92.

BUILDINGS:—

- Amherstburg, public building.—Removal of unsanitary plumbing.
- Arnprior, public building.—Under construction.
- Barrie, public building.—Renewal of drain pipes and plumbing; painting and kalsomining.
- Belleville, public building.—Yard paving renewed; granolithic foot paths laid along street fronts; ordinary repairs.
- Brockville, public buildings.—Iron covering of roof of examining warehouse renewed.
- Cayuga, public building.—Wired for electric light.
- Chatham, public building.—Ordinary repairs.
- Cornwall do do
- Gananoque, custom-house.—Water service pipes cleaned and repaired.
- Dundas post office.—Woodwork painted and varnished.
- Galt, public building.—Fire hose and ladder supplied.
- Guelph.—Fire hose, etc., supplied.
- Hamilton, public building.—Sundry repairs and improvements.
- Kingston, custom-house.—Hot water heating apparatus in course of construction, repairs to plumbing and metal roof covering, new bath, hot water boiler and gas main put in.
- Kingston, post office.—Sundry repairs and supplies.
- London, custom-house.—Ordinary repairs.
- do post office,—New flagpole and flag; repairs to galvanized iron roof covering, etc.
- Napanee, public building.—Minor repairs.
- Niagara Falls, public building.—Repairs to doors, windows and floor: deck roof re-pitched; new ladders furnished.

- Ottawa, Central Experimental Farm.—Repairs to gas fitting and water service in laboratory and lavatory; new w. c., bath, etc., placed in naturalist's residence and position changed; hot water service for bath and sink, including copper boiler and cistern, installed in horticulturist's residence; in dairy, repairs and renewals to boiler and engine, branch water service pipe supplied; in sheephouse, new sink and hydrant taps with connections supplied; additional gas fittings in conservatory.
- do Eastern Block, departmental building.—Three new tubular steam heating boilers, to replace locomotive boilers previously used; ordinary repairs, supplies to offices.
- do Geological Museum.—Repairs to roof and drains; new furniture and stoves supplied; hydrant placed in yard; hose supplied and run through building; ordinary repairs.
- do Western block, departmental building.—Ordinary repairs and supplies; removal of debris after fire of 11th February; building of temporary roof; ceilings removed and replaced by asbestic plastering on iron lathing; repairs, cleaning painting; new system of gas piping and of water supply put in.
- do Government House.—Alterations and repairs; painting, paper-hanging, new furniture, carpets and kitchen utensils; crockery and glass supplied; additions and alterations to electric lights; repairs to stables and skating rink; small toboggan slide renewed, and large slides repaired; fencing renewed and repaired.
- do Printing Bureau.—Ordinary repairs and renewals.
- do Langevin block.—Repairs to elevators, furnaces and heating apparatus; other ordinary repairs and supplies.
- do Major's hill park.—repairs to fences and benches; grounds maintained efficiently.
- do Parliament buildings.—Alterations in Commons galleries; additional electric lights in sundry offices, gas-fitting and electric bells; cleaning, tinting, papering, painting.
- do Parliament grounds.—Necessary repairs to and maintenance of lover's walk and greenhouse; removal of snow, &c.
- do Public buildings and repairing streets.—The work of removing snow and ashes, maintaining streets, roadway, sidewalks, &c., in connection with government property in the city, was satisfactorily carried on by the departmental staff during the year.
- do Supreme Court and Exchequer building.—Sundry supplies and repairs.
- do Post office building.—Alterations in electric light system.
- Pembroke, public building.—Ordinary repairs.
- Peterborough, custom-house.—Repairs to heating furnace.
- do post office.—Repairs to steps, south-west entrance.

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Petrolia, public building.—Water service installed and connected with town works.

Port Arthur, public building.—Grading and filling in grounds.

Port Hope, public building.—Ordinary repairs.

St. Catharines, public building.—Repairs to sidewalks; water service pipe put in, with connections for hose on each floor.

St. Thomas, public building.—Two new heating furnaces supplied; repairs to roof and sidewalks.

Stratford, public building.—New furnace and renewal of smoke pipe.

Toronto, custom-house.—Ordinary repairs to inside; lawn re-sodded; roof repaired.

do examining warehouse.—Ordinary repairs and some necessary changes in internal arrangements.

do Inland Revenue building.—New steel lining with doors in treasury vault; repairs to heating, plumbing, fire hose, water service, &c.

do post office.—Fire escapes put in; necessary repairs to water, steam and gas service, plumbing, wood-work.

Windsor, public building.—Repairs to roof, furnace room and plumbing.

See Appendix No. 2, page 31.

DREDGING.—Dredging operations were carried on during the fiscal year at Belle River, County of North Essex; at Belleville, Hastings County; at Bowmanville, or Port Darlington, West Durham County; at Cobourg, County of Northumberland; at Frenchman's Bay, or Pickering Harbour, Lake Ontario; at Hamilton and Hawkebury; in the Kaministiquia River; at Meaford, on the southern shore of Georgian Bay, and at Midland, Simcoe County. For fuller particulars, see chief engineer's report, Appendix 3, page 144, &c.

PARLIAMENT GROUNDS.

These grounds have been carefully maintained by the contractor to the satisfaction of the Department.

PRINCE EDWARD ISLAND.

The following is a summary of the operations of the Department, during the year, in connection with the harbours and rivers:

BREAKWATERS, PIERS, &c.:—

Annandale	King's Co	Temporary repairs to pier.
Belfast (Halliday's)	Queen's Co	Repairs to pier and approach.
Chapel Point	King's Co	Temporary repairs to pier.
China Point	Queen's Co	Repairs to pier.
Crapaud (Victoria pier)	do	General repairs to pier.
Hickey's pier	do	Pressing repairs to pier.
Hurd's Point	Prince Co	General repairs to pier.
Kier's shore	do	Repairs to roadway or pier.
New London	Queen's Co	Part reconstruction of and repairs to breast-work and east side harbour entrance.

BREAKWATERS, PIERS, &c.—*Continued.*

North Cardigan.....	King's Co.....	Small repairs to roadway or pier.
Pinette.....	Queen's Co.....	Levelling up pier.
Port Selkirk.....	do.....	Levelling up of pier and other repairs.
Pownal.....	do.....	Repairs to flooring of pier, &c.
Souris, Knight's Point.....	King's Co.....	Breakwater strengthened by adding solid block at outer end and placing stone slope on seaward side.
St. Mary's Bay.....	do.....	General repairs to roadway or pier, &c.
Vernon River Bridge.....	Queen's Co.....	General repairs to pier.

See Appendix No. 3, page 62.

BUILDINGS:—

Charlottetown, Dominion building.—In which are contained the post office, custom-house, inland revenue offices, assistant receiver general's office, Dominion savings bank, marine and fisheries agency, &c., repairs were made to the furnace, and hot water boilers put in; new gas fixtures supplied; plate glass put in some windows, and necessary preparations made for winter.

do quarantine hospital (Westport).—Barbed wire fence erected around the grounds.

Summerside, public building.—Plastering thoroughly repaired.

See Appendix No. 2, page 21.

DREDGING.—The dredge "Prince Edward" operated in the following places, viz.:—at Charlottetown, Crapaud and Webster's Corner, East River. The quantity of material removed was 51,078 cubic yards at a cost of \$10,164.92 or 33.29 cents a cubic yard.

See Appendix No. 3, pages 114 and 132.

QUEBEC.

Breakwaters, Piers, &c.:—Following is a synopsis of the works carried out in this province for the maintenance and improvement of navigation during the fiscal year:—

Anse St. Jean.....	Chicoutimi and Saguenay.....	
Anse à l'eau, or Tadousac.....	do.....	New freight and shelter shed, &c.
Berthier (en haut).....	Berthier Co.....	New ice pier built; old repaired.
Cap à l'aigle.....	Charlevoix Co.....	Pier repaired.
Chicoutimi.....	Chicoutimi and Saguenay.....	Addition to pier, &c.
Coteau du Lac.....	Soulanges Co.....	Repairs to wharf.
Coteau Landing.....	do.....	do
Etang du Nord.....	Gaspé Co.....	Repairs to breakwater.
Gatineau Point.....	Wright Co.....	Repairs to wharf.
Grande Rivière.....	Gaspé Co.....	Repairs to pier, and erection of freight shed and waiting room.
Grand Pabos.....	do.....	Repairs to training pier built for improving entrance.
Ile aux Coudres.....	Charlevoix Co.....	Renewals and repairs on wharf.
Ile Perrot.....	Vaudreuil Co.....	Repairs to wharf.
Kamouraska.....	Kamouraska Co.....	do
Lanoraie.....	Berthier Co.....	do
Laprairie.....	Laprairie Co.....	Revetment wall of cribwork. Improvement of steamboat channel.
L'Assomption (River).....	L'Assomption Co.....	River improvements.
Les Eboulements.....	Charlevoix Co.....	Wharf repaired.
L'Islet.....	L'Islet Co.....	Repairs to pier.
Longueuil.....	Chambly Co.....	Repairs to roadway on wharf.

Department of Public Works.

BREAKWATERS, PIERS, &c.—*Continued.*

Lotbinière.....	Lotbinière Co.....	Construction of a block of cribwork for landing and shipping purposes.
Lower St. Lawrence.....		Improvement of landings for fishing boats.
Magog.....	Stanstead Co.....	Flooring of wharf repaired.
Mistassini.....	Chicoutimi and Saguenay.....	New wharf.
Murray Bay.....	Charlevoix Co.....	Sheathing head block of pier.
Montmagny.....	Montmagny Co.....	Reconstruction of wharf.
New Carlisle.....	Bonaventure Co.....	Repairs to pier.
Phillipsburg.....	Missisquoi Co.....	New landing pier.
Pointe Valois.....	Jacques Cartier.....	Repairs to wharf.
Port Daniel.....	Bonaventure Co.....	Repairs to pier and freight shed, &c.
Rivière Blanche.....	Rimouski Co.....	Repairs and renewals to head block of pier.
Rivière du Lièvre, lock and dam.....		Repairs to lock, &c.
Rivière du Sud.....	Montmagny Co.....	Protection of river bank.
Rivière Ouelle.....	Kamouraska Co.....	Repairs to pier.
Rivière Richelieu, Belœil channel.....	Chambly Co.....	New guide pier west side of channel and improving the latter.
Rivière Richelieu, Sorel ice piers.....	Richelieu Co.....	Repairs to ice piers.
Rivière Ste. Anne Le Péradé.....	Champlain Co.....	Works of reconstruction and repair in connection with protection of river banks.
Rivière St. Maurice, between Grandes Piles and Latuque.....	St. Maurice Co.....	Improvement of river channel.
Roberval.....	Chicoutimi and Saguenay.....	Erection of freight shed, &c.
St. Alphonse (Bagotville).....	do.....	Erection of freight shed.
St. Anne du Saguenay.....	do.....	New pier-work, &c.
Ste. Famille (Ile d'Orléans).....	Montmorency Co.....	Works of repair to pier.
St. Irénée.....	Charlevoix Co.....	Works of reconstruction and repair on pier.
St. Jean (Ile d'Orléans).....	Montmorency Co.....	Erection of combined freight shed and waiting room on pier.
St. Jean Port Joli.....	L'Islet Co.....	Repairs to pier.
St. Michel de Bellechasse.....	Bellechasse Co.....	Renewals, repairs, &c., to pier.
St. Valentin.....	St. John Co.....	Construction of a wharf.
Three Rivers.....	St. Maurice Co.....	Ice breaker, repairs.

See Appendix 3, page 74.

BUILDINGS.—During the fiscal year, the public buildings at the undermentioned places, received the attention of the Department.

Aylmer, post office.—Repairs to heating apparatus, to outside walls, fences, gates, and plastering; shingling of outbuildings renewed; carpet and furniture supplied, and sundry other necessary improvements, in connection with drainage.

Fraserville, public building.—Blinds furnished windows.

Grosse Isle, quarantine station.—Roofs re-shingled, and tarred; walls lime-whitened; windows and doors painted; repairs to plastering, glazing and brickwork; new venetian blinds furnished, new chimney built; S.S. "Challenger" cleaned and repainted.

Joliette, public building.—General repairs, painting and colouring.

Laprairie, post office.—New porch to rear entrance.

Montreal, custom-house.—Renewals to boiler; sundry repairs to office furniture; electric bells and stamps supplied.

do examining warehouse.—New steel smoke stack; repairs to boilers; repairs to hatchways and coils; new elevating gangways supplied.

do inland revenue building.—Repairs to gas mains, water pipes, &c.

do post office.—Improvements and repairs to machinery, elevators and furnaces.

Quebec, citadel, Governor General's quarters.—The usual annual preparations were made for His Excellency's visit and sundry repairs made.

do custom-house.—Miscellaneous repairs.

do examining warehouse.—Repairs to roof, heating apparatus, &c.

do marine and immigration agency building.—Various improvements, and repairs.

do immigration building, Louise embankment.—Building painted, sundry improvements.

do post office.—New galvanized iron roof on portion of building; gas-piping renewed and extended; painting, papering, kalsomining and other improvements.

Richmond, post office.—Building nearing completion, contract made for hot water heating apparatus.

Rimouski, post office.—Contract having been abandoned by contractor, building has been carried on by day work and is nearing completion; contract let for hot-water heating apparatus.

St. Henri, post office.—Sundry repairs, improvements and supplies.

St. Jérôme, public building.—Repairs to sidewalks.

St. John's, public building.—Plumbing renewed; basement floored in concrete; sundry furniture for postmaster.

Sherbrooke, public building.—Metal roof repaired and painted; repairs to plumbing, furnace and water tanks; new heating coils put in; new floor in post office; sundry furniture supplied.

Sorel, public buildings.—Improvements to Prince street yard entrance; external woodwork and ironwork re-painted and granolithic sidewalk laid along street fronts; plumbing entirely renewed; improvements in post office and ordinary repairs to building.

Three Rivers, custom house.—Ordinary repairs.

do post office.—New flag supplied.

See Appendix No. 2, page 27.

DREDGING.—During the year dredging operations were carried on on the ship channel between Montreal and Quebec, where four elevator dredges were employed; in the River Richelieu, near Beloeil; in the Berthier channel; at Boucherville, in Chambly, and at Calumet and Grenville in Argenteuil counties; at Laprairie; at the Louise Basin, Quebec; at Papineauville in Ottawa county; Pointe aux Trembles (en haut) in Hochelaga county; in the River St. Francis at Sillery Cove, Quebec county; St. Jean des Chaillons, Lotbiniere county and at St. Valentin, St. John's county. For full details see engineer's report, Appendix No. 3, page 138 and following pages.

Department of Public Works

ROADS AND BRIDGES.

In the older provinces of the Dominion, the Federal Government has confined itself, as a rule, to making provision towards the construction and maintenance of important interprovincial road bridges, and bridges required across waterways, under its exclusive control. In the very sparsely settled districts of the North-west Territories, however, the Government of Canada has also undertaken to provide for the erection and maintenance of ordinary road bridges over large streams that are urgently needed to afford uninterrupted communication through trails and highways of national importance, which, neither the municipalities to be more immediately benefited by the structures, nor yet the territorial authorities most directly concerned, could be expected to erect and maintain at their sole expense.

During the fiscal year ended 30th June, 1897, the iron swing bridge at Burlington channel, leading from Lake Ontario to Hamilton harbour, was completed, inclusive of electrical apparatus for working the swing span.

Works of repair and improvement were carried out as usual on the various bridges in the city of Ottawa, inclusive of approaches, the maintenance of which devolves on the Federal Government, viz., the bridges over slides at the Chaudière Falls, together with roadways in connection with same; Union Bridge over the Ottawa, and Dufferin Bridge, Sappers Bridge and Maria Street Bridge, across the Rideau Canal. A detailed account of these renewals, repairs, &c., is contained in the report of the Superintending Engineer, Ottawa River Works, under the heading of slides and booms.

Repairs were also made to the following road bridges in the North-west Territories, viz., the Battle River Bridge at Battleford; the Belly River Bridge at Lethbridge; the Langevin Bridge at Calgary, and the Old Man's River Bridge at Macleod.

SLIDES AND BOOMS.

The reports of the officials in charge of the slides and booms will be found in Appendix No. 3, page 180, and following pages. Tables in reference to their financial standing will be found attached to the report of the Collector of Revenues, Appendix No. 4, pages 201, &c. A list of the names of persons employed on the slides and booms, with full particulars regarding them will, be found at Appendix No. 8, page 229.

SURVEYS AND EXAMINATIONS.

During the fiscal year, surveys and examinations were made at the undermentioned places, either on the present condition of existing works or the practicability of the construction of new works of various kinds.

NOVA SCOTIA.

Arisaig.....	Antigonish Co.	McNair's Cove.....	Antigonish Co.
Aspey Bay.....	Victoria.	Monk's Head.....	do
Avonport.....	King's.	Neill's Harbour.....	Victoria.
Beaver River.....	Yarmouth.	Newellton.....	Shelburne.
Boularderie (Ross Ferry).....	Antigonish.	Nxel.....	Hants.
Breeding Cove.....	Victoria.	North River.....	Victoria.
Canada Creek.....	King's.	North Sydney.....	Cape Breton.
Chebogue Point.....	Yarmouth.	Oyster Pond.....	Guysboro'.
Cheggogin.....	do	Pennant Harbour.....	Halifax.
Cheticamp Point.....	Inverness.	Picket's Pier.....	King's.
Chipman Brook.....	King's.	Pictou (Public Building).....	Pictou.
Clarke's Harbour.....	Shelburne.	Port George.....	Annapolis.
Cow Bay.....	Cape Breton.	Port Hood.....	Inverness.
Cranberry Head.....	Yarmouth.	Port Latour.....	Shelburne.
Cribbin's Point.....	Antigonish.	Port L'Hébert.....	do
Georgeville.....	do	Port Lorne.....	King's.
Grand Etang.....	Inverness.	Port Maitland.....	Yarmouth.
Hampton.....	King's.	Port Mouton.....	Queen's.
Harbour Bouché.....	Antigonish.	Pubnico Head.....	Yarmouth.
Hantsport.....	Hants.	Pugwash.....	Cumberland.
Hiltz Narrows.....	Lunenburg.	Ross Ferry (Road).....	Victoria.
Horton Landing.....	King's.	Seaside.....	Inverness.
Iona.....	Victoria.	St. Mary's River.....	Guysboro'.
Joggins.....	Cumberland.	Smith's Island.....	Inverness.
Judique.....	Inverness.	Stanwood Beach.....	Yarmouth.
Lafford's Cove.....	Richmond.	Stony Island.....	do
Larry's River.....	Guysboro'.	Sydney (Quarantine wharf).....	Cape Breton.
Little Narrows.....	Victoria.	Tony River.....	Pictou.
Liverpool.....	Queen's.	Wallace.....	Cumberland.
Lockeport.....	Shelburne.	West Pubnico.....	Yarmouth.
Maitland.....	Hants.	Whitewater.....	King's.
Malcouche.....	Cape Breton.	Windsor.....	Annapolis.
Margaree.....	Inverness.	Woods' Harbour.....	Shelburne.
Meteghan.....	Digby.		

PRINCE EDWARD ISLAND.

Apple Tree Pier.....	Queen's.	Mount Stewart.....	Queen's.
Brae Harbour.....	Prince.	McConnell's Pier.....	do
Canoe Cove.....	Queen's.	Red Point.....	do
Cranberry Pier.....	do	St. Peter's Bay.....	King's.
China Point.....	do	Souris Harbour.....	do
Gillis River.....	do	Summerside.....	Prince.
Haggarty's Wharf.....	do	Tignish Harbour.....	do
Hayden's Wharf.....	do	Vernon River (pier).....	Queen's.
Miminigash Harbour.....	Prince.	West point.....	Prince.

NEW BRUNSWICK.

Anderson's Hollow.....	Albert.	Maisonnette.....	Gloucester.
Buctouche.....	Kent.	Negro Point.....	St. John.
Cape Tormentine.....	Westmoreland.	Newcastle.....	Northumberland.
Clifton (Stonehaven).....	Gloucester.	Oromocto (R. St. John).....	Sunbury.
Cocagne.....	Kent.	Partridge Island.....	St. John.
Dalhousie.....	Restigouche.	Quaco.....	do
Fort Dufferin.....	St. John.	Restigouche River.....	Restigouche.
Fredericton (R. St. John).....	York.	Shediac.....	Westmoreland.
Gardner's Creek.....	St. John.	St. John Harbour.....	St. John.
Grand Falls (R. St. John).....	Victoria.	St. Mary's.....	Kent.
Gray's Point (R. St. John).....	King's.	Tracadie.....	Gloucester.
Herring Cove.....	Albert.	Tynemouth Creek.....	St. John.
Jemseg (R. St. John).....	Queen's.	Westfield (R. St. John).....	King's.
Mispec.....	St. John.	Wilson's Beach.....	Charlotte.

Department of Public Works.

QUEBEC.

Anse à Beaufils	Gaspé.	Rivière du Lièvre (Little Rapids, lock, &c)	Labelle.
Baie St. Paul	Charlevoix.	Rivière Noire.	Charlevoix.
Berthier (en haut)	Berthier.	Rivière Ouelle	Kamouraska.
Cap à l'Aigle	Charlevoix.	River St. Francis.	Yamaska.
Cap de la Magdeleine.	Champlain.	River Yamaska (lock, &c)	do
Chateauguay	Chateauguay.	River St. Maurice	St. Maurice.
Chenal du Moine (ice piers)	Richelieu.	River St. Lawrence Ship Channel between Montreal and Quebec	do
Chicoutimi	Chicoutimi and Saguenay.	Shawenegan	Kamouraska.
Eboulements	Charlevoix.	Ste. Anne la Pocatière.	Champlain.
Kamouraska	Kamouraska.	Ste. Anne de la Pérade	Richilieu.
Ile aux Coudres.	Charlevoix.	Ste. Anne de Sorel.	Chicoutimi and Saguenay.
Iberville	St. Jean and Iberville.	Ste. Anne du Saguenay	Huntingdon.
Lanoraie	Berthier.	Ste. Barbe	Montmorency.
La Tortue.	Laprairie.	Ste. Famille.	Jacques Cartier.
L'Islet.	L'Islet.	Ste. Geneviève	Charlevoix.
Lotbinière.	Lotbinière.	St. Irénée	Montmorency.
Louiseville.	Maskinongé.	St. Jean, Ile d'Orleans.	L'Islet.
Maguacha	Bonaventure.	St. Jean Port Joli	Bellechase.
Manigance Rapid.	St. Maurice.	St. Michel de Bellechase.	Lévis.
Mistassini.	Chicoutimi and Saguenay.	St. Nicholas	Laval.
Murray Bay	Charlevoix.	St. Vincent de Paul	Soulanges.
Philipsburg	Mississquoi.	St. Zotique.	Three Rivers and St. Maurice.
Rivière Blanch.	Rimouski.	Three Rivers.	
River Richelieu (Sorel ice piers)	Richelieu.		

ONTARIO.

Desbarats River.	Algoma.	Port Stanley	Elgin (East).
Fort Francis	do	Prescott.	Grenville (South).
Goderich	Huron (West).	Rainy River	Algoma.
Kincardine	Bruce (West).	Sparrow Lake	Ontario (North).
Kingston Harbour.	Kingston City.	Toronto.	Toronto City.
Owen Sound	Grey (North).	Wasdale's Falls.	Ontario (North).
Point Edward.	Lambton (West).		

MANITOBA.

St. Andrews Rapids, Red River, Selkirk County.

BRITISH COLUMBIA.

Fraser River.

I have the honour to be, sir,

Your obedient servant,

A. GOBEIL,
Deputy Minister.

APPENDIX No. I.

STATEMENT OF EXPENDITURE

DURING

FISCAL YEAR ENDED 30TH JUNE, 1897

Department of Public Works

APPENDIX No. I.

STATEMENT A.—Showing the Amount Expended by the Department of Public Works of Canada during the Fiscal Year ended 30th June, 1897.

Name of Work.	Con- struction and Im- provements.	Repairs and Furniture.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
PUBLIC BUILDINGS.				
<i>Nova Scotia.</i>				
Amherst post office, &c		537 05		537 05
Antigonish do		235 60		235 60
Baddeck do		75 02		75 02
Dartmouth do	1 00	15 72		16 72
Halifax Assistant Receiver General's Office		46 75		46 75
do Dominion building	40 00	693 22		733 22
do drill hall	81,167 89			81,167 89
do examining warehouse		167 15		167 15
do immigrant building	13,430 75			13,430 75
do Lawlor's Island quarantine station		749 38		749 38
Lunenburg post office, &c	474 98	89 16		564 14
New Glasgow do		79 84		79 84
North Sydney do		15 50		15 50
Pictou custom-house		162 62		162 62
do post office	1,769 31	20 00		1,789 31
Sydney post office, &c		300 93		300 93
do Point Edward quarantine station		1 58		1 58
Truro post office, &c		92 45		92 45
Windsor do		286 80		286 80
Yarmouth do		208 62		208 62
<i>Prince Edward Island.</i>				
Charlottetown Dominion building		1,287 12		1,287 12
do marine hospital		49 54		49 54
Montague post office		7 05		7 05
Summerside do		31 39		31 39
<i>New Brunswick.</i>				
Bathurst post office, &c		132 88		132 88
Chatham do		182 04		182 04
Fredericton do		848 60		848 60
Moncton do		388 08		388 08
Newcastle do		79 30		79 30
Partridge Island quarantine station	712 55			712 55
Portland post office		9 75		9 75
St. John custom-house, &c		2,016 30		2,016 30
do post office		364 54		364 54
do savings bank		37 82		37 82
St. Stephen's post office, &c	478 37			478 37
Sussex do		67 09		67 09
Tracadie lazaretto	1,171 67			1,171 67
Woodstock post office, &c		9 09		9 09
<i>Maritime Provinces Generally.</i>				
Generally			334 49	334 49
Carried forward..	99,246 52	9,287 98	334 49	108,868 99

APPENDIX NO. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Con- struction and Im- provements.	Repairs and Furniture.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
PUBLIC BUILDINGS—Continued.				
Brought forward.....	99,246 52	9,287 98	334 49	108,868 99
<i>Quebec.</i>				
Aylmer post office.....		502 35		502 35
Coaticook post office, &c.....	1,287 00	44 75		1,331 75
Dundee custom-house.....		4 00		4 00
Grosse Isle quarantine station.....	5,818 12	714 10		6,532 22
Hull post office.....		255 95		255 95
Joliette do.....		29 56		29 56
Laprairie post office.....		124 00		124 00
Montreal civil service examination offices.....		21 20		21 20
do custom-house.....		352 29		352 29
do examining warehouse.....		477 76		477 76
do inland revenue office.....		54 00		54 00
do post office.....		4,328 14		4,328 14
do do running elevators.....			2,535 06	2,535 06
do public buildings generally, Quebec.....			578 98	578 98
Quebec citadel buildings.....		2,533 66		2,533 66
do clerk of works' office.....		9 00		9 00
do custom-house.....		549 99		549 99
do drill hall.....		10 00		10 00
do examining warehouse.....		143 94		143 94
do immigrant buildings on Princess Louise em- bankment.....		3,650 65		3,650 65
do observatory.....		1 50		1 50
do post office.....	750 00	2,984 27		3,734 27
do Queen's wharf building.....		422 00		422 00
do weights and measures office.....		218 91		218 91
Richmond post office.....	9,251 50			9,251 50
Rimouski do &c.....	9,944 63			9,944 63
Rivière du Loup (Fraserville) post office.....		33 15		33 15
St. Vincent de Paul penitentiary.....	4,766 59			4,766 59
St. Henri post office.....		55 66		55 66
St. Hyacinthe post office.....		117 41		117 41
St. Jérôme do &c.....		27 00		27 00
St. Johns do.....		1,124 24		1,124 24
St. Roch de Québec post office.....		13 54		13 54
Sherbrooke post office, &c.....		636 00		636 00
Sorel do.....		1,777 90		1,777 90
Three Rivers custom-house.....		320 86		320 86
do exhibition buildings.....	4,131 20			4,131 20
do post office.....		80 28		80 28
Valleyfield do.....		46 95		46 95
Victoriaville do.....		100 00		100 00
West Farnham do.....		14 60		14 60
<i>Ontario.</i>				
Alexandria reformatory.....	281 80			281 80
Almonte post office, &c.....		18 35		18 35
Amherstburg do.....		8 50		8 50
Arnprior do.....	5,082 60			5,082 60
Barrie do.....		730 50		730 50
Belleville do.....	1,297 45	188 95		1,486 40
Berlin do.....		22 01		22 01
Brampton do.....		30 50		30 50
Brantford do.....	932 34	20 84		953 18
Brockville do.....		206 33		206 33
Carleton Place do.....		5 25		5 25
Cayuga do.....		37 45		37 45
Chatham do.....		265 85		265 85
Clifton (see Niagara Falls).				
Cobourg post office, &c.....		2 90		2 90
Carried forward.....	142,789 75	32,605 02	3,448 53	178,843 30

Department of Public Works.

APPENDIX No. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Con- struction and Im- provements.	Repairs and Furniture.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS—Continued.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	142,789 75	32,605 02	3,448 53	178,843 30
Ontario—Continued.				
Cornwall post office, &c.....		50 88		50 88
Dundas do.....		29 55		29 55
Galt do.....		5 70		5 70
Gananoque do.....		64 75		64 75
Goderich do &c.....		11 70		11 70
Guelph do.....		135 39		135 39
Hamilton do.....		1,980 52		1,980 52
Kingston custom-house.....	266 65	443 88		710 03
do inland revenue office.....		0 45		0 45
do military college.....		5 00		5 00
do post office.....		637 42		637 42
Lindsay do.....		32 60		32 60
London custom-house.....		369 79		369 79
do immigrant building.....		2 50		2 50
do infantry school.....		198 87		198 87
do post office.....		1,008 82		1,008 82
Lucan do.....		12 50		12 50
Napanee do &c.....		11 54		11 54
Niagara Falls post office.....		237 68		237 68
Orangeville do.....		178 84		178 84
Orillia do.....		7 20		7 20
Ottawa Parliamentary and Departmental buildings:—				
Renewal of boilers, East Block.....	4,583 60			4,583 60
Better protection against fire.....	2,948 40			2,948 40
Renewals and temporary repairs after fire of 11th February, 1897, West Block.....		36,989 34		36,989 34
Repairs and furniture.....		116,862 48		116,862 48
Telephone service.....			3,799 50	3,799 50
Decorations for H. M. Diamond Jubilee.....			5,945 76	5,945 76
Ottawa Parliament grounds:—				
Asphalt walks in front of Parliament buildings.....	3,500 00			3,500 00
do and roadways generally.....	2,201 73			2,201 73
Maintenance of grounds.....			4,888 00	4,888 00
Removal of snow.....			461 44	461 44
Major's Hill park.....			2,659 85	2,659 85
Ottawa experimental farm.....	4,038 43	2,433 14		6,471 57
do geological museum.....	122 05	22 00		144 05
do national art gallery and fisheries building.....		219 60		219 60
do do purchase of pictures.....	700 00			700 00
do post office.....	123 48	462 40		585 88
do do asphaltting esplanade.....	1,500 00			1,500 00
do printing bureau, fire escapes.....	1,100 00			1,100 00
do do repairs.....		265 16		265 16
do Rideau hall, repairs and furniture.....		19,401 83		19,401 83
do do grounds, \$2,940; snow, \$283; watchman, \$547.50; fuel and light, \$8,000.....			11,770 94	11,770 94
Pembroke post office, &c.....		42 00		42 00
Peterboro' do.....		99 71		99 71
Petrolia do &c.....	342 76	20 69		363 45
Point Edward (Sarnia) immigrant buildings.....		34 64		34 64
Port Arthur immigrant buildings.....		41 85		41 85
do post office, &c.....		63 44		63 44
Port Colborne do.....		12 30		12 30
Port Hope do.....		52 50		52 50
Prescott custom-house.....	75 00			75 00
do post office.....	75 00	78 90		153 90
Public buildings generally, Ontario.....			511 14	511 14
Smith's Falls post office, &c.....		39 75		39 75
Stratford do.....	328 00	39 40		367 40
Strathroy do.....		9 55		9 55
Carried forward.....	164,694 85	215,220 84	33,485 16	413,400 45

APPENDIX No. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work	Con- struction and Im- provements.	Repairs and Furniture.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
PUBLIC BUILDINGS—Continued.				
Brought forward.....	164,694 85	215,220 84	33,485 16	413,400 45
<i>Ontario—Concluded.</i>				
St. Catharines post office, &c.....		30 30		30 30
St. Thomas do	521 49	207 80		729 29
Toronto—assistant receiver general and inland revenue offices	3,232 15	369 91		3,602 06
do civil service examination office.....		44 11		44 11
do custom-house		3,948 14		3,948 14
do drill hall		28 68		28 68
do examining warehouse.....		1,042 26		1,042 26
do post office		2,022 94		2,022 94
Trenton do	168 00	23 21		191 21
Walkerton do		12 65		12 65
Windsor do		170 95		170 95
<i>Manitoba.</i>				
Brandon Experimental Farm.....	66 43	11 96		78 39
do immigrant building		80 17		80 17
do post office, &c.....		525 05		525 05
Portage la Prairie post office, &c.....	8,150 90			8,150 90
Public buildings generally, Manitoba.....			2,572 16	2,572 16
Winnipeg clerk of works office		183 75		183 75
do crown timber office		42 98		42 98
do custom-house		236 47		236 47
do Dominion lands office		175 49		175 49
do examining warehouse		54 52		54 52
do immigration shed		565 43		565 43
do Indian office		17 43		17 43
do post office		1,941 82		1,941 82
<i>North-west Territories.</i>				
Calgary court-house		87 48		87 48
do Dominion lands office		2 75		2 75
do immigrant building		46 00		46 00
do post office		76 05		76 05
Edmonton land and registry office.....		265 50		265 50
Indian Head experimental farm.....	27 29	214 95		242 24
Lethbridge court-house, post office, &c.....		26 95		26 95
Macleod court-house		33 60		33 60
Moose Jaw court-house		92 60		92 60
Moosomin do	1,493 87	807 60		2,301 47
Prince Albert do and jail.....	6,097 40	117 00		6,214 40
do land and registry office.....		78 90		78 90
Public buildings generally, N. W. T.....			1,680 15	1,680 15
Regina—clerk of works' office		17 00		17 00
do court-house		895 30		895 30
do Dominion lands office		138 65		138 65
do government offices		93 52		93 52
do immigrant building		24 47		24 47
do lieutenant-governor's residence.....	1,590 00	1,138 94		2,728 94
do post office		61 71		61 71
Wolseley court-house.....		69 55		69 55
<i>British Columbia.</i>				
Agassiz experimental farm.....	94 67			94 67
Nanaimo post office, &c.....		31 10		31 10
New Westminster Dominion lands office.....		51 35		51 35
do drill hall.....	3,188 68			3,188 68
do engineer's office.....		159 10		159 10
Carried forward.....	189,325 73	231,486 93	37,737 47	458,550 13

Department of Public Works.

APPENDIX No. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Con- struction and Im- provements.	Repairs and Furniture.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS—Continued.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	189,325 73	231,486 93	37,737 47	458,550 13
<i>British Columbia—Concluded.</i>				
New Westminster post office, &c.....		117 18		117 18
Public buildings generally, British Columbia.....			129 31	129 31
Vancouver post office, &c.....		424 61		424 61
Victoria custom-house.....		48 47		48 47
do drill hall.....	319 66	125 85		445 51
do engineer's office.....		10 60		10 60
do marine hospital.....		5 00		5 00
do post office (old).....		275 86		275 86
do do (new).....	99,831 17			99,831 17
do savings bank.....		7 50		7 50
William's Head quarantine station.....	4,995 19	548 69		5,543 88
PUBLIC BUILDINGS GENERALLY.				
Printing, stationery, instruments, travelling, &c.....			4,061 88	4,061 88
Expenditure, as per statement B (page 14), for rents, salaries and supplies for caretakers and engineers, and heating, lighting and water for public build- ings throughout the Dominion.....			296,438 23	296,438 23
	294,471 75	233,050 69	338,366 89	865,889 33
HARBOURS, &c.				
<i>Nova Scotia.</i>				
	Dredging.			
	\$ cts.			
Arisaig.....		1,239 38		1,239 38
Avonport.....		500 00		500 00
Boularderie-Wharf at Ross Ferry.....	2,758 75			2,758 75
Cheverie.....		100 55		100 55
Church Point breakwater.....	3,974 32			3,974 32
Cribbin's Point wharf.....		1,552 44		1,552 44
Digby.....	2,781 69			2,781 69
East Jordan.....		8 93		8 93
Fourchu Harbour.....	1,833 21			1,833 21
Georgeville.....	845 12			845 12
Grand Etang.....	497 23			497 23
Great Village.....		0 50		0 50
Halifax Graving Dock—subsidy.....			10,000 00	10,000 00
Hantsport.....		174 13		174 13
Harbours generally, N.S.....			1,092 35	1,092 35
Hiltz Narrows.....		20 00		20 00
Horton Landing.....		270 75		270 75
Joggins.....		1,499 12		1,499 12
L'Ardoise.....		25 00		25 00
Larry's River.....	3,073 19			3,073 19
Liverpool.....	4,107 50			4,107 50
McNair's Cove.....		296 02		296 02
Margaree—beach protection.....	199 99			199 99
Margaretsville.....	5,015 83			5,015 83
Monk's Head.....	300 00			300 00
Morden.....		1,963 91		1,963 91
Noël.....		100 00		100 00
Oyster Pond.....		698 46		698 46
Parrsboro'.....		50 16		50 16
Pickett's Pier.....		498 88		498 88
Port George.....		398 50		398 50
Port Hood.....		1,500 00		1,500 00
Port Maitland (Co. Yarmouth).....		3,303 73		3,303 73
Port Mouton.....	266 76			266 76
Carried forward.....	9,280 66	310,844 68	349,459 24	916,835 73

APPENDIX No. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Dredging.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
HARBOURS AND RIVERS—Con.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	9,280 66	310,844 68	247,251 15	249,450 24	916,835 73
<i>Nova Scotia—Concluded.</i>					
Pugwash.....		137 41			137 41
Seaside.....		4,991 00			4,991 00
South Gut.....		27 18			27 18
Stony Island.....			45 69		45 69
Trout Cove.....			3,903 02		3,903 02
Wallace.....	5,224 82	1,461 00			6,686 82
Yarmouth.....	5,043 21		2,937 34		7,980 55
<i>Prince Edward Island.</i>					
Annandale.....			74 67		74 67
Belfast.....			499 94		499 94
Chapel Point.....			41 46		41 46
Charlottetown.....\$5,750 16					
Less—Refunds for dredg- ing done at private wharfs.....587 91					
	5,162 25				5,162 25
China Point.....			284 32		284 32
Crapaud.....	3,661 12		199 51		3,860 63
Harbours generally, P.E.I.....				577 68	577 68
Hickey's Pier.....			253 31		253 31
Hurd's Point.....			107 62		107 62
Kier's Shore.....			62 05		62 05
New London.....			747 41		747 41
North Cardigan.....			20 79		20 79
Pinette.....			200 00		200 00
Port Selkirk.....			597 46		597 46
Pownal.....			132 47		132 47
St. Mary's Bay.....			99 89		99 89
St. Peter's Bay.....			7 70		7 70
Souris, Knight's Point breakwater.....		20,846 60	1,015 09		21,861 69
Tignish.....			2,157 22		2,157 22
Vernon River Bridge pier.....			216 77		216 77
<i>New Brunswick.</i>					
Anderson's Hollow.....			1,018 79		1,018 97
Cape Tormentine.....			566 98		566 98
Campbellton "Traverse".....	5,663 26				5,663 26
Gardner's Creek.....		5,308 75			5,308 75
Harbours generally, N.B.....				1,092 35	1,092 35
Herring Cove.....			990 25		990 25
Partridge Island, quarantine wharf.....		1,136 71			1,136 71
Quaco.....			1,377 64		1,377 64
Richibucto.....	2,614 42				2,614 42
River St. John—					
Between river and Grand Lake.....	1,498 81				1,498 81
Fredericton.....	352 40				352 40
Gray's Point wharf.....		500 00			500 00
Spoon Island.....	370 91				370 91
Westfield Landing wharf.....		338 62			338 62
St. John harbour—					
Fort Dufferin protection work.....			3,398 70		3,398 70
Negro Point breakwater.....			8,465 24		8,465 24
Dredging.....\$19,810 59					
Less refund for dredging done at private wharf.....150 00					
	19,660 59				19,660 59
Carried forward.....	58,532 45	345,591 95	276,672 48	351,129 27	1,031,926 15

Department of Public Works

APPENDIX No. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Dredging.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
HARBOURS AND RIVERS—Con.					
Brought forward	58,532 45	345,591 95	276,672 48	351,129 27	1,031,926 15
<i>Quebec.</i>					
Anse à l'Eau, Tadoussac			1,474 93		1,474 93
Anse St. Jean			598 78		598 78
Ragotville, St. Alphonse			487 78		487 78
Berthier (en haut)	3,936 60	2,584 16	733 29		7,254 05
Calumet	168 24				168 24
Cap à l'Aigle			816 49		816 49
Chicoutimi		4,992 96			4,992 96
Coteau du Lac			1,507 32		1,507 32
Coteau Landing			984 29		984 29
Etang du Nord			764 13		764 13
Grande Rivière		1,881 41			1,881 41
Grand Pabos			500 00		500 00
Grenville	217 59				217 59
Harbours generally, Quebec	1,393 44			1,004 33	2,397 77
Ile aux Coudres			147 66		147 66
Ile Perrot			395 93		395 93
Kamouraska			995 62		995 62
Lake St. John piers and approaches—					
Mistassini		681 04			681 04
Roberval		425 98			425 98
Lanoraie			1,008 27		1,008 27
Laprairie	6,608 87	4,400 36			11,009 23
Les Eboulements			283 57		283 57
Lévis graving dock				7,718 88	7,718 88
L'Islet			396 80		396 80
Longueuil			284 56		284 56
Lotbinière		148 63			148 63
Lower St. Lawrence, landing places for fishing boats—					
Anse au Beaufils		50 00			50 00
Anse au Griffon		75 00			75 00
Anse aux Canards		50 00			50 00
Cap Chat		100 00			100 00
Cap des Rosiers		75 00			75 00
Chlorodyrme		91 15			91 15
Fox River		94 00			94 00
Grande Vallée		75 00			75 00
La Madeleine		100 00			100 00
Newport, Rivière des Flots		43 00			43 00
Percé		50 00			50 00
Petite Rivière		50 00			50 00
Pointe à la Frégate		50 00			50 00
Ste. Adélaïde de Pabos		50 00			50 00
Ste. Anne de Monts		100 00			100 00
Ste. Ivon and Pointe Sèche		50 00			50 00
Magog			154 82		154 82
Mille Isles			4 25		4 25
Montmagny		4,046 51			4,046 51
Murray Bay			149 93		149 93
New Carlisle			849 87		849 87
Papineauville	1,055 91				1,055 91
Philipsburg		646 55			646 55
Piers below Quebec				1,608 29	1,608 29
Pointe aux Trembles	549 41				549 41
Pointe à Valois			210 72		210 72
Fort Daniel			1,992 75		1,992 75
Quebec	903 53				903 53
Rivière Blanche wharf			892 73		892 73
Carried forward	73,366 04	366,502 60	292,306 97	361,460 77	1,093,633 48

APPENDIX NO. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Dredging.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
HARBOURS AND RIVERS—Con.					
Brought forward.....	73,366 04	366,502 60	292,306 97	361,460 77	1,093,636 48
<i>Quebec—Concluded.</i>					
Rivière Chateauguay.....	5,242 00				5,242 00
do du Lièvre lock.....		54 85	1,824 39	790 79	2,670 03
do du Loup (en bas).....			100 00		100 00
do du Sud, protection works.....		3,993 08			3,993 08
do Gatineau do.....		245 76			245 76
do L'Assomption.....		998 31			998 31
do Ouelle wharf.....			845 39		845 39
do Richelieu, Belceil channel guide piers and booms.....	730 45	2,170 12		120 00	3,020 57
do Ste. Anne de la Pérade.....			3,003 83	48 00	3,051 83
do St. Francis.....	830 94				830 94
do St. Lawrence Ship Channel.....	*107,308 39				107,308 39
do St. Louis, headgates.....				120 00	120 00
do St. Maurice, channel between Grandes Piles and Latuque.....		162 33		52 80	215 13
Ste. Anne du Saguenay.....		5,000 00			5,000 00
Ste. Famille.....			1,161 91		1,161 91
St. Irénée.....		3,588 31			3,588 31
St. Jean des Chaillons.....	483 55				483 55
St. Jean, Ile d'Orléans.....		389 38			389 38
St. Jean Port Joli.....			474 56	10 00	484 56
St. Michel de Bellechasse.....		985 00	49 82		1,034 82
St. Valentin.....	460 00	174 10			634 10
Sorel ice piers.....			441 53		441 53
Three Rivers ice breaker.....			538 43		538 43
Yamaska lock.....				685 76	685 76
<i>Ontario.</i>					
Amherstburg.....	18 00				18 00
Belle River.....	368 70				368 70
Belleville.....	1,223 63				1,223 63
Bowmanville.....	1,301 49				1,301 49
Burlington Channel piers.....			1,454 24		1,454 24
Cobourg.....	865 81				865 81
Collingwood.....	3 89		37 75		41 64
Frenchman's Bay.....	772 05				772 05
Goderich.....		372 80	1,068 18		1,440 98
Hamilton.....	2,487 50				2,487 50
Harbours generally, Ont.....	2,921 56			1,016 81	3,938 37
Hawkesbury.....	391 46				391 46
Indian River.....	192 25				192 25
Kincardine.....	3,412 51		2,265 42		5,677 93
Kingston graving dock.....				4,657 10	4,657 10
Kingston harbour.....		963 16			963 16
Kingsville.....			173 55		173 55
Lakes Simcoe and Couchiching.....		4,540 55			4,540 55
L'Orignal.....		191 15			191 15
Meaford.....	738 25				738 25
Midland.....	27 00				27 00
Newcastle.....	747 31				747 31
Owen Sound.....	5,340 65	387 46			5,728 11
Penetanguishene.....	2,109 27		597 28		2,706 55
Port Arthur.....	1,321 81				1,321 81
Point Edward (Co. Lambton).....	1,200 00				1,200 00
Port Hope.....	667 08		999 94		1,667 02
Carried forward.....	214,531 59	390,719 06	307,343 19	368,962 03	1,281,555 87

*This expenditure covers improvements and repairs of plant as well as working expenses.

Department of Public Works.

APPENDIX No. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Dredging.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
HARBOURS AND RIVERS—Con.					
Brought forward.....	214,531 59	390,719 06	307,343 19	368,962 03	1,281,555 87
<i>Ontario—Concluded.</i>					
Port Stanley.....	760 48		1,982 82		2,743 30
Prescott..... \$1,193 29					
Less—Refund for dredging done at private wharf. 1,067 50	125 79				125 79
Rainy River.....		5,205 80			5,205 80
River Kaministiquia.....	9,094 43				9,094 43
River Thames.....	5,259 46				5,259 46
Sandwich.....	332 77				332 77
South Nation River.....	2,101 59				2,101 59
Thornbury.....			20 00		20 00
Toronto.....	2,488 61	3,799 15			6,287 76
Whitby.....	826 42				826 42
<i>Manitoba.</i>					
Hnausa.....		153 95			153 95
Harbours generally, Man.....				812 73	812 73
Red river, mouth.....	9,839 98				9,839 98
<i>North-West Territories.</i>					
Harbours and rivers generally, N.W.T.....				1,063 34	1,063 34
<i>British Columbia.</i>					
Columbia River, above Golden.....		2,993 65			2,993 65
do do Revelstoke.....		1,150 52			1,150 52
Duncan River.....		1,919 41			1,919 41
Esquimalt Graving Dock.....				10,770 28	10,770 28
Fraser River ship channel.....		12,028 70			12,028 70
do do removal of snags, &c.....	7,053 79				7,053 79
Harbours generally, B.C.....				2,550 57	2,550 57
Nanaimo harbour, south channel.....	7,620 21				7,620 21
Skeena River.....		1,330 88			1,330 88
Vancouver harbour.....	1,866 76				1,866 76
Victoria harbour.....	3,462 20				3,462 20
William's Head quarantine wharf and water service.....			3,558 92		3,558 92
<i>Generally.</i>					
Harbours and rivers generally.....	3,242 29			3,401 19	6,643 48
DREDGES AND DREDGING PLANT.					
Maritime Provinces.....		29,826 31	7,997 15		37,823 46
Ontario and Quebec.....		5,136 52	12,954 48		18,091 00
Manitoba.....			1,852 20		1,852 20
British Columbia.....			3,926 43		3,926 43
SLIDES AND BOOMS.					
Saguenay district.....				277 24	277 24
St. Maurice district.....		4,954 62	4,567 03	9,488 68	19,010 33
Ottawa district—					
Ottawa river.....			6,315 53	24,307 00	30,622 53
do Chenaux boom allowance to Upper Ottawa Imp't Co.....				1,722 92	1,722 92
Carried forward.....	268,606 37	459,218 57	350,517 85	423,355 98	1,501,698 67

APPENDIX NO. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Dredging.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
SLIDES AND BOOMS—Con.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward	268,606 37	450,218 57	350,517 75	423,355 98	1,501,698 67
<i>Ottawa—Con.</i>					
Gatineau River, Que			344 54		344 54
Coulonge do			3,002 35		3,002 35
Black do			2,060 59		2,060 59
Dumoine do			1,946 33		1,946 33
Madawaska River, Ont.			35 00		35 00
Petewawa do			1,998 20		1,998 20
Newcastle district.			841 14	1,980 89	2,822 03
Collection slide and boom dues				2,099 05	2,099 05
ROADS AND BRIDGES.					
<i>Ontario.</i>					
Burlington Channel Swing Bridge.		16,520 92		1,556 87	18,077 79
Ottawa City bridges and streets main- tained by Government—					
Chaudière "Union Bridge"			104 51		104 51
Chaudière minor bridges, &c.—					
Ottawa side.			908 32		908 32
Hull side.		8,563 06	936 07		9,499 13
Dufferin Bridge.		1,310 98	1 50		1,312 48
Maria St. Bridge.			24 75		24 75
Sappers' Bridge.		5,892 72	243 93		6,136 65
St. Patrick St. (west).			4 80		4 80
Wellington St.			3,295 25		3,295 25
Lighting all the above, \$2,096.67; watering, \$226.46; snow-cleaning, \$361.44.				2,684 57	2,684 57
York Bridge			12 12	50 00	62 12
<i>North-west Territories.</i>					
Battleford Bridge (Battle River).			371 46		371 46
Calgary Bridge (Bow River).			1,016 20		1,016 20
Edmonton Bridge (Saskatchewan River).		600 00			600 00
Lethbridge Bridge (Belly River).			725 32		725 32
Macleod Bridge (Old Man's River).			498 09		498 09
TELEGRAPH LINES.					
<i>Nova Scotia.</i>					
Cape Sable line				294 46	294 46
Cheticamp do			125 25	1,077 81	1,203 06
Low Point do				50 00	50 00
Meat Cove do				1,979 54	1,979 54
<i>Prince Edward Island.</i>					
Prince Edward Island and mainland cable (subsidy 18 months).				2,919 99	2,919 99
<i>New Brunswick.</i>					
Bay of Fundy line				1,316 00	1,316 00
Escuminac line				551 09	551 09
Carried forward.	268,606 37	492,106 25	369,013 47	439,916 25	1,569,642 34

Department of Public Works.

APPENDIX NO. 1.—STATEMENT A.—EXPENDITURE—Continued.

Name of Work.	Dredging.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
TELEGRAPH LINES—Con.					
Brought forward.....	268,606 37	492,106 25	369,013 47	439,916 25	1,569,642 34
<i>Quebec.</i>					
Anticosti-Gaspé line.....				2,244 48	2,244 48
Caecapedia line.....				44 89	44 89
Grosse Isle Quarantine Station line.....				851 28	851 28
Ile aux Coudres and North Shore line.....		1,643 19			1,643 19
Magdalen Island line.....				2,269 21	2,269 21
North Shore St. Lawrence lines—					
East of Bersimis.....		5,185 80		5,408 45	10,594 25
West do.....				4,627 97	4,627 97
Saguenay line, St. Alexis and Anse St. Jean.....		2,495 24			2,495 24
<i>Newfoundland.</i>					
Cape Ray line (subsidy).....				250 00	250 00
<i>Maritime Provinces and Gulf Generally.</i>					
SS. "Newfield's" cable laying plant—			1,808 74		1,808 74
repairs and improvements.....				893 78	893 78
General expenses.....					
<i>Ontario.</i>					
Peleé Island line.....		1,500 00		354 92	1,854 92
<i>North-west Territories.</i>					
Generally.....				15,092 87	15,092 87
<i>British Columbia.</i>					
Ashcroft-Barkerville line.....				2,094 49	2,094 49
Cape Beale line.....		400 00		3,782 76	4,182 76
Nanaimo-Comox line.....				3,779 04	3,779 04
Telegraph service generally.....				1,678 76	1,678 76
MISCELLANEOUS.					
Surveys and inspections.....				14,836 84	14,836 84
Monument to Champlain in the City of					
Quebec—Government contribution.....		3,000 00			3,000 00
Funeral of late Sir J. S. D. Thompson.....				1,588 79	1,588 79
Gratuity to widow late T. Carbray.....				120 00	120 00
Public Works Agency, B.C.....				2,199 28	2,199 28
Temporary employees—					
Secretary's and Accountant's Staff.....				24,465 80	24,465 80
Chief Architect's Staff.....				24,236 09	24,236 09
Chief Engineer's do.....				44,734 23	44,734 23
Telegraph Service do.....				2,900 00	2,900 00
Departmental Photographer, one-half salary.....				524 97	524 97
GRAND TOTALS.....	268,606 37	506,330 48	370,822 21	598,895 15	1,744,654 21

End of Statement "A."

APPENDIX No. 1.—STATEMENT B.—Showing details of the item \$296,438.23 (page 7) Maintenance of Public Buildings.

	Rents.	Caretakers' and Engineers' Salaries and Supplies.	Heating.	Lighting.	Water.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Nova Scotia.</i>						
Amherst post office.....		401 54	226 28	302 96	20 00	950 78
Annapolis do		399 96	157 23	146 96	40 00	744 15
Antigonish do		402 04	71 50	2 60	10 00	486 14
Arichat custom-house.....			12 00			12 00
do post office.....			112 50			112 50
Baddeck do		202 00	90 00	33 75		325 75
Dartmouth do		249 99	65 40	121 35	38 25	474 99
Halifax appraiser's office.....		2 80	137 62	88 20	32 35	260 97
do asst. receiver general's office.....	1,200 00		52 95	79 80		1,332 75
do Dominion building.....		2,034 79	763 55	2,917 07	532 05	6,247 46
do engineer's office.....	450 00					450 00
do examining warehouse.....	1,000 00	510 80				1,510 80
do immigrant shed.....	66 63	311 93	306 43	264 05		949 04
do penitentiary.....	0 24					0 24
Lunenburg post office.....		309 50	157 50	139 00		606 00
New Glasgow do		373 98	156 48	356 54	100 00	987 00
North Sydney do		404 40	149 12	241 60		795 12
Pictou custom-house.....		366 85	118 84			485 69
do post office.....		17 50	49 39	34 75	1 26	102 90
Sydney do		439 70	168 50	405 50	25 00	1,038 70
Truro do		253 57	35 50	209 37	27 00	525 44
Windsor do		400 00	150 44	81 45	50 00	681 89
Yarmouth do		400 00	292 65	550 60	36 00	1,279 25
<i>Prince Edward Island.</i>						
Charlottetown Dominion building.....		1,769 64	471 20	1,060 25	225 00	3,526 09
do engineer's office.....	180 00					180 00
Montague post office.....		166 88	49 65	23 52		240 05
Summerside do		411 48	263 04	114 56		789 08
<i>New Brunswick.</i>						
Bathurst post office.....		456 17	308 93	25 00		790 10
Carleton, St. John, post office.....		100 00	33 27	150 35	12 00	295 62
Chatham post office.....		306 96	333 32	158 00		798 28
Dalhousie do		412 37	205 99	20 75		639 11
Fredericton do		400 00	251 23	534 63	50 00	1,235 86
Moncton do		400 00	205 95	460 54	100 50	1,166 99
Newcastle do		413 55	276 70	264 30		954 55
Portland, St. John, post office.....	130 90		15 50	67 36	12 50	226 26
St. John customs house	22 00	1,957 14	1,313 64	417 71	561 79	4,272 28
do post office.....		1,402 13	531 19	3,418 71	450 25	5,802 28
do savings bank.....			212 81	119 30	17 52	349 63
St. Stephen's post office.....		407 09	124 40	319 20	64 00	914 69
Sussex do		338 22	4 50			342 72
Tracadie lazaretto		175 00	800 29			975 29
Woodstock post office.....		483 33	210 19	120 00	34 00	847 52
<i>Quebec.</i>						
Aylmer post office.....		60 00	201 00	29 48	20 25	310 73
Coaticook do		410 86	212 75	150 00	40 00	813 61
Dundee custom-house.....			30 00			30 00
Hull post office.....		150 00	300 30	334 90	114 00	899 20
Joliette do		404 63	193 10	86 40	108 00	797 13
Lachine do		103 75	137 65	69 95	29 52	340 87
Laprairie do		50 96	99 35	31 29	40 00	221 60
Lévis immigrant shed.....			43 00			43 00
Montreal civil service examination office.....	50 00					50 00
Montreal custom-house		1,713 23	633 48	358 36	332 70	3,037 77
Carried forward.....	3,099 77	11,774 74	10,741 31	14,310 11	3,123 94	51,119 77

Department of Public Works.

APPENDIX No. 1.—STATEMENT B.—Showing details of the item \$296,438.23—*Con.*

	Rents.	Caretakers' and Engineers' Salaries and Supplies.	Heating.	Lighting.	Water.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Quebec—Concluded.</i>						
Brought forward.....	3,099 77	11,774 74	10,741 31	14,310 11	3,123 94	51,119 77
Montreal Dominion public buildings.....		1,200 00				1,200 00
do drill hall.....		540 00				540 00
do examining warehouse.....		1,362 97	1,769 83	539 08	572 19	4,244 07
do immigration office.....	499 92					499 92
do inland revenue office.....		605 77	183 60	157 20	103 80	1,050 37
do post office.....		4,714 06	744 23	7,093 76	2,068 42	14,620 47
Quebec citadel buildings.....		5 10	164 90	208 25		378 25
do clerk of works' office.....		40 00				40 00
do culler's office.....		542 75	226 51			769 26
do custom-house.....		558 81	356 80	60 08	800 00	1,775 69
do engineer's office.....	144 00					144 00
do examining warehouse.....		1,509 73	591 86	43 41	450 00	2,595 00
do immigrant shed.....			368 79	381 00		749 79
do observatory.....					50 00	50 00
do post office.....		1,342 41	533 79	656 96	766 00	3,299 16
do quarantine station.....			114 47			114 47
do Queen's wharf building.....			172 43		750 00	922 43
Riviere du Loup post office.....		260 16	348 00	36 41		644 57
Sherbrooke do.....		449 42	270 86	445 00	37 50	1,202 78
Sorel do.....		476 61	252 45	239 40	250 00	1,218 46
St. Henri do.....			80 41	69 36	29 28	179 05
St. Hyacinthe do.....		434 59	185 67	192 85	150 00	963 11
St. Jérôme do.....		171 45	265 38	192 00	57 61	686 44
St. Johns do.....		347 51	140 25	250 00	60 00	797 76
St. Lin do.....	250 00					250 00
St. Regis custom-house.....			35 00			35 00
St. Roch, Quebec, post office.....			59 90	56 19		116 09
Three Rivers custom-house.....		422 60	298 80	69 68	66 00	857 08
do post office.....		413 05	147 50	76 10	60 00	696 65
Valleyfield post office.....	329 70		49 20	34 50		413 40
West Farnham post office.....		8 85	5 00	28 25	5 00	47 10
<i>Ontario.</i>						
Almonte post office.....		401 50	131 50	21 44	8 50	562 94
Amherstburg post office.....		412 21	129 65	157 35	30 00	729 21
Barrie do.....		450 08	231 50	435 13	50 00	1,166 71
Belleville do.....		617 63	400 50	601 54	81 75	1,701 42
Berlin do.....		403 90	230 01	157 60	44 00	835 51
Brampton do.....		422 95	156 23	125 27	31 25	735 70
Brantford do.....		615 35	337 44	225 00	63 00	1,240 79
Brockville do.....		407 92	294 40	482 45	170 00	1,354 77
Carleton Place do.....		305 55	117 90	57 75		481 20
Cayuga do.....		56 18	75 00	42 50		173 68
Chatham do.....		460 54	192 38	203 40	40 00	896 32
Clifton do.....		374 91	167 50	243 75	39 00	825 16
Cobourg do.....		400 00	217 35	221 40	45 50	884 25
Cornwall do.....		477 00	265 20	589 85	54 75	1,386 80
Dundas do.....	500 00		22 08	65 48		587 56
Galt do.....		424 95	153 00	284 00	25 75	887 70
Gananoque custom-house.....			133 00	94 00		227 00
do post office.....			90 75	141 00		231 75
Goderich do.....		438 44	205 34	83 46	90 00	817 24
Guelph do.....		402 85	152 61	188 99	28 08	772 53
Hamilton custom-house.....		600 00		70 90		670 90
do Dominion building.....			887 98			887 98
do drill shed.....		315 00				315 00
do post office.....		994 06		1,942 35	1,000 00	3,936 41
Kingston custom-house.....		151 50	364 43	116 80	60 60	693 33
do examining warehouse.....			26 85		7 40	34 25
do inland revenue office.....				68 60	73 31	141 91
Carried forward.....	4,823 39	44,513 10	23,089 54	31,769 60	11,342 63	115,528 26

APPENDIX No. 1.—STATEMENT B.—Showing details of the item \$296,438.23—*Con.*

	Rents.	Caretakers' and Engineers' Salaries and Supplies.	Heating.	Lighting.	Water.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Ontario—Continued.</i>						
Brought forward	4,823 39	44,513 10	23,089 54	31,759 60	11,342 63	115,528 26
Kingston military college		1,498 50				1,498 50
do post office		179 50	227 13	561 00	42 60	1,010 23
Lindsay do		400 65	149 82	56 25	20 00	626 72
London custom-house		1,083 33	493 21	366 31	105 00	2,047 85
do post office		660 85	468 20	945 85	60 00	2,134 90
Napanee do		454 50	199 50	148 44	69 45	871 89
Orangeville do		370 02	128 12	167 90	17 99	684 03
Orillia do		340 04	193 46	85 20	30 00	648 70
Ottawa experimental farm			1,345 71	58 86	457 78	1,862 35
do geological museum		528 00	522 08	299 45		1,349 53
do national art gallery, &c.		439 50	32 40	20 10		492 00
do north-west mounted police stores			24 00			24 00
do parliament & departmental buildings		22,637 46	21,590 78	19,449 77	14,500 00	78,178 01
do post office		816 00	752 53	1,527 29		3,095 82
do printing bureau		3,462 80	3,604 71	694 95		7,762 46
do supreme court		1,452 25	449 93	77 40		1,979 58
Ottawa rented buildings:—						
Bank of Ottawa (Department of the Interior)	1,600 00			40 88	79 90	1,720 78
Boundary commission offices				3 95	8 40	12 35
Coal shed, canal basin	300 00					300 00
Central chambers (Department of the Interior)	200 00					200 00
*Departmental photographer's office	40 00					40 00
*Durie's chambers (Militia)	240 00			10 33		250 33
Examining warehouse	850 00			12 85	30 60	893 45
French translators' offices	240 00		17 09	159 00	5 60	421 69
Gas inspector's office				20 55		20 55
Geological museum annex	645 00					645 00
*Hudson's chambers (Customs)	200 00					200 00
*Nagle block (Customs & Militia)	1,197 96	269 47	117 03	155 11	32 40	1,771 97
Observatory				10 00		10 00
*Russell House (Public Works)	43 00					43 00
*Slater block (Marine and Public Works)	2,910 00			205 65		3,115 65
Workshops of Public Works Dept	650 00		1,248 10	511 65	113 90	2,523 65
Pembroke post office		406 25	168 98	148 50	28 00	751 73
Peterboro custom-house			2 50	3 20	37 50	43 20
do inland revenue office				4 25		4 25
do post office		508 58	254 50	322 50	56 25	1,141 83
Petrolia do		425 14	140 01	37 00		602 15
Port Arthur do		333 53	182 50	11 33	6 75	534 11
Port Colborne do		253 10		134 00		387 10
Port Hope do		412 40	229 50	263 60		906 50
Prescott custom-house			94 00		140 00	234 00
do post office		491 89	175 50	104 83		772 22
Smith's Falls post office		304 00	131 00	121 10	127 50	683 60
Stratford do		659 25	409 75	229 00	64 67	1,362 67
Strathroy do		426 98	169 96	18 00	3 90	618 84
St. Catharines do		417 85	262 70	240 75	57 00	978 30
St. Thomas do		448 15	204 00	406 20	25 28	1,083 63
Toronto civil service examination rooms	40 00					40 00
do custom-house		680 53	326 93	89 55	37 41	1,134 42
do engineer's office	300 00					300 00
do drill hall		1,092 45				1,092 45
do examining warehouse		3,833 08	861 93	74 07	135 40	4,904 48
Carried forward	14,279 85	89,799 15	58,267 10	59,556 22	27,635 91	249,537 73

* Rented as temporary quarters for Departments which were displaced by the fire of 11th February, 1897.

Department of Public Works.

APPENDIX No. 1.—STATEMENT B—Showing details of the item \$296,438.23—Con.

	Rents.	Caretakers' and Engineers' Salaries and Supplies.	Heating.	Lighting.	Water.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Ontario—Concluded.</i>						
Brought forward.....	14,279 35	89,789 15	58,267 10	59,556 22	27,635 91	249,537 73
Toronto inland revenue office.....		616 25	260 58	252 99	23 22	1,153 04
do post office.....		2,103 86	880 34	2,393 99	383 76	5,761 95
Trenton do		450 00	135 00	209 32	75 00	869 32
Walkerton do		406 50	155 09	200 00	20 00	781 59
Windsor do		1,010 95	464 05	559 16	96 00	2,130 16
<i>Manitoba.</i>						
Brandon experimental farm			143 25			143 25
do immigrant shed			97 46			97 46
do post office.....		506 23	554 90	533 40	76 00	1,670 53
Minnedosa Dominion lands office.....	105 00		100 12			205 12
Winnipeg clerk of works' office.....		1 50				1 50
do crown timber office.....		3 00	266 05			269 05
do custom-house			645 05	267 84	120 00	1,032 89
do Dominion lands office.....	30 00			68 31	37 50	135 81
do engineer's office	430 00		8 00			438 00
do examining warehouse.....			522 60	4 59		527 19
do immigrant shed		9 91	600 75	334 98	156 25	1,101 89
do post office		2,553 88	2,816 25	1,635 39	687 50	7,693 02
<i>North-west Territories.</i>						
Alameda Dominion lands office.....	75 00		11 68			86 68
Banff park buildings			140 60			140 60
Battleford Dominion lands office.....	144 00		29 25			173 25
do registry office			28 00			28 00
Beaver Lake Dominion lands office.....	67 50		68 00			135 50
Calgary clerk of works' office			10 50			10 50
do court-house		497 50	313 18		225 00	1,035 68
do immigrant shed			115 61			115 61
do land and registry office		8 00	69 35			77 35
do post office		507 45	347 95	426 30	255 00	1,536 70
Edmonton Dominion lands office.....			108 45			108 45
do land and registry office.....		405 60		174 30		579 90
Estevan Dominion lands office.....	56 00		3 75			59 75
Indian Head experimental farm.....			205 00			205 00
Lake Dauphin Dominion lands office.....			22 50			22 50
Lethbridge court-house			46 72	60 21	45 00	151 93
do Dominion lands office.....	180 00					180 00
do post office		426 30	62 99			489 29
Macleod court-house	250 00	177 98	57 00	5 50		490 48
do custom-house			75 00			75 00
Maple Creek Dominion lands office.....	40 00		5 30			45 30
Moosejaw court-house.....		404 25	1 75			406 00
Moosomin court-house		533 40	362 87	60 66		956 93
Prince Albert court-house	8 00	404 24	178 75	17 43	4 00	612 42
do crown lands and timber office		1 25				1 25
do immigrant shed			12 50			12 50
do lands and registry office		409 70	30 00	10 50		450 20
Red Deer Dominion lands office.....	96 00		59 99			155 99
do immigrant shed	10 00					10 00
Regina clerk of works' office.....	110 00		18 50			128 50
do court-house		474 56	632 08	139 87		1,246 51
do Dominion lands office	500 00			22 00		522 00
do land titles office.....			112 97			112 97
do lieut. governor's residence.....		35 03				35 03
do post office		361 78	238 78			600 56
do registry office			73 93			73 93
Wetaskiwin Dominion lands office.....	100 00		100 00			200 00
Carried forward	16,480 85	102,108 27	69,459 54	66,932 96	29,840 14	284,821 76

APPENDIX No. 1.—STATEMENT B.—Showing details of the item \$296,438.23—*Con.*

	Rents.	Caretakers' and Engineers' Salaries and Supplies.	Heating.	Lighting.	Water.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>North-west Territories—Con.</i>						
Brought forward.....	16,480 85	102,108 27	69,459 54	66,932 96	29,840 14	284,821 76
Wolseley court-house.....		540 00	180 73	13 80		734 53
Yorkton Dominion lands office.....	84 00		49 00			133 00
<i>British Columbia.</i>						
Agassiz experimental farm.....			54 50			54 50
Alberni Indian office.....			11 25			11 25
Duncan do.....			20 82			20 82
Kamloops Dominion lands office.....	165 00		8 50			173 50
Metlakatla industrial school.....			75 57			75 57
Nanaimo post office.....		609 10	320 18	243 50	27 00	1,199 78
New Westminster drill shed.....			178 39			178 39
do engineer's office.....	66 25	1 85				68 10
do post office.....		600 00	106 91	202 15	67 28	976 34
Vancouver custom-house.....				384 90		384 90
do drill shed.....			78 81			78 81
do post office.....		429 80	439 24	747 00	208 44	1,824 48
Victoria adjutant general's office.....			12 70			12 70
do appraiser's office.....			13 93	11 00	12 00	36 93
do barracks.....			26 58			26 58
do custom-house.....			149 42	47 00	30 37	226 79
do drill hall.....		0 90	111 59	715 02		827 51
do engineer's office.....	737 00	7 00		6 40		750 40
do examining warehouse.....			6 90			6 90
do Indian office.....			41 06			41 06
do military store.....			83 67			83 67
do post office.....		614 13	182 36	1,072 35	29 74	1,898 58
do weights and measures office.....			29 00		6 00	35 00
William's Head quarantine station.....			999 52			999 52
<i>Miscellaneous.</i>						
Dominion buildings generally.....		33 32	723 54			756 86
Total, carried into Statement A (page 7)....	17,533 10	104,944 37	73,363 71	70,376 08	30,220 97	296,438 23

STATEMENT C.

SHOWING amounts loaned by Government under the authority of special Acts of Parliament and upon the recommendation of the Minister of Public Works, during the fiscal year 1896-97.

To Montreal Harbour Commissioners for improvement of Montreal Harbour (Act 59 Vict., chap. 10)..... \$190,000 00

DEPT. PUBLIC WORKS,
ACCOUNTANT'S OFFICE,
OTTAWA, 7th January, 1898.

A. G. KINGSTON,
Acting Accountant.

Department of Public Works.

APPENDIX No. 2.

REPORT ON PUBLIC BUILDINGS

THROUGHOUT THE DOMINION

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1897

BY THE

ACTING CHIEF ARCHITECT

Department of Public Works.

REPORT OF THE ACTING CHIEF ARCHITECT.

DEPARTMENT OF PUBLIC WORKS, CANADA,
CHIEF ARCHITECT'S OFFICE,
OTTAWA, 10th July, 1897.

SIR,—I have the honour to transmit herewith the report of the various works performed in connection with the public buildings, during the fiscal year ended the 30th June, 1897.

I have the honour to be, sir,

Your obedient servant,

D. EWART,
Acting Chief Architect.

E. F. E. Rox, Esq.,
Secretary, Department of Public Works.

PROVINCE OF PRINCE EDWARD ISLAND.

CHARLOTTETOWN.

PUBLIC BUILDING.

The steel boilers of the hot water heating apparatus were re-tubed, new furnace grates were supplied, some copper eaves gutter was put up, two winter porches for outside doors were constructed, plate glass for doors was supplied, some new gas fixtures fitted and the windows caulked and steps cased.

Work done under the supervision of the caretaker.

QUARANTINE (WEST PORT).

A barb wire fence, inclosing the grounds, was put up.

SUMMERSIDE.

PUBLIC BUILDING.

The plastering throughout was repaired. The water-closets were cleaned and repaired.

PROVINCE OF NOVA SCOTIA.

AMHERST.

PUBLIC BUILDING.

The heating boiler being unserviceable, was taken out and re-placed by a new steel tubular boiler, set in brickwork and having 4-inch tubes for soft coal burning, and the heating surface, and pipes throughout were painted.

The space between the post office box screen and the ceiling has been screened with glazed sash.

Work done under the supervision of the caretaker.

ANNAPOLIS.

PUBLIC BUILDING.

Storm sashes were provided for the windows, woodwork was re-painted and the roof and heating furnace re-painted.

ANTIGONISH.

PUBLIC BUILDING.

The plastering of walls and ceilings was repaired, the ceilings whitened, the walls coloured and the inside woodwork painted, grained and varnished, and the delivery table extended.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Nova Scotia, Halifax, N.S.

DARTMOUTH.

PUBLIC BUILDING.

Repairs were made to the plastering.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Nova Scotia, Halifax, N.S.

BADDECK.

PUBLIC BUILDING.

The space between the post office box screen and the ceiling was screened with wire mesh, a new letter and newspaper frame and some locks for outside doors were provided.

Work done under the supervision of the caretaker.

HALIFAX.

DRILL HALL.

Work was suspended on 1st December, 1896, and resumed on 5th May, 1897. The walls are now nearly ready for the roof, and it is expected that the building will be completed during the fiscal year 1897-98.

Department of Public Works.

Plans, etc., prepared and work superintended by this department. Resident engineer and inspector of public buildings, Nova Scotia, C. E. W. Dodwell, C.E., Halifax, N.S.

Contractor, John E. Askwith, Ottawa.

DOMINION BUILDING.

The coping of east gable was re-pointed, some repairs were made to furniture and a new floor oilcloth supplied.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Nova Scotia, Halifax, N.S.

EXAMINING WAREHOUSE.

A new boiler flue was provided, some of the valves of heating apparatus renewed; a new water-closet and the requisite plumbing were put in on ground floor and repairs to and renewals of the dry goods hoist were made.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Nova Scotia, Halifax, N.S.

QUARANTINE (DEEP WATER TERMINUS).

The fumigating and steam disinfecting apparatus saved from the fire which destroyed the previous building, was repaired, re-fitted and erected in the new immigration building.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Nova Scotia, Halifax, N.S.

IMMIGRATION BUILDING.

This building, which was described in last year's report, is now completed and furnished with a hot water heating apparatus and occupied.

Plans, etc., prepared and work superintended by this Department.

Resident engineer and inspector of public buildings, Nova Scotia, C. E. W. Dodwell, C.E., Halifax, N.S.

Superintendent of heating construction, John Cowan, Ottawa, Ont.

Clerk of works, W. J. Wiswell, Halifax, N.S.

Contractors, Rhodes, Curry & Co., Amherst, N.S.

LUNENBURG.

PUBLIC BUILDING.

The walks from street to entrance doors were laid.

The plumbing was connected with the town sewer.

Work done under the supervision of the caretaker.

PICTOU.

POST OFFICE.

Gas fittings and fixtures were supplied, and a flag and halyards were provided. A bag rack of 30 bags capacity was furnished to the post office.

CUSTOM HOUSE.

The valleys and slating of roof were repaired, the heating surface was repaired and the heating apparatus in basement altered and added to.

Work done under the supervision of Mr. John Cowan, Ottawa.

SYDNEY.

PUBLIC BUILDING.

Repairs were made to outside wall and to plastering of inside walls and ceilings throughout the building, the ceilings were whitened and the walls coloured; the galvanized iron roof covering was painted, black boards and guards for coils were provided in public lobby and some minor repairs were made to woodwork and glazing.

Work done under the supervision of the caretaker.

NORTH SYDNEY.

PUBLIC BUILDING.

New grates were supplied to hot water heating furnace.

WINDSOR.

PUBLIC BUILDING.

The brickwork was pointed and coping re-set, and the cresting, flag staff, &c., on roof were painted. Repairs were made to window sills and water pipes, a partition in money order office was removed and a new floor of birch was laid in the post office delivery office.

Work supervised by C. E. W. Dodwell, resident engineer and inspector of public buildings, Nova Scotia, Halifax, N.S.

TRURO.

PUBLIC BUILDING.

In public lobby, shelves for protection of coils, two new bulletin boards and a rail in front of general delivery were provided. The smoke pipe of furnace was renewed.

Work done under the supervision of the caretaker.

YARMOUTH.

PUBLIC BUILDING.

Repairs were made to water tank.

The space between top of post office letter box screen and ceiling was screened with wire mesh netting, a black board for post office, and a coal bin in cellar were put up; repairs were made to flooring, stairs and plastering. All the ceilings were whitened, the walls coloured and the woodwork painted.

Work done under the supervision of the caretaker.

Department of Public Works.

PROVINCE OF NEW BRUNSWICK.

BATHURST.

POST OFFICE.

The inside and outside woodwork of building was painted, the floors oiled, the ceilings cleaned and whitened, the plastering, walls and ceilings repaired, and the space between the letter box front and the ceiling of post office screened with wire mesh.

Work done under the supervision of the caretaker.

CHATHAM.

POST OFFICE.

The gutters and roof covering were repaired. The brickwork of furnace, as well as of some of the mains was altered, a new 200 feet coil was put in and some alterations made to plumbing.

Work done under the supervision of the caretaker.

FREDERICTON.

PUBLIC BUILDING.

The Customs and Inland Revenue corridors and offices were cleaned and kalsomined. The post office was furnished with a postal bag rack, style "G," with a capacity for 100 mail bags.

Work done under the supervision of the caretaker.

MONCTON.

PUBLIC BUILDING.

The eaves gutters and the plastering of ground and first floor of main building and the sidewalks were repaired; a rough board floor was laid in the cock loft; the rooms of the annex were ceiled in wood and their floors repaired. A new smoke pipe was provided for the heating furnaces.

Work done under the supervision of the caretaker.

NEWCASTLE.

PUBLIC BUILDING.

A new hardwood floor was laid in post office and a spring provided for front door.

Work done under the supervision of the caretaker.

PARTRIDGE ISLAND.

QUARANTINE STATION.

A contract was entered into for the erection of a building, near the wharf, at the eastern end of the island to contain the steam disinfecter, water tanks and baths. Work under the charge of W. J. McCordock, of this department, St. John, N.B. Contractor, Mr. Jno. Duffy.

PORTLAND (St. John.)

POST OFFICE.

Repairs were made to plumbing, stoves, grates, doors and locks.
Works carried out under the supervision of W. J. McCordock, of this department, St. John, N.B.

ST. JOHN.

CUSTOM HOUSE.

A fire occurred in landing waiters' office, destroying the woodwork and furniture. An investigation resulted in a decision that it arose from a match or cigar thrown in the waste paper basket. The room was repaired and re-furnished.

Three new tubes were put in a boiler and a tube expander furnished. Hardwood floors were laid in Inland Revenue testing room and Customs cigar stamping room; two frames and doors were put up in tank room partitions. A large amount of furniture was supplied to the Customs Department and some shelving to the Inland Revenue; gas fittings and furniture were supplied to the Marine Department; kalsomining and painting were done to Customs long room, and signal officers' room.

POST OFFICE.

The asphalt floor of the driveway in basement was re-laid; a broken water-closet was replaced; parcel post rooms, halls, and newspaper room cleaned and painted and ceiling whitened; office windows and doors re-lettered; new gate for boiler, new flag halyards and new screens for heating pipes supplied and repairs were made to hoist, furniture, plumbing, gas fitting, water service, bells, glazing, woodwork, fittings, floor, hardware, etc., etc.

Work carried out under the supervision of W. J. McCordock, of this department, St. John, N.B.

SAVINGS BANK.

The entrance doors were shortened, a new transom and buffer springs put in and the whole renovated and varnished; the coal bin and some glazing were repaired and a new ensign furnished.

Work carried out under the supervision of W. J. McCordock, of this department, St. John, N.B.

ST. STEPHEN.

PUBLIC BUILDING.

A new wash basin with fittings and connections was put in.

The original hot water heating furnace being burned out, was condemned and replaced by two new "Buffalo" hot water furnaces set on a brick foundation. Repairs were made to the plumbing.

Work done under the supervision of John Cowan, Ottawa.

SUSSEX.

PUBLIC BUILDING.

Three hundred and forty-eight old lock boxes were removed from the post office and re-placed by 96 new lock boxes and 36 new drawers with brass fronts.

Work done under the supervision of the caretaker.

Department of Public Works.

WOODSTOCK.

PUBLIC BUILDING.

The plastering was kalsomined, the roof and the outside and inside woodwork painted; the fittings and stair rails varnished and the floors oiled. The brickwork and masonry were repaired and pointed.

PROVINCE OF QUEBEC.

AYLMER.

POST OFFICE.

A new grate was supplied to the hot water heater.

The stone fence wall was repaired, partly re-built and pointed; the outside walls of the building were repaired and re-pointed; the wood fences and gates were repaired, the post office floor was oiled, the plastering repaired, plumbing, closet, sink, bath, drain and cesspool put in, furniture and carpet supplied and the shingling of outbuildings renewed.

FRASERVILLE.

PUBLIC BUILDING.

Blinds were furnished for windows.

GROSSE ISLE.

QUARANTINE STATION.—WESTERN OR HEALTHY DIVISION.

Sixteen venetian blinds were supplied to building No. 1, to replace as many others which were unsuitable. A verandah or shelter was built along the south end of building No. 2. The roofs of Nos. 10, 11, 12, 15 and 16 were re-shingled. The shingling of Nos. 3, 4, 5, 6, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 21, and that of the new cookhouse tarred. The walls of Nos. 3, 6, 7, 9, 10, 11, 12, 14, 15, 16, 17 and 19 were limewhitened. Windows and doors of Nos. 3, 7, 10, 11, 12 and 16 were painted. Two new chimneys were built on No. 15 and one on No. 11, and a chimney cap on No. 5. The roof of the wing of No. 5 was covered with galvanized iron. Repairs were made to shingling of Nos. 4, 11, 12 and 19, and to the glazing and painting of No. 3. The floors of hall and kitchen of No. 21 were painted.

CENTRAL OR OFFICIAL DIVISION.

The roofs of Nos. 26, 28 and of the superintendent's laundry were re-shingled, those of Nos. 22, 26, 30, 33, 34 and 35, as well as that of the superintendent's laundry were tarred, those of Nos. 24, 27, 28, 29 were painted, and those of Nos. 24, 29, 30 and 34 were repaired. The outside walls of Nos. 22, 26, 33, 35 and of the superintendent's laundry were limewhitened. Nos. 27, 28 and 29 had outside and inside woodwork painted, 27 had the inside plaster painted and 29 had the ceiling painted and the walls papered. The oven in 34 was re-bricked and covered with sand. Four double porches were built to No. 30 and the chimneys pointed. No. 25 was re-floored as also the attic of No. 29. Glazing was done to windows of Nos. 22 and 25 and at the superintendent's laundry. The plastering of 27 was repaired and new windows, new ventilator and a new chimney stack were supplied the superintendent's laundry and also new glazing and repairs to doors.

EASTERN OR SICK DIVISION.

The roofs of No. 39 were re-shingled, those of Nos. 36, 38, 39, 40 and of the disinfecting building, sick shed, old store building, the stable and the well house were limewashed, the doors and windows of No. 36 were painted, 4 chimneys on No. 39 were pointed, the shingling of sick shed was repaired and an old well filled in to prevent accident.

The SS. "Challenger" was cleaned and re-painted.

Work done under the superintendence of Ph. Beland, clerk of works, Quebec.

JOLIETTE.

PUBLIC BUILDING.

The plastering throughout was repaired, the ceilings whitened, the walls coloured and the woodwork painted.

LAPRAIRIE.

POST OFFICE.

A new porch to rear entrance was constructed.

MONTREAL.

CUSTOM HOUSE.

A set of new grate bars for boiler was supplied, repairs were made to coil in long room, gas stove and one wash basin; and a new wash basin was supplied. Alterations to the gas fitting were made, a bell hung in caretaker's quarters and repairs made to office furniture, electric bells and stamps.

EXAMINING WAREHOUSE.

The steel smoke stack on chimney being worn out was taken down and re-placed by a new one, stayed and painted. New grate bars and dead plates were supplied to boilers and a mud port to boiler No. 2. The hatchways were repaired and wire ropes supplied to hoists (3), new elevating gangways were put in eastern end of warehouse, coils were repaired in hardware appraiser's and fancy goods' office and a brass pump for sodium was put in.

INLAND REVENUE BUILDING.

A pigeon-hole case was furnished the collector. The gas mains were repaired and some new gas fittings furnished. Repairs were made to w.c., water service pipes, entrance doors and glazing.

Work done under the supervision of C. Desjardins, clerk of works at Montreal.

POST OFFICE.

The brickwork of the heating furnaces was taken down and re-built and new grate bars supplied. A new floor was put in meter room, the clock was repaired and new striking regulator furnished. A double throw switch was put in for stamping machine, a new switch on elevators, a new letter box on letter elevator, and additions and repairs to all the elevators and machinery generally. The tile drain in basement was repaired and put in order.

Work done under the supervision of C. Desjardins, clerk of works at Montreal.

Department of Public Works.

QUEBEC.

CITADEL, GOVERNOR GENERAL'S QUARTERS.

Repairs were made to plumbing and woodwork. The usual annual cleaning, painting and preparations for His Excellency's annual visit were done. Work done under the supervision of an officer of this department.

CUSTOM HOUSE.

Repairs were made to the water-closets and plumbing and some door springs and furniture were provided.

Work inspected by Ph. Beland, clerk of works, Quebec, P.Q.

EXAMINING WAREHOUSE.

A portion of the galvanized iron roofing was renewed. Repairs were made to hoist, heating, &c.

Work inspected by Ph. Beland, clerk of works, Quebec, P.Q.

MARINE AND IMMIGRATION AGENCY BUILDING.

A new roof covering was put on carpenters' shop and also on gas offices; a pine floor was put in oil cellar and one of the chimneys repaired.

Work inspected by Ph. Beland, clerk of works, Quebec, P.Q.,

IMMIGRATION BUILDING, LOUISE EMBANKMENT.

The building has been painted outside, including the roof covering. A new tower and tank for the water supply are being erected in yard. Two new closets and a bath are to be arranged for on the first floor.

Work inspected by Ph. Beland, clerk of works, Quebec, P.Q.

POST OFFICE.

The original tin roof covering on Buade and Frontenac streets was taken off and replaced by a galvanized iron covering; the gas piping throughout, including the mains, branches, &c., was taken out, renewed and extended to the new wing and second floor; the public lobby was painted and the fireman's quarters cleaned, painted, papered and kalsomined; a new mail delivery porch was put in the office and the public lobby porch improved; electric bells, locks, &c., were supplied.

Work superintended by Ph. Beland, clerk of works, Quebec, P.Q.

RICHMOND.

POST OFFICE.

This building, which was previously described, is nearing completion. Plans were prepared and contract entered into for the construction of a hot water heating apparatus.

Plans, &c., prepared by this department.

Clerk of works, N. Nicholson, Richmond, P.Q.

Contractors for construction of building, Messrs. Paquet & Godbout. Contractor for construction of heating, J. Lamarche.

RIMOUSKI.

POST OFFICE BUILDING.

This building, which was previously described, is nearing completion. The work which was abandoned by the contractor, has been carried on by day work. Plans were prepared and a contract entered into for the construction of a hot water heating apparatus.

Plans, &c., prepared by this department.

Work superintended by J. P. M. Lecourt, Ottawa, and Ph. Beland of Quebec.

ST. HENRI.

POST OFFICE BUILDING.

The drain was cleared and the plumbing repaired; a stairway to and a door from basement were put in for the removal of ashes. Two outside porches were constructed for the post office, a new coil was put in entrance hall, some gasoliers were fitted up, a sink for clerks and carriers, guards for basement windows, air springs for entrance doors, hose for cleaning windows, a step ladder, &c., &c., were provided.

Work done under the supervision of the caretaker.

ST. JEROME.

PUBLIC BUILDING.

Repairs were made to the sidewalks.

ST. JOHNS, P.Q.

PUBLIC BUILDING.

The plumbing, which was obsolete in style and unsanitary, was taken out and new water-closets, wash-basins and sinks provided on the ground and first floors. The basement was floored in concrete. New furniture and carpet were provided for the postmaster. Ventilating panes were put in the storm sashes. Plans are prepared for the alterations of the post office fittings.

Plans, &c., prepared by this department.

Work inspected by Mr. John Cowan, engineer, Ottawa, Ont.

SHERBROOKE.

PUBLIC BUILDING.

The metal covering of roof was repaired throughout and painted, the water tanks were cleaned and repaired, the plumbing was repaired, additional heating coils were put in and the brick work of furnace repaired; a new hardwood floor was laid in the post office. The vaults were shelved, furniture and carpet were supplied to the collector of customs, oil cloth to the post office inspector, and an ash sifter and a flag to the caretaker.

Work done under the inspection of the caretaker.

Department of Public Works

SOREL.

PUBLIC BUILDING.

The stone coping and arch stones of Prince Street yard entrance, were taken down and re-set in cement and tied with iron. All the external woodwork and iron-work were re-painted. A granolithic sidewalk was put down along the street fronts, the plumbing and inside drains were taken out and a complete outfit of sanitary plumbing put in. The space between the post office screen and the ceiling was screened with wire mesh, and some new venetian blinds, window ventilators, and a counter supplied. A wood floor was placed as protection over the flat roof of the one storey portion of the building and the balconies. Repairs were made to doors of weights and measures' office, slate and eaves gutters of roof, window sashes and boundary walls, steps, &c.

THREE RIVERS.

CUSTOM HOUSE.

The cellar floor was repaired.

POST OFFICE.

A new flag supplied.

PROVINCE OF ONTARIO.

AMHERSTBURG.

PUBLIC BUILDING.

The water-closets and plumbing of the building, being unsanitary, were removed. Work supervised by the caretaker.

ARNPRIOR.

PUBLIC BUILDING.

The building for which a contract was entered into on 4th September, 1896, is situated on the corner of John and Madawaska streets, in the town of Arnprior, Ont.

It will have stone walls, ground floor partitions and safes of brick, and the remaining partitions, as well as the roofs and floors, of wood. The main building will be 44 feet square, two stories and attic, the ground floor being the post office, the first floor the inland revenue and customs offices, and the attic the caretaker's apartments. On the street corner is an octangular clock turret, 14 feet across, 54 feet from ground to top of stonework, 75 feet from ground to top of roof, which is to be surmounted by an iron finial. On the John Street front is a one story annex 35 feet by 30 feet, to contain examining warehouse, weights and measures and water-closets.

In the main building there are to be brick vaults, one on the ground floor for the post office, and two on the first floor, one each for the customs and inland revenue.

Plans, &c., prepared by this department.

Contractors—Messrs. Fortin & Fortin, of Pembroke, Ont.

Clerk of works—Jas. W. Tierney, Arnprior, Ont.

BARRIE.**PUBLIC BUILDING.**

The drain pipes and plumbing throughout were renewed, some minor repairs were made to heating pipes, all the walls and ceilings were repaired and kalsomined, the entire woodwork, including floors, of first floor and of the ground floor stairway hall and the heating pipes, were painted.

BELLEVILLE.**PUBLIC BUILDING.**

The block paving in yard was removed and the yard gravelled, footpaths of granolithic were laid along the street fronts, three offices on first floor were kalsomined; alterations and additions to post office fittings were made, the post office floor repaired and a filter supplied.

BROCKVILLE.**PUBLIC BUILDING.**

The galvanized iron covering of the roof of the examining warehouse was renewed.

CAYUGA.**PUBLIC BUILDING.**

The building was wired for electric light.

CHATHAM.**PUBLIC BUILDING.**

Iron handrails were provided for outside steps and minor repairs made to plumbing, gas meter and post office floor.

CORNWALL.**PUBLIC BUILDING.**

Some new door locks were supplied and repairs made to water-closets.

GANANOQUE.**CUSTOM HOUSE.**

The water service pipes throughout were cleaned and repaired.

DUNDAS.**POST OFFICE.**

The woodwork of the office was painted and varnished.

GALT.**PUBLIC BUILDING.**

Some fire hose and a ladder were supplied.

GUELPH.

Some fire hose was supplied as well as some carpet and linoleum.

Department of Public Works.

HAMILTON.

PUBLIC BUILDING.

The walls and ceilings of the first and second floors were cleaned, repaired and kalsomined, the plaster, cement floor, roof and gutters were repaired and a snow guard fixed on roof. An additional water-closet and a slop-sink were put in second floor. The water closets, urinals and sinks were vented into a pipe carried through roof. A new supply tank was provided for heating apparatus, the floor of furnace room cemented and a telephone cabinet put up in the custom-house. In the examining warehouse the plastering was repaired and kalsomined, the woodwork painted, the plumbing vented, a new kitchen chimney built and the stonework pointed.

Work done under the supervision of the caretaker.

KINGSTON.

CUSTOM HOUSE.

Plans were prepared and a contract entered into for the construction of a hot water heating apparatus, and the work is now in progress. The plumbing throughout has been overhauled, a new bath, hot water boiler and gas main put in and repairs made to the metal roof covering.

Plans, &c., prepared by this department.

Work done under the supervision of Arthur Ellis, architect, Kingston.

POST OFFICE.

Some new gas piping and fixtures were supplied and repairs were made to heating furnace, drive in yard, entrance doors, post office fittings and flagpole.

Work done under the supervision of Arthur Ellis, architect, Kingston.

LONDON.

CUSTOM HOUSE.

Repairs were made to the woodwork, plumbing and boiler.

Work superintendent by H. C. McBride, architect, London, Ont.

POST OFFICE.

A new flagpole and an ensign were supplied, repairs were made to the galvanized iron roof covering and to the woodwork and plumbing.

Work superintended by H. C. McBride, architect, London, Ont.

NAPANEE.

PUBLIC BUILDING.

The roof and the water closet were repaired.

NIAGARA FALLS.

PUBLIC BUILDING.

All the windows and doors were repaired and one new door and frame supplied. Repairs were made to the floor, the deck roofs were re-pitched and some new ladders furnished.

Work done under the supervision of the caretaker.

OTTAWA.

CENTRAL EXPERIMENTAL FARM.

Laboratory:—The gas fitting and water services were repaired and in part renewed.

Lavatory:—The old waste pipe was removed and re-placed by one of cast iron, which was carried through the roof; two new water closets and a new trap to sink were supplied.

Residences:—At the Naturalist's residence the water-closet and bath-rooms were changed to a room at the rear of the same flat, and a new water closet, bath, wash-basin and connections put in. At the Horticulturist's residence a hot water service for bath and sink, including a copper boiler and cistern, was installed.

Dairy:—The boiler was re-set in brick and furnished with a new grate and safety valve, the engine was overhauled, four cooling tanks were lined with galvanized iron, a broken water-closet was replaced, cast iron drain pipes were put in, a branch water service pipe 400 feet long was taken from the main to the dairy and lavatory.

Sheephouse:—A new sink and 8 hydrant taps with all required lead connections were put in.

Conservatory:—Some additions were made to the gas fitting.

Work done by the departmental staff.

EASTERN BLOCK—DEPARTMENTAL BUILDING.

New stationery and other cupboards, new furniture, shelving, repairs, cleaning, painting, tinting and bronzing were done or supplied for all the departments occupying the building; new curtains were supplied the Department of Justice and the Privy Council, mats, rugs and oilcloth to the Department of Justice and the Privy Council; window ventilation to the Department of Finance and the Department of Justice; boxes and chests to the Privy Council and Departments of Justice and of Finance; step ladders to the Auditor General and Secretary of State; glazing was done at the Departments of Finance and of Secretary of State; new letter boxes were supplied to the Secretary of State, air springs to the Department of Justice, and fire irons, cushions, etc., generally. Three new tubular steam heating boilers were put in boiler house to replace the two locomotive boilers previously used.

Gas fitting was done in the Department of Indian Affairs, in the offices of the Solicitor General and of the Deputy Registrar General, and in rooms 49, 50, 51, 54, 135 and 139. Twenty-one Auer lights were supplied to the Department of Justice, 2 to the Auditor General's Department, 3 to the Department of the Secretary of State and 2 to the Finance Department; and a gas stove to the messengers' room of the Secretary of State's Department. Electric bell hanging was done in the correspondence and records' branch of the Department of the Secretary of State, and in rooms 85 and 86. A wash basin was put up in room 59 and steam radiators in rooms 57 and 59.

GEOLOGICAL MUSEUM.

Repairs were made to roofs, some new furniture and stoves were supplied and the drains repaired and flushed. As a protection against fire a hydrant was placed in the yard, and three-inch pipes (hydrant) with hose connections, and hose run through the different flats of the building. Gas fittings were supplied room D 4. Usual and ordinary repairs were made to heating, plumbing, lighting and water service.

Works done by the departmental staff.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

Department of Public Works

WESTERN BLOCK—DEPARTMENTAL BUILDING.

New window blinds were supplied Customs and Militia Departments, window awnings to Marine and Inland Revenue Departments, mats, carpets and rugs to Militia, Public Works and Trade and Commerce; cleaning, tinting and painting were done in Inland Revenue, Marine, Militia, Railways and Canals, Trade and Commerce and Public Works Departments; new furniture and fittings were supplied to Customs, Inland Revenue, Public Works, Militia and Marine Departments. Gas fitting was done at the offices of the Minister of Trade and Commerce, Commissioner of Customs, Public Works Engineer's office, Inland Revenue Laboratory and Public Works Clerk of Works' office. Electric bell hanging was done for the Minister of Militia, Commissioner of Customs and Accountant of Customs. Some new heating surface was put into the offices of the Chief and Assistant Engineers of the Department of Public Works. Usual and ordinary repairs were made to the heating, plumbing, bells, hoist, water service, &c., &c.

On 11th February, last the roof of the original portion of the building was destroyed by fire. Following is a copy of my report thereon:

CHIEF ARCHITECT'S OFFICE,
OTTAWA, 14th February, 1897.

Re FIRE WESTERN BLOCK.

SIR,—The fire originated in the small tower room used as a store room by the Department of Railways and Canals, in the attic over the office of the Private Secretary of the Hon. the Minister of Public Works. It was first observed about 4.15 p.m., on Thursday the 11th instant. Immediately at the first alarm being given, a Babcock fire extinguisher was used on the fire by D. Good, who has charge of the elevator, and meanwhile the hydrant in the attic corridor of the Western Block extension near the Mackenzie tower, was connected with the hose by Messrs. F. A. Dixon, J. W. H. Watts and T. W. Fuller; which hydrant is directly connected with the city pressure; but when turned on, the stream did not reach three feet therefrom due to the lack of pressure. Another Babcock was used by Mr. Wm. Smith, foreman engineer, but had no material effect on the fire. Streams were then run from two hydrants situated in the front attic corridor; but as the head of water was from the supply tank in the tower corner, which tank is only a few feet above the ceiling of the attic rooms, the pressure was insufficient to cope with a fire in an attic covered with a wooden roof and filled with combustible materials. As this was being done the city fire brigade was telephoned for, and were on the ground a few minutes after the call and were early at work, and ran a line of hose on the roof of the Western Block extension. At the same time the foreman engineer had a line run from the steam pump in the Parliament Building to the same roof, and owing to the combined use of the Government and City appliances, the fire was prevented from passing the fire wall dividing the new and old portions. The fire brigade on arriving took full charge, but some delay was experienced in applying the water, through the bursting of several lines of hose and insufficiency of city appliances. Valuable opportunities and important time were also lost on account of the firemen not being acquainted with the internal arrangements of the rooms and declining at times to accept the directions and suggestions from officials of the Department as to the points from which to battle with the fire. Attempts were made to cut the roof in front of a fire wall, to stop the progress of the fire and enable the firemen to confine it, but owing to the fact that when the building was re-roofed, the original roof was left intact, there were two metal covered roofs to remove, and before such could be accomplished, the fire was spread so far as to render the attempt useless. The fire was exceedingly fierce and rapid in its progress, and in a few minutes the smoke was so dense that it was with great difficulty the men could hold their own. A small opening which had been cut in the first fire wall, years ago, and closed with a wooden door, no doubt also helped the quick spreading of the fire. When it passed the fire wall, it became evident that the roof could not be saved and efforts were

then made to save the contents of the offices and to prevent the fire breaking through the first floor ceiling. The appliances of the Government fire services such as Babcocks, hose, etc., were all in good working order at the time of the fire, but owing to the construction of the roof and the inflammable character of the contents, they were not sufficient to cope with such a fire.

No recent change has been made in the system, either in the appliances or the personnel of the staff having charge of them. The officers of the Department were present at the commencement of the fire, some of them remaining there continuously until 6 a.m.

The water supply for fire and domestic purposes is taken by a 6-inch main from the Wellington Street city main pipe to the tank in Parliament Building, and from thence, by a 4-inch main to one of the West Block tanks, from which it gravitates to the other; from these tanks the hydrants throughout the part destroyed by fire were supplied. The 6-inch main from the city pressure also furnishes the West Block extension with a branch which supplies the hydrants in that portion with direct city pressure, and the same 6-inch main has two hydrants branched from it within the public grounds. To one of these hydrants the city brigade connected a line of hose while the other was reported frozen. An examination after the fire elicited the fact that such was not the case, but this fact is not material, as, had both of these hydrants been connected, the supply would have been taken up, and not enough left for the use of the steam pump, which did better service. The remaining hydrants in the grounds are used for watering the grass only, and as they are connected with the tank in the Parliament Building, they would be comparatively useless for fire service. It must be borne in mind that the appliances placed at the disposal of the department were never intended to cope unaided with a fire assuming great dimensions, and that the successful co-operation of the city brigade was always relied upon in case of emergency.

In 1888, a grant of \$15,000 was made by the department towards the construction of the Central fire station in Ottawa.

Upon the whole I think it can fairly be said in favour of our staff, both the officials and workmen, that they exerted themselves to the utmost to prevent the spreading of the fire; that they worked as hard as possible to save the official documents and papers as the fire gained headway, and that nothing which could be done under difficult circumstances was left undone.

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

D. EWART,
for Chief Architect.

The debris was immediately carried away, the building closed in by a temporary wooden roof covered by felt and gravel; the ceilings were removed and replaced by asbestos plastering on iron lath, and the walls, woodwork, glazing, &c., were repaired, cleaned, painted, &c., and the glazing repaired. A new system of gas piping and also of water supply, as well as a new system of water and wash basins, was put in.

Drawings and specifications for a new roof are in course of preparation.

Repair works done by the departmental staff.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

GOVERNMENT HOUSE.

At the Hall a new doorway was made from dining-room and one between serving-room and ball-room; the windows between front hall and lavatory and telephone rooms were changed into doors, reached by semi-circular stairs. The lavatory fittings in room off Secretary's office were taken to and put up in w.c. room. The stage alcove, sliding doors and a large part of the partition between ball-room and ante-room were taken out, the jambs panelled and the opening filled with movable sections of panelling in order to allow of both rooms being used as

Department of Public Works.

one. A new hardwood floor was laid in both, the ceilings and cornices were cleaned, coloured and gilded, a new moulded ring 9 feet diameter was put in centre of ceiling, new blinds, curtains and lambrequins were furnished for the windows and new carpets for the floors.

The partition in secretary's room (oval room) was removed. The woodwork was painted in vestibule, front hall, oval, ball-room and ante-room, studio, tennis court, ante-room, lavatory, telephone room, passage and serving room to ball-room, stairs to ball-room and vinery. Paper hanging to walls of front hall, 1st floor hall studio and w.c. No. 10. The ceilings of A. D. C. room and front hall were distempered, as well as the walls and ceilings of the ante-room, tennis-court, telephone and lavatory rooms, kitchen wing, still and wash rooms. A number of the heating coils and radiators were bronzed, a new floor was laid in store-house, the tables in green-house and the rack floor in conservatory were repaired and the conservatory floor shored up. Alterations were made to furniture and fittings and a quantity of new furniture, carpets, furniture covers, kitchen utensils, crockery and glass supplied. The coppers were re-tinned, the smoke jack repaired and some additions made to the electric lights as well as some alteration of switches.

The flooring of east and west stables and wash-up were taken up and renewed; partitions, stalls and mangers were repaired; new sliding doors and frames were put in; the drain was cleared out, a new cesspit provided and the woodwork painted.

A part of the woodshed was converted into a hose reel house and the front was repaired and had new sliding doors and gangways provided.

The porch of the guard-room was re-built, a new platform provided, the front and sidewalks repaired and the outside woodwork re-painted. The shelter at skating rink was clapboarded, new shutters were made for log cabin, a large amount of broken glass was renewed at Hall, conservatory, green-house, stables and outbuildings generally.

The small toboggan slide at front of ball-room was renewed. The large slides were put in thorough repair and a cut 150 feet long made at the lower to continue slide towards Ottawa River.

A branch from the water service main in front of Hall was taken to chapel to supply organ motor.

A timber float was made and boat-house placed on it.

Stoves and stove pipes were supplied to laundry and stables.

Drains were opened and repaired.

The Bay road and the main avenue were gravelled and a part of the back road macadamized.

A large part of fencing was repaired and in part renewed and some sidewalks and crossings renewed.

The grounds, gardens, lawns and plant houses were maintained efficiently by the contractors.

The usual periodical cleaning and the packing and unpacking were done, arrangements for and attendance on entertainments were furnished and the rinks, slides, &c., &c., kept in order.

Work carried out and maintained under the supervision of this department by the departmental staff.

Clerk of works, W. M. Hutchison.

Contractors for the maintenance of the grounds, lawns and conservatories, Sorley & Sims, Ottawa.

Contractor for the removal of snow, A. Hunter, Ottawa.

GOVERNMENT PRINTING BUREAU.

The heating pipes at the workshop were renewed, the electric light service was overhauled and put in order, new sinks with connections, fittings, &c., were put in the bindery, the boilers and steam pipes of the engine-room were covered and the

heating pipes of the upper flats painted and bronzed, some wooden partitions were erected, the press room was cleaned, tinted and painted.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

LANGEVIN BLOCK.

A large amount of gas fitting was done for the Post Office Department and some for the Departments of Agriculture, Trade and Commerce and the Interior. Electric bell hanging was done for the Post Office, Agriculture, Trade and Commerce and Interior Departments, and wash-basins were put in for the Dairy Commissioner and the Agriculture Chief Clerk. New valves were put on the elevator pumps and the elevators were overhauled. The sub-basement walls and ceilings were kalsomined, new baffling plates and new fire boxes put in the eight heating furnaces and the brickwork of the furnaces and the heating apparatus generally put in order.

Work done by the Departmental staff.

Mechanical engineer, Wm. King.

Clerk of Works, F. Breton.

MAJOR'S HILL PARK.

The fences generally were repaired, the lawn benches were repaired and painted and the grounds were maintained efficiently by the contractor.

Contractor for maintenance of grounds, Thos. E. Davis.

PARLIAMENT BUILDING.

Two new porches were built at Senate and at Commons entrances, the House of Commons galleries were altered in some minor details of arrangement, additional electric lamps were put in the Commons Speaker's office, the Commons Sergeant-at-Arms quarters, the Senate dining-room and in the Senate restaurant larder. Electric bells were hung in the Commons Speaker's and Deputy Speaker's offices, the Minister of Public Works room, the press room, the press gallery and in room 23½. Gas fitting was done in rooms 32 and 29, Deputy Speaker's and French translators' rooms. Four gas governors were placed on the supply mains, a gas log fireplace put in Commons Speaker's room, and four in the Speaker's apartments in the Senate. Additional wash basins were placed in the Senators' wash-room and the hot and cold water pipes of the rooms of the Speaker of the Senate renewed. Some new cupboards were put in, cleaning, tinting, papering and painting were done to plaster and woodwork, the wardrobes were re-lettered, the furniture, library bookcases, cupboards, &c., were repaired, the floor of the library was shellaced, &c.

Work done by the Departmental staff.

Mechanical engineer, Wm. King. Clerk of works, F. Breton.

PARLIAMENT GROUNDS.

The glazing, painting and woodwork of the greenhouse were repaired.

The bridges, platform railings and cribwork of Lovers Walk were maintained and repaired.

The snow was removed.

The grounds, &c., were maintained to the satisfaction of the department.

Contractor for maintenance of grounds, J. N. Grieves, Ottawa.

Contractor for removal of snow, J. A. Thompson, Ottawa.

OTTAWA PUBLIC BUILDINGS, REPAIRING STREETS, &c.

All the refuse brick, lime and other material resulting from the fire at the Western Block were taken to the dump at the north end of Bank St. A few toises

Department of Public Works.

of stone were quarried on the canal reserve and broken for use on the roads. A new sidewalk was laid on St. Patrick Street down to the ferry wharf, and a strip 180 feet long and 12 feet wide on the east side of the Printing Bureau was macadamized.

Scraping, cleaning, repairs were made to the roadway of east and west Canal Streets and on both sides of locks and Nepean Point roadway; the sidewalks and crossings of Wellington Street, Cartier Square, St. Patrick Street and at the Museum were repaired; the grass at the Geological Museum and Cartier Square was kept clipped and the ashes removed from the Langevin Block, Museums and Printing Bureau; the various roadways, sidewalks, footpaths, roofs and yards were kept clean of snow during the winter.

Work done by the departmental staff foreman, C. Leblanc.

Contractor for the removal of snow, M. Hayes, Ottawa.

SUPREME AND EXCHEQUER COURT BUILDING.

New cupboards and book cases, and a new case for the clock were supplied, the gas fitting of the court was altered and minor repairs made to furniture, heating, gas fitting and water service.

Work done by the departmental staff.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

OTTAWA POST OFFICE BUILDING.

Alteration of the electric light switches was made and two vertical hydrant pipes were placed inside, one on the north and one on the south side, with hose connections and hose on each story.

A new partition was put in the customs long room, two new cupboards were supplied, some painting and glazing done and minor repairs and renewals to the woodwork, heating, plumbing, &c., carried out.

Work done by the departmental staff.

Mechanical engineer, Wm. King.

Clerk of works, F. Breton.

PEMBROKE.

PUBLIC BUILDING.

Usual and ordinary repairs were effected under the supervision of the caretaker. Minor repairs were made to the roof.

PETERBOROUGH.

CUSTOM HOUSE.

A new smoke pipe was furnished for the heating furnace.

POST OFFICE.

The stone foundation of steps, south-west entrance, was rebuilt and the steps re-set.

Work done under the supervision of the caretaker.

PETROLIA.

PUBLIC BUILDING.

A water service was put in and connected with the town waterworks.

Work done under the supervision of the caretaker.

PORT ARTHUR.

PUBLIC BUILDING.

Grading and filling in a portion of the grounds were done under the supervision of the caretaker.

PORT HOPE.

PUBLIC BUILDING.

Several offices were kalsomined.

Work done under the supervision of the caretaker.

ST. CATHARINES.

PUBLIC BUILDING.

A portion of the street sidewalk was re-planked and a service pipe with connections for hose on each floor was put in.

Work done under the supervision of the caretaker.

ST. THOMAS.

PUBLIC BUILDING.

Two new heating furnaces were supplied and some changes in the heating are about to be made.

Repairs were made to the roof, and cement sidewalks were laid; and some additional gas fittings supplied.

STRATFORD.

PUBLIC BUILDING.

A new heating furnace was supplied to replace one of the original pair of pipe furnaces in the main building, and the smoke pipes of the furnaces were renewed.

TORONTO.

CUSTOM HOUSE.

The lawn was re-sodded and the roof and flagstaff repaired; window shades were furnished to some of the offices and usual and ordinary repairs were made to the heating, plumbing, water service, gas fitting, electric bells, tanks, doors and locks, iron railing, painting and glazing, &c.

Repairs mainly by mechanical staff in charge of Wm. Bell, engineer.

EXAMINING WAREHOUSE.

One of the windows on Esplanade Street was changed into a door, the verandas on north and south sides of building were removed, as they interfered with the light of the offices, the engine-room, boiler-room office and engineer's room were painted and repairs were made to fence on Esplanade Street. Changes were made in counter, the roof of the building was gravelled, new wire screens were provided for top of

Department of Public Works.

chimney and the old water tank replaced by a new one. No. 6 boiler was re-fitted, a new coil was put in grocery department and repairs were made to large entrance doors, hoists, floors, vault doors, heating, chimneys, lighting, water service, &c.

Engineer in charge of mechanical staff, Wm. Bell.

INLAND REVENUE BUILDING.

A new steel lining with doors, &c., was built in treasury vault and brick-work, concrete, &c., in connection therewith, the boiler and steam pipes were painted and the boiler-room whitewashed. Repairs were made to plastering, heating, plumbing, fire hose, water service, &c.

Plans, &c., prepared by this Department.

Resident architect, S. G. Curry.

Engineer in charge of repair and heating staff, Wm. Bell.

Contractors for steel lining, J. & J. Taylor, Toronto.

POST OFFICE.

A floor was laid in letter carriers' room, two new steel fire escapes were put in and linoleum supplied, four radiators in delivery department were moved, the street letter boxes were painted, the sky-lights re-painted and re-glazed, a heating coil, a wash basin and a low water alarm and new grate bars and firing tools were supplied, the cellar was cleaned and repairs were made to wood-work, brick-work of boiler, water, steam and gas service, area gratings, plumbing, coal bins, hose, &c.

Engineer in charge of heating and repair staff, Wm. Bell.

WINDSOR.

PUBLIC BUILDING.

Repairs were made to the roof, the furnace room floor and the plumbing.

PROVINCE OF MANITOBA.

PORTAGE LA PRAIRIE.

NEW PUBLIC BUILDING.

The site of this building, which was described in my report of last year, was changed to lots 4, 5 and a part of 6.

Plans and specification prepared by this department.

Clerk of works, John Duncan.

Contractors, Viau and Lachance, Hull, P. Q.

BRANDON.

PUBLIC BUILDING.

Additions were made to the heating surface of the post office and the custom-house and some alterations of the mains in the basement.

Plans and specifications prepared by this department.

Work superintended by D. Smith, clerk of works, Winnipeg.

Contractors, Plaxton Bros., Winnipeg, Man.

WINNIPEG.

POST OFFICE.

A new closet was put in post office and a new wash basin in customs parcel office, some additional coils were put in, protectors were put on coils in public lobby, a number of large lock boxes were supplied and repairs were made to elevator, steam pump, windows and some new office door signs were supplied.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

EXAMINING WAREHOUSE.

A new flagstaff and flag were supplied, a new platform was laid, the ditch was covered in and repairs made to brick, &c.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

CUSTOM HOUSE.

New sidewalks and platforms were laid, a new form case was supplied and repairs made to furniture, locks, fittings, plumbing and heating.

Work superintended by D. Smith, Winnipeg, Man.

CROWN TIMBER OFFICE.

The water pipes were wrapped in hair felt covering, and repairs made to vault door and ash pans.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

IMMIGRATION HALL.

The walls and ceilings were kalsomined, and the furniture and floor oiled. A new stair rail, a new water-closet, three sections in cast iron heater and some storm sash shelves, cupboards and lamps were furnished, and repairs were made to heating apparatus, woodwork throughout, sewer, plastering, water pipe and glazing.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

BRANDON.

IMMIGRATION SHED.

Minor repairs were made throughout, principally to flooring.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

ELKHORN.

INDIAN INDUSTRIAL SCHOOL.

Plans are in preparation for this school to be erected on a site chosen by the Department of Indian Affairs.

Department of Public Works.

NORTH-WEST TERRITORIES.

CALGARY,

COURT HOUSE.

The cesspool was cleaned. The well in basement was filled up and a new one sunk in the yard.

EDMONTON.

REGISTRATION AND LANDS OFFICE.

Some shelving, pigeon holes and furniture, and a flag were supplied, and an extra hot air register put in.

LETHBRIDGE.

PUBLIC BUILDING.

The land agent's office was fitted up and general repairs were made to the glazing.

MOOSOMIN.

COURT HOUSE.

The outside of external walls of basement was tarred and the basement floor cemented to make them water tight. The vault was fitted up with pigeon holes, shelves, &c., and a stove supplied.

Drawings and specifications were prepared, and a contract was entered into for the construction of a hot water heating apparatus, and the work is nearly completed.

Clerk of works, D. Smith, Winnipeg, Man.

Contractor, Jos. Lamarche, Montreal, P.Q.

PRINCE ALBERT.

COURT HOUSE AND JAIL.

The foundation and brick work of the court house which was rendered dangerous through settlement were taken down and re-built, the basement is being partitioned with brick and floored in cement. The earth closets are to be taken down and a two story w. c. annex built, opening on to the stairway landings.

Plans were prepared for the construction of a hot water heating apparatus and a system of tanks, water-closets, baths, wash tubs, water service, and drainage; the material has been ordered, and it is intended to carry out the work by day labour.

MEDICINE HAT.

COURT HOUSE.

Complete furniture and fittings were supplied to the court room, judge's chambers, jury rooms, &c., and cocoa matting laid in court room and chambers.

In June, 1897, this building was destroyed by fire.

PRINCE ALBERT.

LAND AND REGISTRATION OFFICES.

A sidewalk was laid from the front gate to the front entrance and thence around the building to the latrines. The upper story was fitted up as apartments for the caretaker.

REGINA.

COURT HOUSE.

A soft water cistern in basement and a supply cistern in attic were constructed, connected by piping and force pump, and the wash basins in the building connected with the attic tank. The middle window in east end of the court room was closed, and a coat of arms placed in panel thus formed; an opening was made between boiler house and coal cellar, a ventilator placed on closets, 10 slat window blinds were supplied court room and some book shelves and electric fixtures were provided.

Work superintended by Wm. Henderson, clerk of works, Regina, N.W.T.

DOMINION LANDS OFFICE.

General minor repairs to the woodwork throughout were made.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

IMMIGRATION SHED.

The seats were repaired.

GOVERNMENT HOUSE.

The furniture throughout was repaired, and in part re-varnished, re-upholstered and renewed, the drawing room floor was stained, some kitchen utensils, carpets, linoleum, mats, &c., were supplied. Repairs were made to conservatory, drains, plumbing, well and pump, windmill, pumping engine, plastering and wall papering; a new grate, bricks and water back were put in kitchen range, some of the inside walls were kalsomined and the fences of grounds, glazing, conservatory, heating furnace, electric bells, sewer and painting of woodwork were repaired.

Work superintended by D. Smith, clerk of works, Winnipeg, Man.

POST OFFICE.

Repairs were made to the glazing, &c.

WOLSELEY.

COURT HOUSE.

Storm doors were supplied and a water tank was put in attic.

Department of Public Works.

BRITISH COLUMBIA.

NANAIMO.

POST OFFICE.

The heating, plumbing and glazing were repaired generally.
Work superintended by F. C. Gamble, resident engineer, Victoria, B.C.

NEW WESTMINSTER.

DRILL HALL.

The chimneys were cemented and repaired, and some minor general repairs done.

Work superintended by F. C. Gamble, resident engineer, Victoria, B.C.

POST OFFICE.

A postal bag rack, style "D", with a capacity of 28 bags was supplied, some of the offices and corridors were kalsomined and a wash basin supplied.

Work superintended by F. C. Gamble, resident engineer, Victoria, B.C.

VANCOUVER.

PUBLIC BUILDING.

Alterations of the vaults and water closets were effected, some new furniture was supplied and repairs were made to plumbing, roof, water pipes, locks, letter boxes, &c.

Work superintended by F. C. Gamble, resident engineer, Victoria, B.C.

VICTORIA.

CUSTOM HOUSE.

Minor repairs were made to the building generally, and some fire hose was supplied.

NEW PUBLIC BUILDING.

The building is now approaching completion and it is expected that it will be completed, fitted up and furnished ready for occupation by the close of the fiscal year 1897-98.

Plans and specification prepared and work supervised by this department.

Clerk of works, A. G. Smith.

Resident engineer, F. C. Gamble, Victoria, B.C.

Contractors, Messrs. Elford & Smith, Victoria, B.C.

POST OFFICE.

A portion of the wood work was re-painted and some office furniture and pigeon holes supplied. Repairs were made to plumbing, roof, flagstaff, letter boxes, grates, &c.

Work superintended by F. C. Gamble, resident engineer, Victoria, B.C.

WILLIAM'S HEAD.

QUARANTINE STATION.

The buildings were re-painted.

Shelter sheds for passengers were erected on wharf; cars and tele-thermometer were furnished and steam disinfecter was supplied; the buildings were re-painted, needle and shower bath and stalls for same were provided.

Repairs were made to the plumbing, woodwork, sewer, ditches, &c.

Work superintended by F. C. Gamble, resident engineer, Victoria, B.C.

DOMINION BUILDINGS GENERALLY.

FUEL.

Tenders were invited by public advertisement for the supply of coal at 138 of the public buildings, and coal and wood were supplied to over 200 buildings in all.

LIGHTING.

The lighting of the various Dominion buildings is under the control of this branch of the department. Of these buildings 85 are lighted by gas, 65 by incandescent electric light, one by natural gas and the remainder by coal oil. At several of the last mentioned, the entrance is illuminated by an arc light outside.

WATER.

The water supply for the various public buildings, excepting the penitentiaries and military buildings, is controlled by this branch of the department; 125 buildings at 71 localities have water service connected with water supply of the local water-works companies, the remainder being in general supplied with wells, pumps and tanks.

ENGINEERS, FIREMEN, &c.

The various engineers, firemen and caretakers of the buildings, 249 in number, including employees at Parliament and Departmental Buildings at Ottawa, and the heating apparatus of Dominion public buildings, with the exception of that of the various penitentiaries and some military buildings, are under the control of this branch of the department.

GENERALLY.

Repairs and alterations have been executed and sundry articles of furniture, &c., provided, and cleaning, painting and other improvements carried out in connection with a number of buildings, not herein reported upon.

D. EWART,
Acting Chief Architect.

Chief Architect's Office,
Ottawa, 1897.

Department of Public Works.

APPENDIX No. 3.

REPORT

ON

HARBOURS AND RIVERS, DREDGES, DREDGING AND SURVEYS

THROUGHOUT THE DOMINION

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1897

BY THE

CHIEF ENGINEER

Department of Public Works.

REPORT OF THE CHIEF ENGINEER

DEPARTMENT OF PUBLIC WORKS OF CANADA,
CHIEF ENGINEER'S OFFICE,
OTTAWA, 15th December, 1897.

E. F. E. ROY, Esq., Secretary,
Department of Public Works.

SIR,—I have the honour to submit my report on the various works under my charge during the fiscal year ended 30th June, 1897.

These works comprise the construction and repair of wharfs, piers, breakwaters, dams, weirs and bank and beach protection works; the improvement of harbours and rivers by dredging; the construction, maintenance and operation of Government dredging plant; the construction and maintenance of graving docks; the construction, maintenance and working of slides and booms; the construction and maintenance of interprovincial bridges and approaches thereto, and of bridges on highways of federal importance in the North-west Territories and the maintenance of military roads; also hydrographic and ordinary surveys and examinations, inclusive of precision measurements and levelling which are required for the preparation of plans, reports and estimates; and testing of cements, etc.

It is a great pleasure to me, to be able to testify that good work has been accomplished, and that this is due in a great measure to the able, faithful and conscientious assistance rendered by the engineering and clerical staff placed under my orders, by the Honourable the Minister.

I have the honour to be, sir,

Your obedient servant,

LOUIS COSTE,
Chief Engineer.

WHARFS, PIERS, BREAKWATERS, BANK AND BEACH PROTECTION WORKS AND OTHER HARBOUR AND RIVER IMPROVEMENTS.

The following is a list of places, by Provinces, where such works were carried on during the fiscal year 1896-97, showing the nature of the work undertaken :—

NOVA SCOTIA.

Arisaig	Antigonish Co.	Repairs to pier.
Avonport	King's Co.	Repairs to wharf.
Boularderie (Ross Ferry) ..	Victoria Co.	Construction of a new wharf.
Cheverie	Hants Co.	Renewals and repairs on wharf.
Church Point	Digby Co.	Extension of groyne. Reconstruction of dam with sluice gate. Repairs to wharf.
Cribbin's Point	Antigonish Co.	Repairs to wharf.
Digby	Digby Co.	Works of construction and repair of pier.
East Jordan	Shelburne Co.	Small repairs to breakwater.
Georgetown	Antigonish Co.	Wharf extension.
Grand Etang	Inverness Co.	Improvement of entrance channel to harbour, etc.
Hiltz Narrows	Lunenburg Co.	Small repairs to breakwater.
Horton Landing (or Lower Horton)	King's Co.	Repairs to wharf.
Joggins	Cumberland Co.	Works of renewal and repair on breakwater.
Margaree	Inverness Co.	Repairs to beach protection works.
Margaretsville	Annapolis Co.	Reconstruction of outer end of breakwater pier.
McNair's Cove	Antigonish Co.	Breakwater, stone protection slope.
Monk's Head	do	Repairs to bridge over boat channel ; protection of its banks.
Morden	King's Co.	Renewals & repairs to breakwater.
Noel	Hants Co.	Repairs to pile wharf.
Oyster Pond	Guysboro' Co.	Repairs to breakwater, protecting entrance to pond.
Parrsboro'	Cumberland Co.	Small repairs to breakwater.
Pickett's pier	King's Co.	Repairs to pier.
Port George	Annapolis Co.	Repairs to breakwater.
Port Hood	Inverness Co.	Repairs and renewals to pier.
Port Maitland	Yarmouth Co.	Extensive works of repair to breakwaters.
Pugwash	Cumberland Co.	Construction of new wharf.
Seaside	Inverness Co.	New wharf completed.
Trout Cove (Centreville) ..	Digby Co.	Works of reconstruction and repair on breakwater.
Wallace	Cumberland Co.	Construction of ferry wharf of crib and pile work.
Yarmouth	Yarmouth Co.	Repairs and additions to protection works on Stanwood beach ; marking out channel with dolphins.

PRINCE EDWARD ISLAND.

Annandale	King's Co.	Temporary repairs to pier.
Belfast (Halliday's)	Queen's Co.	Repairs to pier and approach.
Chapel Point	King's Co.	Temporary repairs to pier.
China Point	Queen's Co.	Repairs to pier.
Crapaud (Victoria pier)	do	General repairs to pier.
Hickey's Pier	do	Pressing repairs to pier.
Hurd's Point	Prince Co.	General repairs to pier.
Kier's Shore	do	Repairs to roadway or pier.
New London	Queen's Co.	Part reconstruction of and repairs to breastwork, east side harbour entrance.
North Cardigan	King's Co.	Small repairs to roadway or pier.
Pinette	Queen's Co.	Levelling up of pier.
Port Selkirk	do	Levelling up of pier and other repairs.
Pownal	do	Repairs to flooring of pier, &c.
Souris, Knight's Point	King's Co.	Breakwater strengthened by adding solid block at outer end and placing stone slope on seaward side.
St. Mary's Bay	do	General repairs to roadway or pier, &c.
Vernon River Bridge	Queen's Co.	General repairs to pier.

Department of Public Works.

NEW BRUNSWICK.

Anderson's Hollow	Albert Co.	Reconstruction of inner face of break-water pier.
Cape Tormentine	Westmoreland Co.	Temporary repairs to worm eaten portions of harbour works, &c.
Gardner's Creek	St. John Co.	New wharf completed.
Herring Cove	Albert Co.	General repairs to breakwater.
Partridge Island	St. John Co.	Cribwork foundation for quarantine buildings.
Quaco	do	General repairs to piers which form tidal harbour.
River St. John, including tributaries	do	Wharfs—assistance towards construction.
St. John Harbour	St. John City and Co.	Protection of superstructure of Negro Point breakwater, with blocks of concrete, &c. Cribwork protection at base of Fort Dufferin, extended and repaired.

QUEBEC.

Anse St. Jean	Chicoutimi and Saguenay	
Anse à l'Eau, or Tadousac	do	New freight and shelter shed, &c.
Berthier (en haut)	Berthier Co.	New ice pier built; old repaired.
Cap à l'Aigle	Charlevoix Co.	Pier repaired.
Chicoutimi	Chicoutimi and Saguenay.	Addition to pier, &c.
Coteau du Lac	Soulanges Co.	Repairs to wharf.
Coteau Landing	do	do do
Etang du Nord	Gaspé Co.	Repairs to breakwater.
Gatineau Point	Wright Co.	Repairs to wharf.
Grande Rivière	Gaspé Co.	Repairs to pier, and erection of freight shed and waiting room.
Grand Pabos	do	Repairs to training pier built for improving entrance.
Ile aux Coudres	Charlevoix Co.	Renewals and repairs on wharf.
Ile Perrot	Vaudreuil Co.	Repairs to wharf.
Kamouraska	Kamouraska Co.	do do
Lanoraie	Berthier Co.	do do
Laprairie	Laprairie Co.	Revetment wall of cribwork. Improvement of steamboat channel.
L'Assomption (River)	L'Assomption Co.	River improvements.
Les Eboulements	Charlevoix Co.	Wharf repaired.
L'Islet	L'Islet Co.	Repairs to pier.
Longueuil	Chambly Co.	Repairs to roadway on wharf.
Lotbinière	Lotbinière Co.	Construction of a block of cribwork for landing and shipping purposes.
Lower St. Lawrence		Improvement of landings for fishing boats.
Magog	Stanstead Co.	Flooring of wharf repaired.
Mistassini	Chicoutimi and Saguenay	New wharf.
Murray Bay	Charlevoix Co.	Sheathing head block of pier.
Montmagny	Montmagny Co.	Reconstruction of wharf.
New Carlisle	Bonaventure Co.	Repairs to pier.
Phillipsburg	Missisquoi Co.	New landing pier.
Pointe Valois	Jacques Cartier	Repairs to wharf.
Port Daniel	Bonaventure Co.	Repairs to pier and freight shed, etc.
Rivière Blanche	Rimouski Co.	Repairs and renewals to head block of pier.
Rivière du Lièvre, lock and dam		Repairs to lock, etc.
Rivière du Sud	Montmagny Co.	Protection of river bank.
Rivière Ouelle	Kamouraska Co.	Repairs to pier.
Rivière Richelieu, Belœil channel	Chambly Co.	New guide pier west side of channel and improving the latter.
Rivière Richelieu—Sorel ice piers	Richelieu Co.	Repairs to ice piers.
Rivière Ste. Anne de la Pérade	Champlain Co.	Works of reconstruction and repair in connection with protection of river banks.
Rivière St. Maurice, between Grandes Piles and Latuque	St. Maurice Co.	Improvement of river channel.
Roberval	Chicoutimi and Saguenay	Erection of freight shed, &c.
St. Alphonse (Bagotville)	do	Erection of freight shed.
St. Anne du Saguenay	do	New pier-work, etc.
Ste. Famille (Ile d'Orléans)	Montmorency Co.	Works of repair to pier.
St. Irénée	Charlevoix Co.	Works of reconstruction and repair on pier.
St. Jean (Ile d'Orléans)	Montmorency Co.	Erection of combined freight shed and waiting room on pier.

QUEBEC—Concluded.

St. Jean Port Joli.....	L'Islet Co.....	Repairs to pier.
St. Michel de Bellechasse.....	Bellechasse Co.....	Renewals, repairs, etc., to pier.
St. Valentin.....	St. John Co.....	Construction of a wharf.
Three Rivers.....	St. Maurice Co.....	Ice breaker, repairs.

ONTARIO.

Burlington Channel.....	Wentworth Co.....	Repairs to protection piers.
Collingwood.....	Simcoe (North) Co.....	do to breakwater.
Goderich.....	Huron (West) Co.....	Reconstruction of breakwater and repairs to piers.
Kincardine.....	Bruce (West) Co.....	Repairs to piers.
Kingsville.....	Essex (South) Co.....	Repairs to landing pier.
Lakes Simcoe and Couchiching.....		Regulation of waters of lakes.
L'Orignal.....	Prescott Co.....	Reconstruction of wharf.
Penetanguishene.....	Simcoe (East) Co.....	Repairs to wharf.
Port Hope.....	Durham (East) Co.....	Repairs to east pier.
Port Stanley.....	Elgin (East) Co.....	Repairs to west breakwater-pier, etc.
Rainy River.....	Algoma Co.....	Construction of wing dams, etc.
Toronto.....	Toronto City, etc.....	Protection of eastern entrance to harbour by piers, etc.

MANITOBA.

Wharfs on Lake Winnipeg.....	Construction of wharfs.
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BRITISH COLUMBIA.

Columbia River above Golden... Yale District.....	Improvement of navigable channel.
Columbia River at Revelstoke... do do	Protection of river bank to prevent erosion.
Columbia River above Revelstoke do do	Removal of rocks.
Duncan River..... do do	Removal of snags and other obstructions.
Fraser River..... do do	Improvement of ship channel through sand heads.
Skene River..... New Westminster District.....	Removal of points of rock, snags, etc.
William's Head Quarantine Station..... Victoria District.....	Repairs to wharf and improvement of water service.

*PROVINCE OF NOVA SCOTIA.**ARISAIG.*

Arisaig, Antigonish County, is on the Northumberland Strait, 15 miles to the eastward of Merigomish, the nearest harbour.

The works consist of a pier built by the Provincial Government, prior to Confederation, the charge of which was assumed by the Federal Government in 1870, and the breakwater built in 1886-88.

The pier originally consisted of an approach 245 feet in length and an outer portion 195 feet in length varying from 40 to 44 feet in width. Repairs and improvements have been made from time to time, including a stone talus on the seaward side and an extension 100 feet in length, built in 1889-91. The depth at extreme low water at the outer end of the extension is 10 feet. Spring tides rise 5 feet.

The breakwater is 300 feet in length and 20 feet in width and has an L at the outer end 40 feet in length. The depth at extreme low water at the outer end is 5 feet.

During the fiscal year 1896-97 the sum of \$1,239.38 was expended in repairing and strengthening the seaward face of the pier, over a distance of 5 feet from its outer end, by means of extra bolting above low water, and in constructing and placing the substructure of a block 24 by 24 feet on the seaward side at the outer end, which besides strengthening the face work, will serve to retain a proposed extension of the stone talus.

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AVONPORT.

Avonport, King's County, is a small farming village with a population of about 250, situated at the mouth of the Avon River (at this point nearly two miles wide) and on the Dominion Atlantic Ry. 12 miles N.W. from Windsor the county town of Hants, and 13 miles E. from Kentville the county town of King's. Some two or three millions of bricks are made here during the year.

A small wharf of ordinary round log, stone filled cribwork was built here before Confederation by the inhabitants aided by the Provincial Government. It is 300 feet long, 22 to 25 feet wide on top, and 17 feet high at the outer end which is dry at L. W. O. S. T. In 1886 the department having assumed control of the wharf some little time previously, spent \$1,200 in extensive general repairs.

During the year 1896-97 the sum of \$500 was expended in rebuilding the top of the shoreward half of the work; the covering, floor stringers and upper two or three logs in height being renewed. The outer end is still in a dilapidated condition, but the wharf is now in better condition than it has been for some years, and shipments can be made from it.

BOULARDERIE (ROSS FERRY).

Ross Ferry Landing, Victoria County, is on the northern side of Boularderie Island, 13 miles to the westward of the principal entrance to the Great Bras d'Or Lake.

During the fiscal year 1896-97 a contract, entered into in 1895 96, for the construction of a new wharf about midway between the old wharf and the ferry landing, was completed.

The work as completed, includes a road cutting 106 feet in length, an approach 23 feet in length and 20 feet wide consisting of a brush and stone embankment and a stone abutment, creosoted pile work 61 feet in length and 20 feet wide, and a cribwork head 20 by 50 feet with creosoted substructure. The depth at the outer end of the wharf is 14 feet at low, or 15 feet at high lake level.

CHEVERIE.

The village of Cheverie, Hants County, population 350, is situated on the right or east bank of the estuary of the Avon River, where it debouches into the Minas Basin, about 16 miles north of Windsor, the county town.

This is a good farming district but the principal trade of the place is the quarrying and shipment of gypsum to the United States.

A wharf about 100 feet long was built here many years ago by the Provincial Government. It was lengthened by the department, 70 feet in 1873-74, at a cost of \$2,338 88, and, in 1882, a further length of 183 feet was added at a cost of \$5,000.

The pier as extended can only be approached at high water, when the depth along the same varies from 14 to 22 feet.

In June, 1897, the sum of \$100.55 was expended in renewing a small portion of the flooring of the shoreward end of the structure and repairing one or two other places: six new fenders were also supplied to replace those broken by ice or vessels.

CHURCH POINT.

Church Point, Digby County, is situated on the south east side of St. Mary's Bay, 9 miles south-west from Weymouth and directly opposite Petit Passage, between the extremity of Digby Neck and Long Island. It has a population of about 200 people engaged in fishing and farming, and is one of the most important shipping points on the Digby coast of the bay.

The work here consists of a wharf-retaining wall, and a breakwater appears to have been built between the years 1856 and 1866 at the joint expense of the inhabi-

tants and the Provincial Government; the expenditure of the government having been \$1,055.66.

From 1875 to 1895 inclusive, the department has expended the total sum of \$3,963.13 in repairs, renewals and extensions.

During the fiscal year 1896-97 the sum of \$3,975.51 was expended in extending a groyne built in 1894-95, for the purpose of keeping the gravel from washing around the end of the breakwater and filling the berth for vessels alongside the quay or retaining wall. The new work is of substantial stone filled cribwork of the usual type, 120 feet long, 16 to 25 feet wide, and from 10 to 22 feet high.

In addition to this work, the dams and sluice gate at the head of the dock, where the little fresh water stream makes its exit, were rebuilt with the object of scouring the gravel from the front of the retaining wall where vessels lie to load lumber. The sluice gate is 10 feet wide to admit boats to the tidal pond inside, and 7 feet high. It is raised by means of a horizontal capstan when the pond is full, and the free flow of the issuing stream has already done excellent work. The wharf front was also repaired by placing a number of fender piles, and mooring posts, and filling with ballast a few holes on top of the wharf.

CRIBBIN'S POINT.

Cribbin's Point, Antigonish County, is on the west side of St. George's Bay, 8 miles to the southward of Cape George, and 5 miles to the northward of the entrance to Antigonish Harbour.

A wharf, commenced in 1890-91 and completed during the following fiscal year, extends 300 feet in a southerly direction from the point, and has an approach 195 feet in length. The approach consists partly of side cutting and embankment with a stone retaining wall, and partly of a through cutting 18 feet wide at the bottom, with sides sloping one and one-half to one. The wharf is 20 feet in width on top for a distance of 120 feet from the inner end, and 30 feet for the remaining 180 feet, the inner 50 feet being of stone and the outer 250 feet of close-faced timber work fully ballasted. The depth at extreme low water at the outer end of the wharf, originally 11 feet, is now about 9 feet. Spring tides rise 4 feet.

The face-timbers having been weakened by the ravages of the teredo, the sum of \$3,000 was voted for expenditure during 1896-97 in placing a talus of stone on the seaward side and in close piling the outer end with creosoted timber. Of this sum \$1,552.44 was expended in quarrying and placing stone.

A further sum of \$1,500 is required for procuring and placing creosoted piling and in completing the stone talus.

DIGBY.

The town of Digby, Digby County, population about 1,500, is situated at the south-western end of the Annapolis Basin. It is an important station on the Dominion Atlantic Railway, 150 miles from Halifax, 20 from Annapolis and 67 from Yarmouth, the terminus. A daily steamer runs to St. John, N.B., in connection with the train service.

The pier, which was originally built by the Provincial Government some years before Confederation, is an important and substantial composite structure, partly of cribwork and partly of pile work, 870 feet long and 40 feet wide. Its outer end is 40 feet high, and at H. W. O. S. T. carries about 33 feet of water (Springs rise 24 feet, neaps 18 feet.)

During the year 1896-97 the sum of \$3,132.89 was expended in the rebuilding of the southern half of the shore end of the pier, a length of 450 feet, in substantial pile work.

This structure is at this date in a thoroughly satisfactory condition.

EAST JORDAN RIVER.

During the fiscal year 1896-97 the sum of \$8.93 was expended in trifling repairs to the floor of the East Jordan River breakwater, Shelburne County.

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GEORGEVILLE.

Georgeville, Antigonish County, is on the Northumberland Strait, $6\frac{1}{2}$ miles south-west from Cape George.

The wharf at this place, commenced in 1890-91, and completed the following year, is 207 feet in length and 20 feet in width on top, with an L 20 by 20 feet. The approach, which is 87 feet in length, is of stone, and the remainder of the work of squared timber fully ballasted, and protected by sheathing and fenders. The depth at the outer end, at extreme low water, is 5 feet. Spring tides rise 4 feet.

The sum of \$1,800 was voted by Parliament for expenditure during the fiscal year 1896-97 in constructing an extension to the wharf 44 by 40 feet, with an L 20 by 24 feet, the materials for which were procured in 1895-96. Active operations were commenced on the 7th June, and were in progress at the end of the year, when the expenditure amounted to \$845.12.

The substructure of the extension was constructed and made ready for launching, with the exception of placing the fenders and sheathing.

GRAND ETANG.

Grand Etang, Inverness County, is on the Gulf of St. Lawrence, about midway between the harbours of Margaree and Chéticamp.

Works designed to improve the entrance to the pond, and thus make it available for the use and shelter of fishing boats and small vessels, commenced in 1893-94, were completed the following year, with the exception of the excavation to low water between the piers, and the removal of a bridge and abutments.

In May and June, 1896, the sum of \$4,289.26 was expended in constructing a pile bridge and approaches within the pond; in removing the superstructure and one of the abutments of the old bridge, and in excavating between the piers of the new channel over a width of 50 feet, to 1 foot below extreme low water, 200 feet below the old bridge.

During the fiscal year 1896-97, the sum of \$1,497.08 was expended in improving the channel. Of this amount \$497.73 was expended in October and November, 1896, in removing material that had been carried into the channel made in May and June, 1891, and in opening a channel through the bar between the old bridge and the pond, a distance of about 125 feet, to 1 foot above extreme low water; and \$999.35 in May and June, 1897, in deepening the channel from end to end to 1 foot 3 inches below extreme low water, or to about 4 feet 6 inches at ordinary high water.

HILTZ NARROWS.

Hiltz Narrows, also known as Silver Point, is on the west side of Mahone Bay, Lunenburg county, about 4 miles to the northward of the village of Mahone Bay. The Narrows are the entrance to a large and perfectly sheltered pond which constitutes a safe and commodious harbour for fishermen and others.

During the fiscal year ended 30th June, 1897, some small repairs were made to the breakwater and warping pier.

JOGGINS.

The Joggins, Cumberland County, is a small port and settlement, of some 300 to 400 people, situated on the south east side of Chignecto channel, the northern arm of the Bay of Fundy. It is about 10 miles from the head of Cumberland Basin and 14 from Maccan Station on the Intercolonial Railway, with which it is connected by the "Joggins Railway" built in 1889.

The coal from the colliery of the "Joggins Railway and Coal Co.," distant from the shore $1\frac{1}{2}$ mile, is brought down to the loading wharf by means of a wire rope tramway.

During the year 1896-97 the sum of \$1,499.12 was expended in extensive repairs, and renewals to the breakwater protecting the coal loading wharf. The work done consists of the rebuilding of the shoreward portion of the breakwater, 165 feet long, 18 to 25 feet wide and 6 to 12 feet high, and the renewal of the floor, on 125 feet in length, of the outer portion or L, besides some new fenders and minor repairs. This work still requires an expenditure of about \$400.00 in placing some new close sheathing and fenders around the end of the L.

The depth at high water ordinary spring tides, along the inner face of the breakwater pier, varies from 18 to 26 feet. At extreme low water the flats are dry a distance of about $\frac{1}{2}$ mile beyond the breakwater.

LOWER HORTON.

Lower Horton or Horton Landing, King's County, is a farming village of some 200 people on the left or north bank of the Gaspereau River, at the southern end of the Basin of Minas, and close to the village of Grand Pré.

It is also a station on the D. A. Ry., between Windsor and Kentville; being 14 miles from the former and 11 from the latter. About 60 years ago a landing wharf was built here by the inhabitants aided by the Provincial Government.

In 1887-88 this work, which is about 3 miles by water and 2 miles by land, west of that at Avonport, had become so decayed and dilapidated as to be quite useless for shipping purposes, and the department expended the sum of \$737.21 on repairs, and in 1888-89 the sum of \$2,252.25 in rebuilding it. The new wharf, which is on the site of the old one, is constructed of round log open cribwork, 172 feet long, 65 feet wide at the outer, and 23 feet 6 in. at the inner end. The outer end is dry at L. W. owing to the great range of tide, 40 to 48 feet, but at H. W. vessels drawing 18 feet can reach it.

During the year 1896-97 the sum of \$270.25 (appropriation \$435.00) was expended in a few much needed repairs. The work done consists in the re-flooring of the shoreward half of the wharf, together with the placing of new guard timbers and a few new floor stringers, and the building of two small piers of cribwork, about 15 feet long, 6 feet wide, and 4 to 5 feet high, one on either side of the shore end of the wharf to prevent the bank from wearing away. The work is now in good condition.

MARGAREE.

Margaree Harbour, Inverness County, is at the mouth of Margaree River, on the Gulf of St. Lawrence, about 30 miles north-east of Port Hood.

The entrance is by a narrow channel obstructed by a bar of shifting sand over which there is at times only 5 feet at extreme low water. Spring tides rise 4 feet.

The western side of the entrance is protected by works commenced by the Provincial Government which have been extended and repaired by the department.

During the fiscal year 1896-97, the sum of \$200.00 was expended in completing the beach protection work of brush and stone on the east side of the entrance, commenced in 1894-95, and continued in 1895-96.

MARGARETSVILLE.

Margaretsville, Annapolis County, is the largest and most important village on the south coast of the Bay of Fundy, between Digby Gut and Scot's Bay. It is distant 42 miles N.-E. from the former, 36 miles S.-W. from the latter, and 8 miles N. from Middleton, an important station and junction of the Dominion Atlantic Ry. It has a population of about 500 people engaged in fishing, farming, and to a smaller extent, in lumbering and general trade.

In March, 1897, the department awarded a contract for the reconstruction of the outer 185 feet in length of the work that was totally destroyed by violent gales in October, 1890, and March, 1894. The amount of the contract is \$10,854.00, and

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at the end of the fiscal year, work to the value of \$5,427.00 had been done. The new block is 185 feet long, 42 feet wide, and from 22 feet at the junction with the old work, 32 feet high at the outer end. Springs rise 30 feet; neaps 25 feet.

M McNAIR'S COVE.

McNair's Cove, Antigonish County, is on the west side of St. George's Bay, 2 miles south of Cape George.

A breakwater, 400 feet in length, was built on the north side of the cove in 1872-73. Repairs were effected from time to time up to 1887-88, when the work was reconstructed over a distance of 160 feet from the outer end. During the year 1890-94 the outer end of the work, re-constructed in 1887-88 was protected, by close piling with creosoted timber, and its seaward face by a talus of quarried stone.

During the fiscal year 1896-97 the sum of \$300 was expended in raising the talus which had settled so as to leave portions of the damaged face exposed.

MONK'S HEAD.

In 1894-95 a channel for boats was opened between Dunn's Lake and Antigonish Harbour, and a highway bridge was constructed over it. After the completion of the work the current cut into the slopes, and undermined the bridge abutments which settled considerably.

During the year 1896-97 the sum of \$300 was expended in repairs to the bridge and abutments, and in the construction of brush and stone protection work. About 60 feet of brush and stone work was constructed on each side of the channel in continuation inwards, of the brush and stone work in the bridge abutments; the superstructure of the bridge was removed and renewed after cutting back the abutments so as to increase the width of the opening from 14 to 18 feet, and facing them with 5 piles capped with 12 inch squared timber; and 5 piles were also driven on each side at the face of the brush and stone work over a distance of 20 feet from the bridge.

The work is still incomplete, requiring a hand rail on each side of the bridge, the removal of brush at the bottom of the face of each abutment; and some extension of the brush and stone protection work.

MORDEN.

Morden, formerly called French Cross, King's County, is a small fishing and farming village of about 120 people situated on the south shore of the Bay of Fundy, 50 miles east of Digby Gut, and 9 miles north from Aylesford Station on the Dominion Atlantic Railway. The breakwater was begun in 1846 by the inhabitants aided by the Provincial Government, and between the years 1867 and 1894 inclusive, the Department has expended upon it a total of \$6,619.64 in renewals and repairs.

During the year 1896-97 the sum of \$1,963.81 has been expended in renewals and repairs, namely, in the fall of 1896, the sum of \$505.31 in making such repairs to the outer block of the breakwater as would enable it to withstand the winter storms; and in the spring of 1897 the sum of \$1,458.50, partially rebuilding a gap of 120 feet in length that was made through the middle of the work in February and October, 1895, by exceptionally heavy seas.

NOEL.

Noel, Hants County, is a village of about 500 people, situated on the south shore of Cobequid Bay, the extreme eastern arm of the Bay of Fundy. It is 13 miles west of Maitland and 32 north-west from Shubenacadie, the nearest Railway Station, on the I. C. Ry. Spring tides rise here 50 feet and neaps 43 feet.

A pile work wharf 230 feet long and 25 feet wide, with an L 62 feet long, was built by the department in 1889 at a cost of \$27,000.

In June, 1897, the sum of \$100.00 was expended in re-laying with 3 inch hemlock plank the shoreward 150 feet in length of the floor, which was in an advanced state of decay. The rest of the floor will require renewal within a short time. The wharf is in other respects in fair condition.

OYSTER POND.

Oyster Pond, Guysboro' County, is one of several large ponds on the north shore of Chedabucto Bay which form the only boat harbours between Cape Argos on the western side of the southern entrance to the Strait of Canso, and Guysboro' Harbour, a distance of 15 miles.

In 1876 the entrance to the pond was improved by hand dredging and protected by the construction, on its eastern side, of a breakwater 180 feet in length; and in 1883-84 the breakwater was extended 105 feet over a level bottom, dry at low water. The width of the inner work is 14 feet, and of the extension 16 feet.

During the fiscal year 1896-97 the sum of \$698.46 was expended in repairs to the breakwater, including re-ballasting the work where required; repairs to the outer end; sheathing with hardwood at the outer end and over a distance of 20 feet on each side, and with spruce for a distance of 120 feet on the east side; constructing a timber break 2 feet 6 inches in height on the east side of the inner work, over a distance of 100 feet from its outer end, and in renewing the upper cross-ties, cap-timbers and covering of the inner work over a distance of 100 feet from its outer end.

PARRSBORO'.

Parrsboro' Pier, Cumberland County, is situated on the north side of the Basin of Minas, about a mile to the south-west of the lighthouse at the entrance to Parrsboro' Harbour. It is two miles south of the village of Parrsboro' and is the landing place for the steamers of the St. John, N.B., and Basin of Minas route, which call regularly during the season of navigation.

During the fiscal year 1896-97 a sum of \$50.16 was applied in making small repairs to this pier.

PICKET WHARF.

The Picket Wharf, so called in King's County, is situated on the south side of the mouth of the Habitant River, two miles below the village of Canning, and about the same distance from the village of Lower Canard. It is conveniently placed with regard to a large and thickly populated area of the richest fruit growing and agricultural land in Nova Scotia.

The wharf was begun in 1845, and extended in 1859-60 by the inhabitants, aided by the Provincial Government. Since these dates the department has expended upon it, in renewals and general repairs, in 1878, \$500; in 1885, \$100, and in 1886, \$500.

It is 190 feet long, 60 feet wide, and at the outer end, which is now about two feet below high water ordinary spring tides, it is 23 feet high. Spring tides rise 48 feet, neaps 40 feet.

During the year 1896-97 the sum of \$498.88 was expended on some very necessary repairs. The work done consists of the rebuilding of the crib breastwork along the outer face of the shoreward end for a length of 170 feet, that had fallen into decay and threatened to make an island of the main portion of the wharf. Portions of the top of the wharf were also filled up with stone and gravel, so that teams could come alongside vessels loading potatoes and other produce. This wharf is now in better condition than it has been for some years, though it is still, as a whole, in a very advanced stage of dilapidation.

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PORT GEORGE.

Port George, Annapolis County, is a thrifty village of about 400 people engaged in fishing and farming, on the south shore of the Bay of Fundy, 37 miles north-east from Digby Gut, and 42 miles south west from Scot's Bay. It is 6 miles south-west from Margaretsville and 7 miles north west from Middleton on the D. A. Railway.

Some years before Confederation a small harbour (dry at low water, spring tides rising about 30 feet) was formed at the expense of the Provincial Government by the construction of a western breakwater and an eastern pier or wharf. The breakwater is 440 feet long, 25 to 35 feet wide, and at the outer end 25 feet high.

During the year 1896-97 the sum of \$398.50 was expended in filling with stone and timber, a dangerous cavity, nearly a hundred feet long and from 3 to 12 feet wide, that heavy waves had excavated under the lower side of the seaward face of the breakwaters, and in close sheathing a length of 46 feet on the shoreward side, together with a few new planks to replace a few that were rotten and unsafe.

PORT HOOD.

Port Hood, the shire town of the County of Inverness, is on the west coast of Cape Breton Island, 20 miles north of the northern entrance to the Strait of Canso.

The harbour was formerly a secure one, Smith's Island, which is 2 miles in length and forms its western side, having been connected with the mainland by a range of sand hills. In 1839 the sea made a breach through this protection. The opening, at first narrow, was enlarged by the tidal currents with increasing rapidity until it was swept entirely away and its site occupied by 15 feet of water. The harbour is now unsafe during northerly gales, except in a small cove on the east side of Smith's Island.

The pier, which is on the eastern side of the harbour, was commenced by the Provincial Government in 1865-66. It was originally 550 feet in length and 24 feet in width, with an L at the outer end 160 feet in length and 23 feet in width. It came under the charge of the Federal Government in 1871, since which time extensive repairs and renewals have been made, including the construction of a new block 125 feet by 25 feet at the outer end in 1873; the placing of slopes of heavy stone on each side in 1883-84; the construction of a block 50 feet by 22 feet at the south end of the L in 1888-89; and the construction of a block 71 feet by 24 feet at the outer end in 1889-90.

During the fiscal year 1896-97 the sum of \$1,500 was expended in close piling and re-ballasting the outer end of the work, where the face-timbers and close piling had been damaged and in places destroyed by the teredo, and where the ballast had gone out of the face-chambers in some places to the bottom. Piles were driven as close together as possible inside the face-chambers over a distance of 244 feet, and the close piling of about 150 feet of outer face was renewed; and 319 cubic yards of ballast were placed in the empty face chambers.

The depth at the outer end of the pier, at the face of the 71 foot block, varies from eleven and one-half to fifteen feet at extreme low water; but there is less water over a shifting sand bar about 220 feet further out. Spring tides rise 4 feet.

PORT MAITLAND.

Port Maitland, Yarmouth County, formerly known as Green Cove, is a prosperous and important fishing and farming village, with a population of about 400; it is situated on the south-east side of the mouth of the Bay of Fundy, 12 miles north of the county town of Yarmouth. The works, which were begun about the year 1859 by the Provincial Government, consist of an eastern and a western breakwater, both of cribwork, the former 400 feet and the latter 500 feet long enclosing between them a snug high water harbour of $2\frac{1}{2}$ acres in extent.

Spring tides rise 18 feet, and the harbour, at low water, is dry to the outer end of the western breakwater.

During the year 1896-97 the sum of \$3,304.79 was expended on extensive repairs and renewals to both works. On the eastern breakwater, which also serves as a wharf for the landing and loading of general merchandise, coal, lumber, etc., the shoreward 30 feet was rebuilt on the south side 6 logs high, and on the north side 3 logs, including floor stringers and covering, 22 feet in length of new covering was also laid on the outer end, and a number of new fenders were bolted into position.

On the western breakwater, a reinforcing block was built on the south side of the outer end, 97 feet long, 11 feet wide and 12 to 14 feet high, or to a height of about ten feet below the floor of the work. A reinforcing block was also begun along the whole length of the L 78 feet, and in width from 10 to 12 feet. To obviate settlement due to soft bottom and the eating away of the bottom logs by the limnoria, which was the cause leading to the necessity of constructing this block, it has been built on 147 piles driven to hard bottom and cut off level with the bottom. The inner or northern side of the shore end has also been rebuilt and strengthened.

PUGWASH.

Pugwash, Cumberland County, is a town of nearly 2,000 people, situated on the south side of the Strait of Northumberland, 50 miles west of Pictou, 10 west of Wallace and 20 east of Bay Vert. It is the terminus of the Pugwash branch of the Intercolonial Railway, Oxford and New Glasgow division.

Immense quantities of deals, ten or twelve million feet, are annually shipped from here to Europe.

The only wharf from which lumber can be shipped at present is the Intercolonial Railway wharf, and as this has a frontage of 60 feet only, not more than one vessel can load at a time, and there are often more waiting their turns.

To facilitate this import and export trade, the department in May, 1897, let a contract for the sum of \$8,640, for the construction of an additional wharf, on which work was begun by the contractors in June.

The new structure will be 145 feet long, 50 feet wide, and have a depth of about 16 feet of water at its outer end at low water spring tides. The lower portion of the outer 100 feet block will be creosoted timber up to midway between high and low water, owing to the prevalence and destructiveness of the limnoria. The wharf is so located as to be reached by a spur track from the Intercolonial Railway. It will be finished by about the 1st December, 1897.

SEASIDE.

Seaside is on the east coast of St. George's Bay, near the southern entrance to Port Hood Harbour; and about two miles west from Port Hood, the shire town of the County of Inverness.

During the fiscal year 1896-97 a contract entered into in 1895-96 for the construction of a wharf at this place was completed.

The wharf is 300 feet in length and 20 feet in width on top, of open-faced cribwork fully ballasted and close fendered at the outer end; the substructure is of creosoted North Carolina yellow pine and the superstructure of native timber. The depth at the outer end at extreme low water is 7 feet. Spring tides rise 4 feet.

TROUT COVE.

Trout Cove (Centreville), Digby County, is a small indentation of the coast line on the shore of Digby Neck, Bay of Fundy. It is about midway, and has the only breakwater affording shelter to fishing boats, between Digby Gut and Petit Passage, being 18 miles S. W. from the former.

The settlement at and near the cove, which is called Centreville, has a population of about 250 people engaged in fishing and farming. The fishing fleet comprises about 30 boats of 16 to 18 feet keel, and there are also owned here two schooners of

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30 tons that, during the season, run to and from St. John, Halifax, Yarmouth and Lunenburg with freight, fish, lumber, flour, etc.

In 1856-57 the inhabitants, aided by the Provincial Government, built a breakwater 200 feet long, and 30 feet wide, for the purpose of affording much needed shelter to the fishing boats from north-east storms.

From 1867 to 1892 inclusive, the department expended a total sum of \$9,925.78 on repairs and renewals; the chief work being an extension 178 feet in length built in the year 1896.

During the year 1896-97 the sum of \$3,903.20 was expended on thorough and much needed repairs, the work done consisting of (1) the taking down and re-building a length of 130 feet on the inner side of the shore end of the work, which was thoroughly rotten, (2) the close fendering and reinforcing with longitudinal bottom face logs, a length of about 80 feet on the seaward side of the outer end, (3) the raising of the middle 100 feet of the work a height of 2 to 2½ feet, (4) the entire renewal of the floor and, (5) the renewal of many fenders and mooring posts, and the strengthening of the break on the seaward side. The breakwater is at this date in good condition.

WALLACE.

Wallace Harbour, Cumberland County, is situated on the south side of the Strait of Northumberland, about midway between Pictou Harbour and Bay Verte. It is at the mouth of Wallace River, and well protected from all winds.

On the south side of the harbour which is ¾ mile wide, is situated the village of Wallace with a population of about 800 people. The industries of the place are chiefly farming and the quarrying and export of freestone, of which there are large and valuable beds in the immediate neighbourhood.

The depth of water in the channel varies from 6 to 7½ feet at low water springs. With the object of facilitating communication with the north side of the harbour, a thickly settled district, the department in March, 1897, awarded a contract for the construction of a ferry wharf, for the sum of \$2,329. Work was vigorously begun on the 20th day of the same month, and at the end of June, 1897, the wharf was very nearly finished. It is a composite structure 320 feet long; the shoreward 170 feet being of block and span work 18 feet wide on top; and the outer 150 feet of pile work. The outermost 90 feet is widened to double width to form an inclined slip at which the ferry boat can lie at any stage of tide.

YARMOUTH HARBOUR.

The town of Yarmouth is situated at the southern extremity of Nova Scotia. It has a population of about 7,000 people, and next to Halifax is the largest and most important town in the province. It is the terminus of the Dominion Atlantic Ry. (217 miles from Halifax) and the headquarters of the Yarmouth Steamship Co. whose fine Clyde built steamers make regular trips to Boston throughout the year.

The harbour, in which spring tides rise 16 feet and neaps 13 feet, and which at low water is largely mud flats covered with eel grass, is formed by shingle beaches about a mile long; Stanwood Beach connecting the northern end of Cape Fourchu Island with southern end of Stony Point on the main land, and separating the harbour from the Bay of Fundy.

In 1867 it was found that the part of the beach, between Cape Fourchu and Stony Point, was gradually wearing away and it was feared that unless this action could be arrested, the sea would eventually sweep away the beach and destroy the harbour, and the Provincial Government therefore began the work of protection by building 200 feet of cribwork on Stony Point. In 1873 and 1874 the department completed the remaining length of 2,800 feet to Cape Fourchu, and from that date to 1888 inclusive, the total sum of \$2,468.08 was expended on this work.

During the year 1896-97 the sum of \$2,083.62 was expended on repairs. The work done consists of the rebuilding a length of 80 feet on the south-western end of the

cribwork, of an average width of 20 feet and a height of 6 feet; the closing of three breaches in the middle of the work, respectively 50, 50 and 60 feet in length by 22 feet wide and 10 feet high, and the filling with ballast of a length of 70 feet for the full height and width. These four pieces of rebuilt work were fully ballasted and close fendered on the seaward side. A new block or groyne, projecting at right angles from the north east end of the work was also begun.

Moreover, a sum of about \$200 was expended in driving seven clusters of piles, 3 in each, to serve as "dolphins" for marking the channel in the harbour.

PROVINCE OF PRINCE EDWARD ISLAND.

ANNANDALE.

Annandale Pier, King's County, is situated on the north side of Grand River, near its entrance into Boughton Bay. The pier originally constructed by the local government was taken over by the Federal Government in 1883. It consists of a shore abutment or approach 300 feet in length and 23 feet wide, with a pier head fronting on the channel 140 feet long and averaging 36 feet in width.

The abutment or shore approach (excepting on a short span of 18 feet in length planked over), is constructed of close faced timber work, filled in with brush, stone and clay, the road-way being formed of the latter material, while the pier head is formed partly of crib work and partly of piling, the whole of which is covered by planking spiked to floor stringers. On the channel face of the pier, there is a depth of 7 feet of water at low water spring tides, or 12 feet at high water springs, which here rise 5 feet. The pier being a very old structure when assumed by the department, and being exposed to attacks of the teredo, it has latterly been found necessary to incur expenditure nearly every year to keep the structure in a passable state for traffic. During the fall of 1896 the sum of \$74.67 was expended on the pier for such purpose.

The work done consists in the following, viz.:—(a) Filling in where settlement had occurred in shore approach. (b) Raising and blocking up the south-west corner and a portion of the east end of the pier head, which had been completely broken down owing to decay of capping on bents and floor stringers, and (c) Strengthening as far as possible, the work where found unsafe by inserting new floor stringers and capping; also renewing planking where found broken or unsafe. The work here referred to should, however, be considered to be only of a temporary nature as the entire pier head requires re-construction.

BELFAST.

Belfast Pier, Queen's County, locally known as "Halliday's Wharf," is situated on the south side of Orwell Bay and about one mile from the village of Eldon. This pier, constructed originally by the Government of Prince Edward Island previous to Confederation, was taken over by the Federal Government in 1883. It has a length of 600 feet and, at its outer end, stands a head block 130 feet long fronting on the channel where a depth of about 5 feet now obtains at low water spring tides or 14 feet at high water.

Being a very old structure when assumed by the department, yearly expenditures have to be incurred for repairs to keep it in a passable state for traffic, as apart from its exposed situation, this pier like all other works on Prince Edward Island suffers from the action of the teredo, which is here most destructive to all unprotected timber. As a result of the continued expenditures made by the department, the greater portion of the pier above low water has been rebuilt; settlement, however, occurs on it year by year which requires levelling up from time to

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time. During the spring of 1897 the pier head was levelled up from $1\frac{1}{2}$ to 3 feet and new floor stringers and planking put on; fender piles were placed at about 5 feet centres on the face and ends of the pier head, and new guard timbers, mooring posts, &c., were put in and the roadway of the approach repaired with broken stone and gravel. Total expenditure incurred in 1896-97, \$499.94.

CHINA POINT.

China Point Pier, Queen's County, is on the west side of the Orwell River, and near its outlet on Orwell Bay. It was constructed many years ago by the local government so as to provide a place of shipment for the surplus produce of a large section of country.

This pier is a place of call for the steamer plying tri-weekly between Charlotte-town and other points on Orwell Bay, its total length as originally constructed was 426 feet, the work extending out to the edge of the channel where a pier head 72 feet long, averaging 25 feet in width has been added. The inner portion of the pier is composed of a shore abutment, and eight "blocks" with intervening timber "spans." The two outer blocks and the one forming the pier head or **L** are built of close faced squared timber and the whole work inclusive of spans is covered over with planking spiked to the floor stringers. There is within a short distance of the face of the work a depth of 40 feet at low water; but the head of the pier built close to the edge of the channel bank stands in a depth of 15 feet at low water, or 24 feet at high water spring tides that rise 9 feet. Owing to the soft yielding nature of the bottom on which the pier head rests and the destructive action of the teredo, it has been found necessary to incur every year some expenditure to keep the pier in a passable condition; the native and unprotected timber used for piling (the principal support of the structure) is destroyed by the teredo in from two to five years and some settlement always follows. It had been intended with the sum of \$500.00 authorized for expenditure in connection with the other repairs required, to have driven a number of creosoted piles along the faces of the blocks forming the pier head, and these with all the other materials had been provided at an expense of \$261.85; but before the work could be commenced, movement of the ice during a high spring tide about the middle of March, carried away one of the blocks forming the pier head, breaking down the connecting spans and making repair of the pier impossible with the sum then available. On account of this unexpected occurrence, all materials of value were collected from the damaged works and these, together with those previously provided, placed in safety at an expense of \$22.47; the total expenditure being thus increased to \$284.32.

CHAPEL PIER.

Chapel Pier, King's County, is on the south side of Grand River, about 3 miles from its entrance into Boughton Bay, and nine miles from Cardigan Station on the line of the Prince Edward Island Railway. The pier constructed by the local government previous to Confederation was assumed by the Dominion Government in 1884; it consisted at the time of a shore abutment or approach, 205 feet long with a "block" and "span" at outer end, affording a length of 249 feet of pier work 22 feet wide, and extending out to a depth of 7 feet at low water, and 12 feet at high water spring tides. During 1889-90 a length of 44 feet of pier work was added by the re-construction of a former "block" and "span," making the pier 293 feet in length and affording to vessels a depth of 9 feet at low water. Owing to the disturbance of the foundation, the destructive action of sea worms or other causes, settlement of the outer work took place which, together with the decay of some of the floor stringers and planking, rendered the pier unfit for traffic, hence temporary repairs had to be effected at a cost of \$11.46 to facilitate fall shipments.

The work done consisted in re-planking over an area equal to one half that covered by the pier head and "spans," and filling up some holes in the roadway approach with broken stone and gravel.

CRAPAUD.

Crapaud or Victoria Pier, Queen's County, is situated at the head of the navigation in the Crapaud Basin, at Victoria Village, which is the most important port of shipment after Summerside on the south-western coast of Prince Edward Island. It is about midway between Charlottetown and Summerside harbours, and about 11 miles distant (south) from Emerald Junction on the line of the Prince Edward Island Railway, and is the outlet of probably the most fertile and best tilled district on the island. At different times since Confederation the department has expended considerable sums in dredging to improve the approach, from the deep water outside to the pier, and it has also expended in 1884-85, on assuming control of the work, a sum of \$953.84 in repairing and improving it.

This pier has a total length of 486 feet, consisting of shore abutment or approach 286 feet long and 20 feet wide, a middle section 143 feet long and 37 feet wide, and a pier head 75 feet long and 58 feet wide; its height is 19 feet at the outer end, where a depth of 9 feet is now found at low water; the channel having during the past season been dredged to that depth for a width of 60 feet and a basin formed in front of the pier where vessels can turn. With the exception of the approach, which is built solid, the work is composed of alternate "blocks" and "spans" floor stringered and planked over. During the spring of 1897 the sum of \$199.51 was expended on general repairs; the work done consisted in putting in two new mooring posts, 20 fender piles, 9 span beams, renewing the broken and decayed planking and making up the roadway of the shore abutment with broken stone.

HICKEY'S PIER.

Hickey's Pier, Queen's County, is situated about 10 miles from Charlottetown on the southern shore of the East or Hillsborough River, which, being navigable for about 15 miles, viz., for a greater distance than any other inlet of the island, is its most important estuary. The pier, which was constructed by the local government, is the only one on the river which has been assumed by the Dominion Government. When this was done in 1883, the work was in such a dilapidated condition that its usefulness could only be restored by repeated annual expenditures; but it has been kept in passable condition for traffic ever since.

The pier is 428 feet in length, and varies from 22 to 29 feet in width; the latter width extending inwards from the outer end for 180 feet. In order to render it available for the fall traffic, nearly all the planking and floor stringers of its outer 120 feet had during the past season to be re-placed, they being decayed and broken down; 20 hardwood fender piles were also driven on the sides and end of the outer block to protect it from the cutting and crushing actions of running ice, and to hold its bottom timbers together until further strengthening of the work could be undertaken; the outlay in 1896-97 was \$253.31.

HURD'S POINT PIER.

Hurd's Point Pier, Prince County, is situated on the southern side of Bedeque or Summerside Harbour, and about 3 miles south of Summerside, the shire town of the county.

The pier is a most important shipping place, being about the only outlet for the surplus produce of a large and rich agricultural district. It is also the calling place for the ferry steamer plying on the harbour and which makes several trips daily between Summerside and the pier. It is 510 feet in length and 26 feet in width, excepting the outer 50 feet where the width is 65 feet. During the past season the sum of \$107.62 has been expended on general repairs, consisting in replacing 6 fender piles, 3 mooring posts, all decayed or broken, planking, levelling up floor stringers in the spans, and making up the roadway approach with gravel.

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KIER'S SHORE PIER.

Kier's Shore Pier, Prince County, is situated on the east side of Richmond Bay, about 7 miles from Kensington, a village and station on the line of the Prince Edward Island Railway. The pier originally constructed jointly by the local government and residents of the district, has a length of 1,033 feet and a width of 20 to 25 feet, excepting for the outer 50 feet where it is 40 feet wide, with the exception of a short span (17½ feet) at 283 feet from the outer end. All the work is constructed of close-faced timber work, filled with brush and stone, with roadway of clay or gravel, excepting an outer 50 feet or pier head which is floor stringered and planked over.

During the spring of 1897, the sum of \$62.05 has been expended in filling in with broken stone and gravel at all places where a settlement had occurred in the roadway or where it was cut up by the heavy traffic.

NEW LONDON.

New London Harbour, Queen's County, is on the northern coast of the island, about 10 miles east from the entrance into Richmond Bay.

Within its entrance which is about 1,200 feet wide, the harbour has a width of about 3 miles, receiving the waters of the "South-west," the "French," the "Stanley," and the "Hope" rivers, which are navigable for short distances. On these rivers there are wharfs or shipping places from which a considerable export of the surplus produce raised in the surrounding districts is made. All these districts are thickly settled and well cultivated, and large quantities of general merchandise, coal, lumber, limestone, etc., are also imported by water for the use of the inhabitants, there being no railway facilities, as in many other places on the island. The harbour is also largely used as a fishing station and as a harbour of refuge, and is very conveniently situated, being near some of the best fishing grounds on the Gulf of St. Lawrence.

For the improvement of the entrance to the harbour which is obstructed by a shifting sand bar, works were commenced by the Department in 1878, consisting of beach protection, and breakwaters on each side of the harbour mouth.

A work was built on the eastern side, having a length of 1,120 feet, and one on the western side 460 feet long; the object being to preserve and extend the beaches by confining the current so as to cause increased scour and deepening of the water over the bar; the result obtained is a most satisfactory one, considering the expenditure incurred.

The depth of water has been increased by as much as 6 feet, giving a depth of 12 feet at low water, and making New London harbour one of the best on the coast. The works are built partly of brush, stone, and piling and partly of crib-work close-faced and of square timbers. The western work has never been damaged so as to require repair, but the eastern one being exposed to a strong current and at times to a heavy sea, and to the cutting action of ice, etc., has often suffered serious damage owing to its inner portion as originally constructed, being too slight to withstand a severe storm. Whenever found possible with the sum available for expenditure, the breaches made through it at various times have been closed by rebuilding the work in a more substantial manner, and it is hoped that the whole breakwater will thus be finally secured.

During the past season 150 feet of the central portion of the breastwork have so been re-constructed, and a further 220 feet levelled up and repaired where settlement had occurred, the total outlay in 1896-97 being \$747.41.

NORTH CARDIGAN.

North Cardigan, King's County, situated on the north side of the Cardigan River, about 5 miles from Cardigan bridge and station on the line of the Prince Edward Island Railway, is one of the Prince Edward Island piers assumed by the Federal Government in 1883-84. This pier has a length of 381 feet, consisting of

shore abutment 100 feet long and 7 "blocks" with intervening "spans"; it is from 23 to 25 feet wide to the outer block or pier head, which has a width of 32 feet; the "blocks" are from 19 to 25 feet long, and the "spans" vary from 14 to 26 feet. The approach and all the blocks are constructed of squared timber, close-faced work filled with brush, stone and gravel, the latter being used to form the roadway, excepting on the two outer blocks, which, like all the spans, are floor stringered and planked over.

Being an old structure, much out of repair when assumed by the department, this pier has to be repaired nearly every year to keep it in passable condition. During the past season the sum of \$20.79 has been expended on repairs to the roadway; broken stones and gravel filling being put in where settlement had occurred in the shore abutment and the inner blocks, and planking on the outer blocks replaced where found broken or unsafe.

PINETTE.

Pinette Pier, Queen's County, is situated on the south side of the Pinette River immediately below and at right angles to the public road bridge crossing the river, being connected with the bridge by a "span" 28 feet in length. The pier is 120 feet long by 28 feet wide and constructed of close faced square timber, cribwork, ballasted, floor stringered, and planked over. It faces on the river channel where a depth of 8 feet of water is available at low water, this having been obtained by the dredging done by the department in 1881, since which no shoaling of any account has taken place. The pier being a very old structure and much out of repair when assumed by the department in 1883, general repairs had several times to be carried out on it since then in order to keep it open for traffic. Settlement having occurred in the cribwork after the dredging was done, the pier had to be levelled up; moreover, additional floor stringers, &c., had to be put in shortly after the general levelling up was completed.

During the past season the sum of \$200 has been expended on work of this nature so as to render the pier serviceable for traffic, 7 cross ties, 8 floor stringers each about 22 feet long, two span beams on the approach from the bridge, 8 new fenders, 2 mooring posts and about 2,000 feet B.M. plank covering were put in; two bearing piles were also driven and placed under the centre of the new span beams and 120 lineal feet of new guard timber laid.

POWNAL.

Pownal Pier, Queen's County, is situated at the head of the north-eastern portion of Hillsborough Bay, about 9 miles east of Charlottetown.

The pier as built by the local government many years previous to Confederation, is in all 753 feet long; consisting of a shore abutment 209 feet in length and 16 feet wide and 14 "blocks" with intervening "spans"; the inner blocks are from 14 to 16 feet wide, while the outer ones forming the pier head are 40 feet wide. Originally there was little or no water at the pier when the tide was low, but in 1880-81, in order to afford to large boats and small vessels access at all times of tide, and to permit of large vessels loading when the tide is well up, the department dredged a channel from the deeper water outside, 1,275 feet in length, 50 feet in width, and of a minimum depth of 6 feet at low water, and also formed a basin 250 feet long and 90 feet in width on the eastern side of the outer end of the pier.

During the past fall the sum of \$132.47 has been expended in renewing portions of the planking and floor stringers of the outer "blocks" and "spans," putting on four new fender piles and making up roadway with clay and gravel, thus placing the pier in serviceable condition for fall and spring shipments.

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PORT SELKIRK.

Port Selkirk Pier, Queen's County, is situated on the south side of Orwell River near its entrance into Orwell Bay, and is distant by water about 20 miles from Charlottetown.

The pier is in the form of a **T** consisting of a pier head 250 feet long and 35 feet in width, fronting on the edge of the channel connected to the shore by an approach 250 feet long and 23 feet wide. The whole pier head and the outer part of the approach are composed of a series of "blocks" and "spans," floor stringered and planked over. During the past season the sum of \$597.46 has been expended in levelling upper or northern "block" and adjoining "span;" fender piling the face and sides of this block with creosoted piling; putting in new floor stringers and covering; fender piling the whole of the remainder of the pier head with native timber; rebuilding a length of 80 feet of timber facing on the upper side of the approach and making up the roadway with gravel and broken stone; the entire pier being thus placed in good condition.

SOURIS.

Souris Harbour, King's County, situated on the southern side of the Island about 16 miles westward from East Point, is most important both as a harbour of refuge and port of shipment, being easy of access and now about perfectly safe over the portion protected by the breakwater at Knight's Point.

Souris is the eastern terminus of the Prince Edward Island Railway, which has a deep water wharf from which shipments can be made later in the fall and earlier in the spring than from any other of the island harbours.

During the season of navigation it is largely used by coasters and fishermen as a port of call. The works constructed by the department afford good accommodation and a perfectly sheltered area (carrying from 12 to 20 feet of water at low tide) sufficient for a large fleet of vessels. The breakwater has in all a length of 1,200 feet—270 feet of which were constructed previous to Confederation by the local government. The whole of this work stands in deep water, and is exposed to the full force of the sea during southerly gales and generally to the shoving and cutting action of the ice in the winter.

Since its construction the breakwater had to undergo extensive repairs, chiefly owing to the ravages of the teredo, which in nearly all the island waters destroy timber works in a few years to such an extent as to render them unfit for resisting the forces to which they are exposed. Nearly the whole of the seaward face of the breakwater has thus been destroyed or so weakened as to render its re-construction or protection necessary, and this work has during late years been proceeded with in sections of various lengths. Since the 1st July, 1896, the sum of \$1,000.09 has been expended in completing a length of 110 feet of new facing commenced in the previous fiscal year.

This work is at a distance of about 350 feet from the inner end of the breakwater, and immediately inward of the new face constructed in 1893 under contract by Messrs. Wightman and Mellish, and is of similar construction.

The construction of a solid close faced block of creosoted timber, 80 feet in length by 40 feet in width at outer end of breakwater, and the placing of a stone slope for a length of 395 feet inward, which works were let by contract on the 17th February, 1896, have also been in progress during the fiscal year 1896-97; the block being completed at the end of this year and the greater part of the stone required, delivered and deposited along the side of the work. Total expenditure incurred in connection with the Knight's Point breakwater during the past fiscal year \$21,861.69.

ST. MARY'S BAY.

Saint Mary's Bay Pier, King's County, is situated on the southern side of St. Mary's Bay, which is inside Panmure Island. The pier was constructed originally

by the local government, and is one of those assumed by the Dominion in 1884; it is 407 feet in length and for a distance of 310 feet is 21 feet in width; the outer 97 feet are from 28 to 29 feet in width. The work comprises a shore abutment or approach and seven "blocks" with intervening "spans."

Since the pier was taken over by the Dominion Government, the approach thereto has been much improved; a channel carrying 10 feet at low water being dredged to it with basin at end, and loading berths on sides of pier 50 feet wide and 100 feet long.

During the fall of 1896 the sum of \$99.89 was expended on general repairs to the roadway on the pier, which at the second span had completely broken down, 5 new span beams were put in, and this span and adjoining blocks re-planked, and the roadway of the approach made up with broken stone and gravel.

TIGNISH.

Tignish Harbour, Prince County, is situated on the north or gulf coast of the island, about 6 miles southward of North Cape, and is formed by the mouth of the Tignish River which empties into the Gulf of St. Lawrence.

As on each side of the mouth of this river the coast is quite straight, gales from north-east to south-east throw in a heavy sea. Formerly when moved by such seas the shifting sands of which the beach is composed, frequently completely blocked the mouth of the Tignish River, which would remain so closed until broken through by a freshet or some other abnormal disturbing cause. To keep the river permanently open and also to confine the channel to one and the same place in its bed, the government of Prince Edward Island, in 1868, commenced the construction of works on each side of the mouth of the river contracting the stream to a width of 40 feet, the effect of this contraction has been to increase the current and the river has not since been closed to navigation. The original works have since been repaired, raised and extended by the department, breastworks have also been constructed on the low lying sand beaches on either side of the river to prevent the breaking through of the sea, and a portion of the channel has been dredged. These works have proved a great benefit, and have been the cause of a large increase in the business of the place. The principal difficulty is now, that the harbour is not large enough to accommodate all the vessels and fishing boats desiring to use it. As portions of the work have become much decayed and also injured by the scour and ravages of the teredo, the sum of \$2,157.22 has been expended during the fiscal year of 1896-97 in making urgent repairs. The work done consists in levelling up the floor stringers and re-planking of 400 feet of the central portion of the northern breakwater, and the whole of the southern breakwater; close piling 161 feet of the face of the northern breakwater and 220 feet of the face of the southern breakwater; re-placing all fender piling carried away and re-fastening all the piles found to be loose, and generally placing the entire southern breakwater and the outer portions of the northern breakwaters in good condition.

VERNON RIVER BRIDGE.

Vernon River Bridge Pier, Queen's County, is situated at the head of navigation on the Vernon River, about 2 miles above its entrance into Orwell Bay. The pier consists of a close faced timber block 120 feet in length and 30 feet wide lying parallel to the channel and having along its face a depth of 9 feet at low water or 17 feet at high water springs; it stands on the lower side of, and at a distance of 30 feet from the Vernon River Bridge, to which it is connected by an approach averaging 30 feet in width, this approach being floor stringered and planked over. During the fiscal year of 1896-97 the sum of \$216.77 has been expended in fender piling, at about 8 feet centres, the faces and outer end of the pier; putting in 7 new mooring posts, new guard timbers on channel face and end; replacing all broken flooring, and making a landing slip near the outer end of the pier to afford better accommodation for landing freight from the steamer that calls weekly at the place; finally placing all the work generally in a good and serviceable condition.

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PROVINCE OF NEW BRUNSWICK.

ANDERSON'S HOLLOW.

Anderson's Hollow, Albert County, is in a cove of Salisbury Bay on the north-west side of the Chignecto Channel, Bay of Fundy. Spring tides rise here $40\frac{1}{2}$ feet. Neaps $32\frac{1}{2}$ feet.

The breakwater-wharf at this place was begun in 1879 by the construction of a detached block 550 feet from the shore, with which it was afterwards connected. The structure, 25 feet wide on top, was originally 27 feet high at the outer end (which is dry at low water owing to the accumulation of drift material) but stands now 4 feet less above the bottom. It is built of round cribwork, lightly battered inside, but sloped at $\frac{1}{2}$ H. to 1 V. and sheathed on the weather face. The work was damaged by storm on the 21st November, 1895, when a small lighthouse placed at the outer end was swept away, together with part of the break, while some of the top work at the head was at the same time shaken and started. In 1895-96, a small sum was applied to bolting loosened timbers, for temporary security. During the fiscal year of 1896-97, the inside face of the wharf at the outer end, which had received a heavy list in the storm mentioned, was cut down and rebuilt for a distance of 75 feet on the top and 44 feet on the bottom. The list was taken out, the new face being carried to a height of 15 feet in order to level the block, and new covering laid for a distance of 75 feet. A length of 70 feet out of 110 feet of dismantled break was re-constructed, and fenders were placed on the inside of the new face. The expenditure amounted to \$1,018.79.

CAPE TORMENTINE.

Cape Tormentine, at the extreme eastern end of Westmoreland County, is the most prominent head land on Northumberland Strait and the south western terminus of the winter ferry route between Cape Traverse on Prince Edward Island and the mainland. Spring tides rise $7\frac{3}{4}$ feet, neaps $3\frac{1}{4}$ feet.

Between 1886 and 1892, a breakwater-pier was constructed at this cape, with a view of forming an artificial harbour for purposes of interprovincial communication at the extremity of a peninsula which is the nearest point on the continent to Prince Edward Island. The harbour works carried out comprise a straight pier 2,500 feet long, with head and return, each 400 feet in length, inclosing a basin about 4 acres in area with a ruling depth of 15 feet at low water, or 22 feet 8 inches at high water spring tides. For a distance of 1,300 feet from the shore, the pier is a rubble mound 20 feet wide on top, with pitched slopes of 2 H. to 1 V.; while the remainder of the straight portion (400 lineal yards), is built of close faced cribwork 30 feet in width. The head and return are of similar cribwork, but are 40 feet in breadth, from the base to low water, decreasing to 30 feet at the finished top (4 feet above high water, spring tides) and presenting a sloping face sheathed with hardwood to the north and east. A branch line 36 miles long, connects the pier with the Intercolonial Railway at Sackville.

There being a storm wave at least 6 feet in height at Cape Tormentine, it was found that although the rails were secure where spiked to the covering of the cribwork, they were liable at the elevation of 4 feet above high water to be washed off the embankment or rubble mound, which afforded no facilities for bolting. To prevent interruption in the traffic, from this cause, the rails were raised 2 feet along the embankment in 1893-94. At the same time, a freight shed was built and protected by a break. The tops of the cribs receiving the foot of the hardwood sheathing composing the sloping face, having been destroyed by the teredo, the planks thus left overhanging are exposed below to upward wave action, a force found by Stevenson to be 84 times greater when exerted vertically, than when directed

against the side of a breakwater. These planks were secured in 1893-94, as far as the worm-eaten condition of the timber permitted. In the following fiscal year, 321 lineal feet of worm-eaten longitudinals supporting the sloping hardwood were replaced by new timbers, a space of 90 lineal feet of new planking was laid, and the remainder of the face secured wherever bolt-hold could be found in the honey-combed wood.

In 1895-96, similar temporary repairs were made, 414 lineal feet of worm-eaten longitudinals being renewed with fresh timber, and 117 lineal feet of sloping face being re-laid.

In the past fiscal year (1896-97) repairs of the same kind were made for 154 lineal feet of the sloping face, in which 534 lineal feet of longitudinals were used. There being some slight difference of duration in favour of hardwood, birch longitudinals were for the most part inserted, and were secured with screw bolts. The ramp 165 feet long, leading from the embankment to the cribwork, was also covered with 3 inch plank in order to permit the passage of carts for occasional local traffic. The expenditure incurred in 1896-97 was \$566.98. The revenue collected during the previous fiscal year amounted to \$303.78.

The harbour is used during the season of navigation by vessels engaged in the deal trade with the United Kingdom, since it offers facilities for transferring deals in clean condition from train to ship, without the loss of class and so of price, occasioned by rafting. For this purpose it has to some extent superseded the open roadstead of Baie Verte, formerly a centre of the deal trade.

On account of the prevalence of the teredo, any works built in the future in Northumberland Strait, should be constructed of creosoted timber, stone, or concrete. The worm-eaten condition of Cape Tormentine requires that the course hitherto customarily adopted in similar cases, *i.e.*, external protection with stone, should be taken. For the quay face of the winter berth, concrete would be best used. Although the top appears in good condition, the substructure of the cribwork of the pier has been so injured by the teredo, that the upperworks, notwithstanding their sound state, are liable to be sheared off the impaired foundation by ice or storm.

FORT DUFFERIN (ST. JOHN HARBOUR.)

Fort Dufferin, St. John County, was originally built by the British Government on Negro Point at the western entrance to the harbour of St. John; a ten gun battery being placed in position on this point, which is 60 feet in height above high water mark. This fort is now maintained by the Dominion Government, which also built an important breakwater at this point for the protection of the harbour of St. John.

In order to preserve the headland called Negro Point, from erosion by the waves, this department built in St. John harbour a retaining wall of sheathed cribwork, extending 815 feet in a northerly direction from the inner end of the breakwater. The work is 7 to 14 feet wide on top and about 9 feet in mean height. The crest for almost the whole length is surmounted by a break 2½ feet high.

During the fiscal year 1896-97, a gap 81 feet long in the break was repaired, 200 lineal feet of longitudinals were renewed inside, and 128 cubic yards of ballast were restored to the work, while the sheathing was patched at intervals along the face with hardwood planking. Besides, in order to raise the beach, and so reduce the area of timber face necessary to be repaired, a groyne 40 feet long, 10 feet wide, and 4 feet in mean height, was built of hardwood piles, timber and stone, towards the end of 1896. In 1897, the final extension of the cribwork, a distance of 130 feet was begun, and by the end of the fiscal year brought within two tiers of the full height.

The expenditure has amounted to \$3,398.70.

GARDNER'S CREEK.

Gardner's Creek, St. John County, enters the Bay of Fundy some 20 miles east of St. John Harbour, and 14 miles from St. Martin's Railway station. Spring tides rise 30 feet, neaps 25 feet.

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On the 1st of July, 1895, a contract was let for the construction of a wharf near the mouth of this creek, intended to facilitate the shipment of the lumber and piling sent coastwise from this locality.

The wharf, placed in a cove sheltered from direct south-west winds by McCoy's Head, consists of substantial open-faced cribwork 215 feet long, sheathed on the north and east. The head stands in a depth of 21 feet at high water spring tides, and affords one berth for coasters; but, as in the case of all other wharfs on this coast, is dry at low water.

This wharf was completed on the 29th October, 1896, for the stipulated price of \$7,400; the workmanship is of superior character. The total expenditure incurred during the fiscal year 1896-97, amounts to \$5,308.75.

HERRING COVE.

Herring Cove is situated $11\frac{1}{2}$ miles west of Cape Enragé, forming the western extremity of Salisbury Bay, an indentation of the Albert coast of the Bay of Fundy. Spring tides rise 37 feet, neaps 30 feet.

A breakwater 215 feet long, 31 feet wide on top, and 43 feet high at the outer end, was built in this cove by the Federal Government in 1873, at a cost of \$13,113.45. The inside face of the work is of square timber, while the outside, strongly battered, is of round timber close-fendered. Founded on a reef under the lee of Matthew's Head, and directed towards Owl's Head, a neighbouring elevation in the bight of Salisbury Bay, the work trending towards the land lies in the general direction of south-west waves, and affords during storms some slight protection from under tow to small craft, if beached in the extreme angle of the cove. The outer end of the breakwater reaches almost to low water mark, and no shelter is given by it except at high water, but by extending the work some 250 feet beyond the reef, a sheltered area of $1\frac{1}{2}$ acre, affording 3 to 14 feet depth at low water, would be made.

The cove is noted for good holding-ground, and is one of the two places on the New Brunswick coast of the Bay of Fundy east of St. John, considered to present natural features favourable for the construction of a harbour of refuge.

The vessels carrying deals from Alma to the United Kingdom, anchor off this breakwater to receive cargoes by lighter. Alma, two miles distant, is the terminus of the Albert Southern Railway.

During the fiscal year 1896-97, works of repair were carried out on the upper-works of this breakwater, generally decayed from age. The cribwork break extending the whole length of the work was removed and rebuilt, while the decayed part of the close-fendering was almost entirely replaced by sound material. The expenditure amounted to \$990.75.

NEGRO POINT BREAKWATER.

Negro Point is a headland about 60 feet in height above high water mark, at the western entrance to St. John Harbour, which is formed by the estuary of the River St. John, on the northern side of the Bay of Fundy. Spring tides rise 28 feet, neaps 22 feet.

In addition to convenience of position for distribution by rail of cargoes landed at the city of St. John, St. John Harbour is remarkable principally for great tidal range and for consequent freedom from ice in the winter months. The harbour is open, broadly speaking, from south-east to south-west, but southerly waves are broken by Partridge Island, and south-west waves are mitigated by Negro Point breakwater; while the foul ground, a shoal tailing down from the peninsula on which the city is built, must have more or less effect in moderating the force of south-easterly seas rolling round Mispec Point. By Partridge Island, a rocky eminence devoted to quarantine and lighthouse purposes, the entrance of St. John Harbour is divided into east and west channels. In the former or main channel, a depth of 21 feet is found on the bar at low water ordinary spring tides, according to the chart. Half

a mile inside the crest of the bar, a depth of five fathoms is found in the narrow fairway, while higher up, and between the principal wharfs on either side of the harbour (500 yards broad at that point), 12 fathoms are given in mid-channel. The west channel, 10 to 14 feet deep at low water, and originally 1,200 yards wide, has been contracted by Negro Point breakwater, a structure extending 2,200 feet in a south-easterly direction from the head land so styled.

The official reasons for undertaking this work are thus stated in the Reports of the Minister of Public Works for 1875 and 1882:—

"1875.—This breakwater extends south-eastwardly from Negro Point at the west-entrance of the harbour of St. John. When completed, it will extend a distance of 2,250 feet, closing up the west channel to that extent, leaving, however, a width of 1,000 feet between the outer end and Partridge Island. The object is to break the force of the seas which roll into the harbour of St. John during the south-west gales in the Bay of Fundy, and which render it dangerous and almost impossible at such times for vessels to make the harbour.

"1882.—South-westerly winds threw in a heavy sea through the western channel which rendered it difficult for vessels to make the harbour as they were in danger of being driven on the foul ground on the eastern side of the channel. In the spring of 1875, a breakwater, 2,250 feet long to partially close the western channel was begun, and in September, 1877, completed."

Reference to the chart will show that as long as the present opening remains, the object of the breakwater has been only partially fulfilled. In dealing with reduction of the bar, a more cogent reason than improvement of shelter may be found for the extension of the work to Partridge Island.

The breakwater consisted at first of a crib-work core, 30 feet wide at the base and 15 feet wide at the top (5 feet above high water ordinary spring tide,) protected on both sides by stones sloping to seaward at the rate of 2 horizontal to 1 vertical and landward at the rate of 1 to 1. By the month of February, 1879, 1,300 lineal feet of the cribwork had been swept away to a depth varying between 13 and 19 feet from the top, the stones having been raked down by wave-action to a slope more nearly approaching the angle of repose of the material, under the exposure to which the work is subjected. In 1880, temporary repairs were made, and in 1881 a contract, completed six years afterwards, was entered into, whereby the lost cribwork was replaced by heavy stones, and the seaward slope made 3 to 1. Even this flatter inclination proved too steep for stability, consequently, notwithstanding their size, the stones, though smoothly laid, were soon displaced by the sea. A length of 50 feet of the breakwater, extending at full height beyond a masonry pier built under the same contract to support a beacon, was also swept away. From 1891 to 1894, desultory repairs were made by the addition of large stones, chiefly deposited about the end to prevent the light-house from being undermined.

In May and June, 1895, four large blocks of concrete were placed for the same purpose in front of the pier at its base. In 1895-96, seven concrete blocks founded at about the level of low water neaps, were built *in situ* around a quadrant of the outer end, to receive the foot of a slope proposed to be laid of heavy granite blocks, inclined at 4 to 1. The blocks were from 59 to 91 tons each, all but the heaviest being laid in one tide. The granite pier was also re-inforced by a semi-circular skin of concrete 7 feet in average thickness and strongly battered, placed around the front and brought to the level of high water springs. The footing blocks were 15 feet long, 12 feet wide, and unless varied for the sake of foundation, 3 feet high in the face, sloping upward at the rate of 4 to 1 on the top. Each block was free to settle independently, but all were keyed together by splayed concrete joggles. Inside part of the space within the quadrant, stones of the original work, added to some small granite, were assembled and grouted as far as funds permitted, in default of the heavy granite (which will require special plant) necessary for the slopes of this breakwater; but weight is the great desideratum, and part of the grouted slope was broken up in the winter.

Pending consideration of works necessary for deepening the entrance to the harbour, which might possibly involve the extension of the breakwater, nothing

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more was done, during the fiscal year 1896-1897, than appeared requisite to protect the unfinished superstructure just begun, and to preserve the lighthouse, except the completion of a break at the shore end.

For this end, 15 blocks of concrete forming aprons were laid in position at the outer end of the work between October, 1896, and June, 1897. A quantity of stone which had been swept round the point of the breakwater from the seaward to the harbour side, was also replaced in position. Some of this stone was laid outside the heavy footing-blocks built in the previous year, and some applied to restoration of the crest of the work at the back of the lighthouse. Breaches carried below the level of high water have been made by the sea at five or six points in the rubble mound between the lighthouse and the shore. An illustration of the violence of the seas which break against the Negro Point breakwater, is furnished by the removal of a stone of 5 tons a distance of 76 feet in one winter. A marine dynamometer secured to the masonry of the lighthouse records the wave-force at 4,000 lbs. and upwards per square foot.

In order to retain along the seaward face of the work, for natural protection, the littoral drift formerly swept by the waves over the top into the harbour, a break of piles, brush, stone and timber 270 feet long, 8 feet wide and 4 feet high, begun in 1895, was completed, and also extended 140 feet along the timber work during the last fiscal year, with good effect. As a result of the construction of the break, the foreshore has advanced seaward 62 feet along the face at the level of the top of the breakwater, while at one point the beach has increased in height $2\frac{1}{2}$ feet and in breadth 75 feet.

A general accretion of the beach has besides taken place. In addition, a tongue of drift material first observed after the erection of the break, when near the shore, has at the foot of the talus on the seaward side, travelled 200 yards or more towards the end of the breakwater. The formation of this spit, generally 10 feet wide, and 2 feet high, against the work, indicates that the drifting sand, gravel, shingle, etc., which formerly went over the breakwater into the harbour, will in time afford important natural protection to the work, and will reduce the length of face to be maintained. The expenditure for the fiscal year 1896-97 amounts to \$8,465.24.

PARTRIDGE ISLAND.

Partridge Island is a rocky eminence in St. John Harbour, which divides the entrance to the harbour into east and west channels. The island is devoted to quarantine and lighthouse purposes.

At the northern end of Partridge Island, two narrow piers of cribwork give shelter to the boat landing of the quarantine station. During the fiscal year of 1896-97 a block of cribwork 50 feet long and 22 feet wide, intended as a foundation for the disinfecting house, was begun between the piers, together with a slip 8 feet in width. By the 30th of June, the centre of the block had been brought up to within a tier of full height, and the ends within $2\frac{1}{2}$ feet of that elevation. The expenditure amounted to \$1,699.71. The work is still in progress.

QUACO.

Quaco, St. John County, is on the northern coast of the Bay of Fundy, about 30 miles to the north-eastward of the entrance to St. John Harbour. The bay is semi-circular, and lies open to the south-east between Quaco Head and Macomber Point some two miles apart; its depth from a straight line drawn between these two points being about a mile. A small river discharges into the eastern end of the bay near its mouth, and a harbour of refuge has been formed there by the construction of breakwaters, each 300 feet in length, one on either side of the mouth. The harbour is dry at low tide and is only accessible for coasting vessels and schooners which come to load timber, etc., or to seek shelter—for about six hours during each tide. Springs rise about 30 feet and neaps 23 feet.

The west breakwater which had been damaged by storms for a total distance of 149 feet, the sheathing and several longitudinals of the sloping outside face being stripped off, and a quantity of ballast washed out, was repaired during the fiscal year ended 30th June, 1897; besides which the east breakwater was protected by brush and stone placed along the foot of the cribwork to prevent scour from the fresh water stream.

On the western breakwater the longitudinal face timbers of the damaged part were generally renewed with birch 14 inches square, secured where possible with screw bolts. The stone washed out was replaced, and some additional ballasting done. The face was also covered with new sheathing for the distance mentioned, two fenders were renewed and a ladder placed near the shore end. Thirteen new fenders were also placed on the east pier, and the decayed tops of five others replaced by sound material. Small repairs were made to the covering and sheathing, and another ladder placed against that work. The total expenditure amounted to \$1,377.51.

RIVER ST. JOHN.

The Provincial Government of New Brunswick have been paid the sum of \$500 as a contribution towards the construction of a wharf under their own supervision at Gray's Point, Springfield, King's County; and a further sum of \$338.62 to cover one-half of the cost of the wharf built by them at Westfield Landing, King's County.

The wharf at Gray's Point on Belleisle Bay, a tidal reach of the St. John, is 196 feet in length over all (181 feet being cribwork) about 18 feet in general width and 42 feet broad at the pier head, which stands in a little over 3 feet depth at low water. It is built in the usual style of round cribwork with square cap, fendered and loaded with ballast $2\frac{1}{2}$ feet deep topped with sand.

The wharf at Westfield Landing is of the common type of those built on the St. John for the use of river steamers; being of round cribwork and covered with plank all over. It is 116 feet long over the timber work; the head which stands in 7 feet depth at low water measuring 44 feet by 30 feet.

PROVINCE OF QUEBEC.

ANSE ST. JEAN.

Anse St. Jean is situated on the south-western shore of River Saguenay, twenty-five miles up from its mouth.

The parish contains, besides the church and post office, several stores, and cheese factories, a saw-mill and a grist-mill. Population about 1,000.

During the fiscal year 1897-98, telegraphic communication is to be established between this place and St. Alexis, a station on the Saguenay branch of the Main Government Telegraph Line in the Lower St. Lawrence, and an office is to be opened here.

The public landing pier is 366 feet long, 26 feet wide, with the exception of the head block, which measures 50 feet along the channel face by 40 feet in length, and is 33 feet in height. At low water ordinary springs there is a depth of $7\frac{1}{2}$ feet at the outer end of the pier.

Ordinary spring tides rise 17 feet and neaps 12 feet.

The construction of this pier was commenced by the Provincial Government in 1876, and work was continued by the Federal Government in 1879-80-81-82. The pier was finally completed as it now stands, in 1883-84, viz., by raising the superstructure to its present level above high water, sheathing and fendering the head block, fully ballasting the centre portion which had been left partly empty, connecting

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the cribwork structure with the public road by a planked approach and erecting a combined waiting room and freight shed on the same.

In 1886 a movable slip was added, and an open shelter shed 40 feet by 28 feet erected. In 1891 the portion of the pier which had settled in the spring of 1889, was raised from $2\frac{1}{2}$ to 3 feet, viz., over a length of 135 feet, and a quantity of stone placed in the cribs on the east side; the freight shed was also repaired. The renewal here and there of decayed and used up parts of the flooring of the pier had to be undertaken every year, owing to the rapid decay of the planks caused by the large quantities of cordwood continually piled on the structure. In 1892-93 the remainder of the old floor was taken up and replaced by red spruce plank 5 inches thick; moreover, 25 toises of stone were placed in the work and the shed and movable slip repaired.

During the fiscal year ended 30th June, 1897, the planked roadway or approach, 120 feet long and 25 feet wide, leading from the public highway to the pier was entirely renewed, both stringers and planking, and the eastern face of the cribwork was sheathed for a length of 150 feet. The amount expended in 1896-97 was \$598.78.

The total expenditure incurred by the local government and municipality in connection with this pier is about \$1,700, and on the 1st July, 1897, the further expenditures made by the Federal Government amounted to \$11,294.26.

ANSE À L'EAU OR TADOUSSAC.

Tadoussac, the *chef-lieu* of Saguenay County, is a watering place on the north-eastern side of the Saguenay River, about 5 miles above its mouth on the estuary of the St. Lawrence, which is much frequented by tourists and health seekers during the summer season. The village contains three churches, one of which is the oldest church built in Canada, being erected in 1747, four hotels and four stores, a telegraph office, a post office and many handsome villas; a fish hatchery has also been established here by the Department of Marine and Fisheries. Population of village about 900, of parish 2,440.

Some 50 years ago, or more, the ex-lumbering firm of Price Brothers & Co., of Chicoutimi, built at Anse à l'Eau, which constitutes the harbour of Tadoussac, a wharf for their own use and convenience, of round logs and slabs, and partly faced the same with square timber and ballasted the work with stone. This wharf had a total length of 366 feet and a general width of 26 feet, excepting a block at the west end which measured 4 feet by 50 feet by 29 feet in height; the depth available along its outer face at lowest water being about $7\frac{1}{2}$ feet. In the absence of any other landing this wharf was not used alone by the firm who built it, but was also taken advantage of by the Richelieu Company as well as the general public.

The structure having become too dilapidated to be of further service for the public, the Federal Government decided in 1888 to carry out the works of repair required, to permit of the wharf being used for general shipping and landing purposes as in previous years. Accordingly, in 1887-88 and 1888-89, the whole wharf was raised 3 feet, and a new plank floor put on throughout; a new inclined slip was also built. In 1889-90 a block, 30 feet by 30 feet by 43 feet in height, was sunk 30 feet to the westward of the main structure, and in the following year the two works were connected by a timber span 30 feet by 30 feet, and in 1893-94 a new roadway or approach to the pier from the upland, or embankment of earth, 525 feet long by 25 feet wide was built.

The wharf, as completed in 1894, has a total length of 225 feet on the outer or channel face, and is 108 feet wide for 165 feet in length at the eastern end, and 30 feet for the remaining 60 feet at the western end.

By a deed of sale dated 10th December, 1896, Messrs. Price Brothers & Co. have conveyed to the Federal Government all their right and interest to the wharf and the land on which it stands as also to the roads and approaches thereto, for the sum of one dollar; reserving, however, the right of using in perpetuity a portion of the wharf, 35 feet by 25 feet, for the purpose of piling firewood thereon and the right

of access to the wharf in perpetuity, to land or ship merchandise as they may require, whether with steamers, schooners or other craft.

During the fiscal year ended 30th June, 1897, a combined shelter and freight shed with waiting room, covering an area of 60 feet by 30 feet was erected close to the channel or southern side of the wharf, and this face has been sheathed with 5-inch tamarack for a length of 160 feet; moreover, the hand rails on the approach have been painted. Expenditure incurred in 1896-97, \$1,474.93. The total outlay on the wharf by the Government, up to 30th June, 1897, amounted to \$8,972.43.

BERTHIER (EN HAUT).

Berthier (en haut), Berthier County, is a town of 1,600 inhabitants, situated on the north shore of River St. Lawrence, opposite Sorel.

The town, like the Sorel Islands and the parish of Ste. Anne de Sorel, suffers much from the spring floods, and during the extreme high water of April, 1896, the ice did considerable damage.

A new ice pier, consisting of a substantial pine stone filled crib 25 by 30 feet and 30 feet high, was constructed on the edge of the beach at the upper end of the village.

The work was carried on by day labour, commencing 22nd December, 1896, and completed 27th March, 1897.

The amount of the appropriation was \$3,000; the expenditure, including rip-rap protection, being \$2,474.16.

Furthermore, considering that the only protection the lower part of the town had against ice shoves, was a low ice breaker at the head of the R. & O. Co.'s wharf, very much out of repair, and that the formation of the shore was such that the construction of a new pier, in an equally good position would have been costly and an impediment to navigation, permission was obtained from the Richelieu Company to repair and increase the height of the old ice pier of their wharf. This work was completed 14th April, 1897, at a cost of \$733.29.

CAP À L'AIGLE.

Cap à l'Aigle is on the north shore of the St. Lawrence in the county of Charlevoix, 93 miles east of Quebec and 3 miles below Murray Bay.

The public wharf at this place, commenced in 1881 and completed in 1882, is 160 feet long and 35 feet wide and has 18 feet water at its outer end at low tide. Spring tides rise here 20 feet and neaps 14 feet.

This wharf is of considerable local importance as the place has no railway communication; it is visited every year by a number of bateaux and large schooners.

During the month of October last (1896) the following work was done: 1.—The face timbers which had been broken by ice were repaired. 2.—The eastern and western corners were sheathed on a height of 17 feet with rock elm 10 inches thick, and the whole front of the structure 35 feet long with the same kind of timber 6 inches thick. 3.—Repairs were done to the slip. Total expenditure incurred \$816.49.

CHICOUTIMI.

The town of Chicoutimi, *chef lieu* of the county of the same name, is built on the southern side of the Saguenay River, seventy-one miles up from Tadousac and at the head of navigation. Population of town about 2,500, of parish 5,000.

Chicoutimi is the terminus of the Quebec and Lake St. John Railway and the Richelieu and Ontario Company's Saguenay Line of steamers, also the seat of the Bishop of the Roman Catholic diocese of Chicoutimi. Besides the county buildings the town contains two churches, a public hospital, a branch of a chartered bank, several large saw and grist mills and other manufacturing establishments, including six

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cheese factories; also three printing offices, telegraph and express offices, three hotels and some forty stores.

A public landing pier 210 feet long by 25 feet wide, with head block 50 feet by 30 feet, was constructed here in 1874-75 by the Federal Government at a cost of \$14,193.40.

In 1881 the upper end of the head block was strengthened by the addition of a crib 40 feet long by 30 feet wide on its inner side at an expense of \$1,999.91. In 1884 a large quantity of slabs was placed along the western or upper side of the pier, so as to widen the work 70 feet for a distance of 210 feet from its head towards the shore; moreover, a freight shed 40 feet by 25 feet was erected on the slab foundation and in 1888 the whole pier was raised 3 feet and planked over.

In order to prevent the slab structure from giving way ballasted cribwork, 14 feet wide has since 1890 been built along its lower or eastern side for a distance of 180 feet from the head block towards the shore.

The fixed landing slip was also replaced by a movable one. Finally, during the fiscal year 1896-97, the pier was widened by adding cribwork for a length of 210 feet from the head block towards the shore. This timber work was fully ballasted and floored over with three inch tamarack planks, 25 fenders were put up along the same. Moreover, at its northern end the pier was sheathed for a length of 50 feet, in order to complete the sheathing all around the work. Total expenditure incurred in 1896-97, \$4,992.96.

As now completed the Chicoutimi pier measures 245 feet in length by 130 feet in width. At its outer end the work is about 29 feet high; the top standing 6 feet over high water ordinary spring tides, and the depth available at low water springs being about 8 feet.

Ordinary spring tides rise 15 feet, and ordinary neaps, $7\frac{1}{2}$ feet; but extreme high tides rise 19 feet reaching to the top of the pier as it now stands.

COTEAU DU LAC.

Coteau du Lac or St. Ignace, in the county of Soulanges, is on the north shore of the St. Lawrence, 3 miles below Coteau Landing, the county town, and 36 miles west of Montreal.

The public wharf at this place consists of a head block of solid cribwork, 101 feet long by 21 feet wide, with an extension of 40 feet by 47 feet in the rear, and block and span approach 75 feet long and 26 feet wide. At ordinary low water there is a depth of 10 feet along the outer end of the wharf.

Repairs were made to this wharf during the past fiscal year, consisting in the renewal of most of the stringers and the re-covering of the whole structure with 4 inch hemlock planks.

The total expenditure incurred amounts to \$694.58.

COTEAU LANDING.

Coteau Landing is the *chef-lieu* of the county of Soulanges, and the chief grain shipping port of the county. The town is built on the north shore of the St. Lawrence at the foot of Lake St. Francis above the Coteau rapids, about 37 miles southwest of Montreal and 2 miles south of Coteau Station, on the Grand Trunk Railway.

During the fiscal year ended 30th June, 1897, the wharf known as the Richelieu and Ontario Navigation Company's wharf was thoroughly repaired; some stringers being renewed and the whole of the approach to the head block or pier proper, as well as the greater part of the latter, re-floored with hemlock planks 4 inches thick. The total expenditure incurred amounts to \$197.03.

The wharf in question is 904 feet in length, including a head block of solid cribwork which is 279 feet long and 24 feet wide, and has a depth of 10 to 11 feet along its outer face at ordinary low water. The approach to the pier proper or head block is a block and span structure 880 feet long and 13 feet wide, with the exception of the outer 80 feet, and two sidings of 115 feet each, added for the crossing of teams, where the width is 24 feet.

ETANG DU NORD.

Etang du Nord is at the western end of Grindstone Island, one of the Magdalen Group in the Gulf of St. Lawrence. Grindstone Island is irregular in outline and about $7\frac{1}{2}$ miles long by $4\frac{1}{2}$ wide. The coast is indented by small bays and coves, at some of which there are good fishing stations, the principal one being at Etang du Nord. The bay is small but offers a safe shelter for boats in from 3 to 5 feet of water at low tide.

In 1887-88-89, a breakwater of ballasted cribwork 500 feet long, 32 feet wide, from 12 to 28 feet in height, and with 20 feet depth at the end at low tide, was constructed at Ile aux Goelands, about three quarters of a mile to the south-west of the centre of Etang du Nord proper.

During the fiscal year ended 30th June, 1897, a sum of \$764.13 was applied in making general repairs to the breakwater which had to be undertaken chiefly to make good the damage done by storms in November, 1895.

GATINEAU POINT.

Gatineau Point village, county of Wright, is situated at the mouth of the Gatineau River, near the junction of this river with the Ottawa, and about one mile below the city of Hull.

In 1885-86, a wharf 107 feet in length, 29 feet in width, and having a depth of 8 feet along its outer face at lowest water, was built at this place, together with two approaches, each 70 feet in length; the object being to afford suitable landing and shipping accommodation for freight and passengers, not only to the permanent residents of the village, which number some 1,500, and to the inhabitants of the thickly settled surrounding country; but also for the benefit of the steadily increasing number of families, from the capital of the Dominion, who find it to their advantage to spend the hot summer months in this locality every year.

During the fiscal year 1896-97, repairs were made to the face timbers, sheathing and mooring posts of the wharf, and the flooring was partly renewed; the total expenditure amounting to \$245.76.

GRANDE RIVIÈRE.

The village of Grande Rivière, in the county of Gaspé, is situated on Baie des Chaleurs, at the mouth of the river bearing the same name, and 21 miles south-west from Percé, and some 30 miles to the north-eastward of Port Daniel.

The public wharf at this place has now a total length of 660 feet. On the inner length of 457 feet, which was completed in 1892-93, the cribwork varies from 25 feet 4 inches to 37 feet 9 inches in width, and increases to 40 feet 4 inches at the outer end of the extension of 103 feet built in 1894-96, in order to provide additional shelter and accommodation for vessels.

In the fall of 1896, a combined freight shed and waiting room 42 by 18 feet was built, and in May and June, 1897, a block of cribwork 100 feet long, built in 1891, which had settled somewhat, was levelled up and re-floored; the flooring being put on transversely, instead of longitudinally as was done the first time.

Besides, 72 pieces of 8 in. by 12 in. birch sheathing, 15 feet long, were placed on the inside face of the block completed in 1895-96, and old sheathing, where found loose, was re-bolted; also a new stairway was cut into the old work to afford better accommodation for landing and shipping purposes. Total expenditure \$1,881.41.

GRAND PABOS.

The Grand Pabos River, Gaspé County, empties into Pabos Bay about midway between Cape Despair and Point Maquereau, at a point about 30 miles south-west of Percé, following the road along the shore.

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In 1886, the department commenced the improvement of the entrance to the harbour within the mouth of this river, by building a training pier of close faced ballasted cribwork, 215 feet long, 24 feet wide, and 10 feet high, on average, on its western side, and removing dangerous rocks. In 1893-94, the pier was extended shoreward by adding another block of similar work 120 feet long, 21 feet wide, and having an average height of 11 feet; the total length of the cribwork being thus increased to 335 feet.

During the fiscal year 1896-97, a sum of \$500 was applied in sheathing 200 feet in length of this low pier work, which had been damaged by ice, in places, with flatted spruce 10 to 15 feet long, hewn to an average thickness of 8 inches, so as to secure a smooth face finish, notwithstanding the unevenness of the sides of the cribwork at many points.

ILE AUX COUDRES.

Ile aux Coudres is an island in the county of Charlevoix, 9 miles long by 3 miles broad, and distant $1\frac{1}{2}$ mile from the north shore of the St. Lawrence, 12 miles from Baie St. Paul, and 62 miles from Quebec city. Spring tides rise 20 feet, neaps 14 feet.

The public wharf on this island was built partly by the municipality, partly by the Federal Government, viz., on the northern side of the island. The structure is 274 feet long, 25 feet wide for 174 feet from the shore, and 30 feet for the outer 100 feet; it is 40 feet high at the outer end, where a depth of 16 feet is available at low water.

During the month of November, 1896, the top planking of the wharf was partly renewed and the sheathing on the western outer corner repaired; work all done by day labour at a total expense of \$147.66.

ILE PERROT.

"Ile Perrot" is an island in the county of Vaudreuil, at the confluence of the Rivers Ottawa and St. Lawrence, and between the Lake of the Two Mountains and Lake St. Louis; this island divides the Ottawa into two branches.

Both the Grand Trunk and the Canadian Pacific Railways cross the northern part of the island; but the nearest railway stations to the parish and village of Ile Perrot, on the north shore of Lake St. Louis are those of Vaudreuil and Ste. Anne de Bellevue. The population of the parish is 860, and trade is principally carried on with the city of Montreal, viz., farm produce.

In 1887-88-89, a public wharf was built on the south shore of the island, on Lake St. Louis, about $1\frac{1}{2}$ mile below the parish church of the village of Ile Perrot. This wharf as completed in 1889, is 611 feet long, and consists of: (a) a head block 120 feet by 30 feet sunk in 8 feet depth at low water, with return 34 by 16 in the rear of the east end, (b) nine cribs 24 feet wide; five being 20 feet long and four 12 feet long, and which are placed at intervals of from 22 to 25 feet and connected at top by timber spans of stringers and planking. (c) A shore abutment or approach 182 feet long and 16 feet wide. A freight and shelter shed 16 feet by 20 feet has also been erected in connection with this wharf.

During the fiscal year ended 30th June, 1897, a sum of \$395.93 was expended in making general repairs to the wharf.

KAMOURASKA.

Kamouraska is a favourite seaside resort on the south shore of the St. Lawrence, in the county of the same name, 90 miles below Quebec.

The public pier at this place is 280 feet in length, the inner 180 feet having a width of 41 feet, and the outer 100 feet or extension a width of 25 feet. The pier is dry at low water, but at high water ordinary springs, a depth of from 10 to 12 feet is available along the end and sides of the 100 foot extension built in 1884. The top

of the work stands about 2 feet above high water, highest springs, which rise about 15 feet, and neaps only 6 feet.

During the months of May and June last, the inner end of the western side of the wharf, which was in an advanced state of decay, was taken down and rebuilt for a height of 12 feet and a length of 180 feet. Work all done by day labour at a total cost of \$995.62.

LANDING PLACES, LOWER ST. LAWRENCE.

The department has since 1894, undertaken to carry out works of improvement at various places along the south shore of the St. Lawrence below Matane, with a view of providing safe and easy landing places for the fishermen engaged in their arduous calling; the results have in many instances proved very encouraging.

During the past fiscal year a sum of \$1,103.15 was paid out in improvising landings for fishing boats at the undermentioned places, viz.: Newport, Newport Point (Anse au Canard), Little River East, Anse à Beaufils, Percé, Anse à Grisfond, Cape Rosiers, Fox River, Chlorydorme, Pointe Sèche (St. Yvon), Frigate Point, Grande Madeleine, Petite Madeleine, Cap Chatte, Ste. Anne de Monts, Grande Vallée des Mont and Ste. Adélaïde de Pabos.

LANORAIE.

Lanoraie, Berthier County, is a village on the north shore of River St. Lawrence, about 40 miles below Montreal.

The Government wharf constructed 1884 to 1886, consisting of a landing pier and approach, was considerably out of repair, and the approach threatened to fail with the spring ice shove.

General repairs were made to the pier and approach, commencing January 19th, 1897. The ice breaker of the landing pier was renewed and a rip-rap ice breaker added to the approach. The renewal of the flooring could not be done on account of high water and work was stopped April 3rd.

Total expenditure in 1896-97, \$1,008.27.

LAPRAIRIE.

Laprairie, the *chef lieu* of the county of the same name, is situated on the southern shore of the St. Lawrence, seven miles above Montreal.

The Federal Government has undertaken to protect Laprairie from the disastrous effects of the spring floods of the St. Lawrence by constructing ice-breaking piers, a revetment wall of cribwork some 1,650 feet long and 2 feet wide along the south shore of the river, and also an earth embankment 1,600 feet long at the upper end of the town. These works, commenced in 1886-87, and now all completed, with the exception of the retaining wall, have proved thoroughly satisfactory.

During the fiscal year 1896-97, 387 feet in length of the 450 feet of cribwork wall remaining to be built, were completed up to a height of 8 feet above low water, at a total cost of \$1,400.36. A further sum of \$5,411.12 was applied in improving the steamboat channel leading from the Richelieu and Ontario Navigation Company's wharf to deep water in the river, by dredging to 7 feet depth at lowest water.

LES ÉBOULEMENTS.

Les Eboulements is a parish on the north shore of the St. Lawrence, in the county of Charlevoix, about 70 miles east of Quebec.

The Government wharf at this place is 890 feet long, and has a depth of 15 feet along its outer face at low water ordinary spring tides. The head block which is 80 feet long has a width of 45 feet; but the remaining portion of the structure is only 30 feet in width. The wharf is built of close faced square timber and has landing slips at the end and sides. Spring tides rise here 20 feet and neaps 14 feet.

Department of Public Works.

During the month of November, 1896, the stringers and planking at the outer end of the wharf were renewed on a length of 125 feet and the earth approach to the wharf was repaired; the whole at a cost of \$283.54.

L'ISLET.

The village of L'Islet in the county of the same name, is about 47 miles below Quebec, on the south shore of the St. Lawrence. The landing pier at this place was completed in 1855 at a total cost of \$113,343.27. A large lumber trade is carried on from this pier in large vessels; also, a considerable local traffic in general merchandise by bateaux and schooners. The structure is 31 feet wide for a length of 1,054 feet, and then comes a head block 118 feet by 50 feet and 34 feet high. Along the outer face of this block there is a depth of only $7\frac{1}{2}$ feet at low water spring tides, instead of $8\frac{1}{2}$ feet as at first, some filling in having taken place. Spring tides rise 18 feet, neaps 11 feet.

The following works were carried out by day labour on this pier during the month of June 1896; the total outlay amounting to \$386.80, viz.:—

1. The slips on each side of the pier were repaired.
2. The damaged portions of the face timbers on the eastern and western sides of the outer block were made good, and the 10-inch sheathing was extended for 10 feet on both sides to cover the face repairs.
3. Three new ladders were placed in position, and
4. The timber capping on the stone wall at the inner end of the pier was renewed for a length of 270 feet.

LONGUEUIL.

The town of Longueuil, opposite Montreal, is the *chef-lieu* of the county of Chambly.

The Government pier, commenced in 1886, at the foot of St. Alexandre Street, and as now completed, is 1,105 feet long and reaches a depth of 7 feet at the lowest stage of the St. Lawrence. The first 605 feet of the pier from the shore end have a width of 30 feet, and the outer block, 500 feet long, is of somewhat irregular outline, widening out from 30 feet at the inner end to about 60 feet along the outer face, the floor stands $9\frac{1}{2}$ feet over the low water line.

Extensive repairs are needed on this pier, which has been much damaged by floods and ice in the spring of the year. It is in such a bad condition that vehicles cannot safely travel over it.

During the past fiscal year, only works of a temporary nature were carried out on the pier, viz., the roadway was repaired with stone and gravel at a total expense of \$284.56.

LOTBINIÈRE.

Lotbinière, in the county of Lotbinière, is a village of 1,400 inhabitants. It is situated on the south shore of the River St. Lawrence, about 40 miles above Quebec.

It has no railway communication and depends, for exchange of supplies, on the market steamers and bateaux.

The flat rocky beach extending far out at low tide, and the strong current and the tremendous ice shoves make it difficult to maintain wharfs.

A landing pier was built by the Steamboat Navigation Company, in 1865, but it was destroyed by ice shoves; since that time a temporary trestle structure, removable in winter, has been built annually. It proved, however, always dangerous and inconvenient.

Plans and specifications were prepared by the department for a single block of cribwork, 75 feet long and 25 feet wide, at the top, with ice-breakers on the up stream and the inshore faces; the whole to be built of hemlock, strongly framed and sheathed to withstand the heavy ice shoves.

The contract for the construction was let on the 31st March, 1897, to Joseph Archer, jr., for the bulk sum of \$4,940.

Timber and materials were being prepared at the close of the fiscal year 1896-97, but no expenditure had been made from the appropriation of \$4,000, on the 30th June, 1897.

MAGOG.

The town of Magog, county of Stanstead, is situated at the outlet of the Magog River from Lake Memphremagog and is a station on the Canadian Pacific Railway.

The wharf at this place is opposite the railway station; it is a pile structure 430 feet in length, which varies in width from 24 feet, for the first 305 feet from the shore, to 40 feet for the outer 98 feet. There is a depth of $7\frac{1}{2}$ feet along the outer face at low water, and the flooring stands 5 feet above this level.

Extensive repairs are required to place this wharf in first-class order for shipping and landing purposes.

During the fiscal year of 1896-97, a sum of \$154.82 has been applied in effecting the most urgent repairs to the flooring.

MISTASSINI.

Mistassini, county of Chicoutimi and Saguenay, is a settlement on the river of the same name, near its confluence with "Rivière au Foin," or River Mistassibi, being 36 miles to the northward of Roberval on the west side of Lake St. John, and 18 miles above the mouth of River Mistassini on this lake.

Besides the parish church, there is in the locality a monastery of Trappist Fathers; also a grist-mill, a saw-mill and a cheese factory; population about 375.

The side-wheel steamer "Colon," drawing $3\frac{1}{2}$ feet of water and carrying 200 passengers, besides a considerable quantity of freight, and which is subsidized by the local government, calls here regularly, twice a week, during the season of navigation.

In the month of March, 1897, a public wharf was built here for the accommodation of the rapidly increasing number of settlers on the fertile lands around Lake St. John, viz., on the east side of River Mistassini, immediately above its junction with Rivière au Foin.

The structure consists of a fully ballasted close faced timber crib 30 feet long, 30 feet wide and 20 feet high at the outer end, which is floored over with 3-inch plank; along the outer face there is a depth of 5 feet at low water.

Total cost of wharf, \$680.99.

MONTMAGNY.

The town of Montmagny is situated on the south shore of the St. Lawrence, 49 miles east of Quebec City; it is the *chef-lieu* of the county of Montmagny, and has a population of about 2,000.

In August, 1896, the superstructure of the public wharf at this place was burned down to 7 feet below the top of the flooring, together with the lighthouse; the cause of the fire being unknown.

The public wharf is built on the west side of the basin, within the mouth of Rivière du Sud, $\frac{3}{4}$ mile from the centre of the town of Montmagny. As it is the only landing place on the south shore of the St. Lawrence, for boats plying between Montmagny, Grosse Ile, Ile aux Grues and other ports in the vicinity of this town, the immediate re-construction of the upper part of the wharf was imperative. Hence at its second session of 1896, Parliament made an appropriation of \$4,000 for this purpose.

The structure is 205 feet long, the outer 55 feet being 30 feet in width and the remaining 150 feet 24 feet; there is a depth of about $3\frac{1}{2}$ feet along its channel face at low water spring tides and 19 feet at high water springs.

Department of Public Works.

The works of re-construction and repair were carried out by day labour under the direct supervision of an officer of the department; they were commenced in October and completed in December, 1896. Besides the re-construction of the entire superstructure of the wharf inclusive of re-ballasting where necessary, a small waiting room and a lighthouse were erected near the outer end of the structure, and its approaches from the shore were repaired. Total expenditure \$3,971.51.

MURRAY BAY.

Murray Bay, or Malbaie, is situated on the north shore of the St. Lawrence, in the county of Charlevoix, 90 miles east of Quebec, at the mouth of the Malbaie River. At low tide this bay is left entirely dry, with the exception of the few small channels which carry the waters of the river.

On the west side of the bay is the projecting rocky point known under the name of Pointe au Pic; it is at this place that the Murray Bay wharf so called is situated. This wharf built in 1855, was lengthened in 1875 a distance of 30 feet, and is now 500 feet long and 30 feet wide in the main, with a head block 108 by 70 feet, on which is erected a combined waiting room and freight shed, and also a lighthouse; the depth of water at the outer end is 12 feet at low water spring tides. Spring tides rise 20 feet; neaps 13 feet.

During the month of November, 1896, the south-west face of the head block was sheathed between the fenders with six inch spruce timber, also part of the outer face where the sheathing had been carried away. The whole of the work was done by day labour at a cost of \$149.93.

NEW CARLISLE.

New Carlisle, the *chef-lieu* of the county of Bonaventure, is situated on the north shore of Baie des Chaleurs, 50 miles east of Dalhousie, N.B., with which place there is semi-weekly communication during the season of navigation, by the steamer plying between the latter place and Gaspé, in connection with the Intercolonial Railway.

A pier 606 feet long and from 29 feet to 49 feet wide, reaching 15 feet depth at low water springs, has been built at this place by the department, between 1881 and 1883, for general landing and shipping purposes. This work was much strengthened, partly re-filled with ballast, and otherwise improved during succeeding years, and in 1890-91 a head block was added measuring $51\frac{1}{2}$ feet in width at the inner and 32 feet at the outer end, and 70 feet in length on an average, and having a depth of 16 to 17 feet along its outer face at low water spring tides. Springs have here a range of $6\frac{1}{2}$ feet and neaps $3\frac{1}{2}$ feet.

The appropriation of \$850, made by Parliament at its session of 1897, for repairs to this pier, has been applied as follows:—

1. The head of the pier, which had sunk some $2\frac{1}{2}$ feet, was levelled up to the height of the inner portion, over an area of 74 feet long by $40\frac{1}{2}$ feet wide, viz.: to 5 feet above high water level.

2. A wooden building, 24 feet by 34 feet, was erected and fitted up as a combined freight shed and waiting room, with office for agent, etc. This was a much needed improvement, as, when not immediately removed, the freight deposited on the pier is often damaged, owing to the absence of proper shelter, and passengers for the steamer "Admiral" are at times, more especially in the fall of the year, much inconvenienced for want of a suitable waiting room.

3. Sundry repairs required to flooring and slips were attended to.

Total actual expenditure incurred, \$849.87.

PHILIPSBURG.

The village of Philipsburg is situated on the east shore of Missisquoi Bay, Lake Champlain, in the county of Missisquoi.

At the close of the fiscal year 1896-97, the construction of the landing pier had been nearly completed by Mr. Olivier Lefebvre, but later on in the season, without any apparent reason, the contractor refused to comply with certain orders given him, and the department had to complete his work by day labour at a cost of \$351.58, this sum being charged against the amount due under the contract.

In addition to this work, the strengthening of the earth embankment, which had been damaged by ice and high water in April, 1897, was commenced, and on the 30th June, the work was progressing satisfactorily, the expenditure being to that date \$194.50.

POINTE À VALOIS.

Pointe à Valois, county of Vaudreuil, is situated on the south shore of the Lake of Two Mountains and $4\frac{1}{2}$ miles west of the village of Vaudreuil, which is the nearest railway station and $2\frac{1}{2}$ miles east of Como. In 1889-90 the old pier at this place, measuring about 80 feet by 16 feet, with head block of 45 feet by 20 feet and the right of way to this pier, was purchased from Charles Valois for the sum of \$690.

During the fiscal years 1890-91-92, the original pier was extended by adding at the outer end a block of ballasted cribwork 135 feet long by 21 feet wide, with a return to the eastward 55 feet by 25 feet; the total length of the work from the shore being thus increased to 235 feet. The depth of water available at the outer end of the wharf is now $6\frac{1}{4}$ feet at low water.

During the fiscal year 1896-97, a sum of \$210.77 was applied in effecting general repairs on this wharf.

PORT DANIEL.

Port Daniel, Bonaventure county, is on the northern shore of Baie des Chaleurs, 45 miles from Percé and 22 miles north-east of New Carlisle.

The pier at this place is 425 feet in length, and has, at its outer end a depth of 15 feet at low water and 22 feet at high water spring tides. During the fiscal year ended 30th June, 1897, the cribwork which had settled some $3\frac{1}{2}$ feet in places, was levelled up to its original height for a length of 277 feet, viz., over one block 50 feet by 50 feet, another 100 feet by 30 feet and 127 feet at the inshore end 20 feet wide; all the old flooring being ripped up and re-placed by new planking. Moreover, the freight and shelter shed was removed from its original position on the 50 by 50 foot block to the block 50 feet by 75 feet at the outer end of the pier. In addition to the heavy repairs done to the shed, a comfortable waiting room was fitted up in it at one end inclusive of flooring, ceiling and painting. Total outlay during the past fiscal year \$1,992.75.

RIVIÈRE BLANCHE.

Rivière Blanche flows through the county of Rimouski, and empties into the St. Lawrence on the south shore about 224 miles east of Quebec, 26 miles east of Métis and 9 miles west of Matane.

The public pier built near the mouth of this river consists of a head block of solid cribwork, 120 feet by 24 feet on top and about 21 feet high, which is connected with the shore by a block and span structure, 550 feet long, 20 feet wide and some 18 feet high on an average. This pier is an excellent landing place accessible, at high tide, to vessels engaged in the coasting trade; spring tides rise 14 feet and neaps 7 feet.

During the month of June, 1897, the sheathing around the head block was renewed with 6 inch black birch 9 feet high, for a length of 250 feet; the top planking was also partly renewed and new snubbing posts put in; work done by day labour at a cost of \$892.63.

Department of Public Works.

RIVIÈRE DU LIÈVRE LOCK AT LITTLE RAPIDS.

The lock and dam built by the department are situated at the Little Rapids, in Rivière du Lièvre, 12 miles above the village of Buckingham. The lock is built in cut stone masonry and is 150 feet long between the gates and 31 feet wide; and the lift is 13 ft. 9 in. at extreme low water.

It was opened on the 23rd of April, 1896, closed on the 23rd of November, 1896, and opened again on the 26th of April, 1897.

During the fiscal year 1896-97, 470 lockages of all kinds were made, including cribs of railway ties and a few cribs of standard saw logs; and the tolls collected amounted to \$198.45. The suspension of active operations in the phosphate mines as also in a saw-mill, above the lock, for a number of years past, accounts for the reduction in yearly receipts.

The lock and dam were kept in good working order during the year, and the total amount of expenditure for staff was \$755.86, and for maintenance and ordinary repairs \$189.67, making a total of \$945.53 paid up for working expenses.

In addition to the ordinary repairs just referred to, the undermentioned works of re-construction, etc., were carried out, at a total expense of \$1,665.65:

1. The upper portion of the lower entrance wall, which had bulged out about 14 inches for a length of 100 feet from the masonry, was taken down and a new wall 735 feet long by 25 feet wide built in its place. This bulge was getting worse every year, and it was feared that the pressure of the backing on that portion of the wall would soon cause it to collapse and completely block the lower entrance to the lock.

2. A crib 43 feet by 22 feet, built at the head of the western abutment to prevent undermining of this abutment, was completed. This crib imperfectly fulfilled its object, a quantity of water still made its way underneath the abutment, and it was found necessary to remove this source of danger not alone to the abutment, but to the whole work, by adding 3 feet to the height of the crib, fully ballasting it and sheathing its outer face from top to bottom.

RIVIÈRE DU SUD.

Rivière du Sud, after following a winding course for about 30 miles from its source in the hills near the south-western limit of Bellechasse county, joins the St. Lawrence at the town of Moutmagny, which it crosses from south-west to south-east.

Owing to the combined actions of shoving ice and a swift current, the river banks were, prior to their protection in 1894-95, much eroded, especially on the south-east side, where the public road was partly washed away.

In 1894-95, a wall of stone laid dry, 830 feet in length by a depth of 7 feet at the base, tapering to 5 feet at the top, and having a mean height of 7 feet, was built from the Intercolonial Railway bridge in a southwardly direction, parallel to the bank of the river on the south-east side.

This wall was found to be too low to prevent the ice from damaging it at the top, and being carried into the road during the freshets, it rendered the former impassable for weeks at a time. Hence it became necessary to repair the damaged upper part of the wall by re-laying some of the stones in cement, and to increase at the same time, the height of the whole work by some 2 feet.

This work, for which Parliament made an appropriation of \$4,000 at its second session of 1896, was carried out by day labour during the fiscal year 1896-97, at a total expense of \$3,930.08.

RIVIÈRE L'ASSOMPTION.

L'Assomption River has its sources in rear of Joliette county, and joins the St. Lawrence above the village of Repentigny, at the same place as the united waters of the Rivers Jésus and Des Prairies, after meandering for over 100 miles through much rough and mountainous country. The river is navigable for flat bottomed

barges for a considerable distance up from its mouth, and much timber is made on its banks and floated on the stream.

During the fiscal year 1896-97, a sum of \$998.31 was applied in facilitating the driving of logs on this river and some of its tributaries, by removing bad rock and boulders where found most necessary and partly closing up useless channels by shear dams.

Most of the work has been done at a place on the river about 18 miles above the town of Joliette, known under the name of "Les Sept Chutes." Here the river was very tortuous, full of rapids and falls, and obstructed generally by rocks projecting several feet above water level which interfered considerably with the passage of timber, and caused the formation of extensive jams. By removing all the loose rocks and straightening the waterway, this portion of the river was greatly improved.

At points on the tributaries, such as Black River, where the waterway was subdivided into two, three or more shallow channels, the section of the river was reduced and the depth of the stream correspondingly increased by closing up some of the channels.

At Chute à Bouleau, a substantial shear dam of close faced cribwork securely put together and filled with rocks, was built across one of the two river channels so as to effectually prevent the flow of water through the said channel during the low water season. This dam is 60 feet long, 11 feet wide and 6 feet high, and is built with square timber 12 by 12 inches.

At "Trois Cheneaux" one of the three channels occupied by the stream was also similarly closed by a shear dam built of well bolted round logs and filled with stones. This dam is 50 feet long, 10 feet wide and 5 feet high.

Between Chute à Bouleau and "Trois Cheneaux" about 1,000 cubic yards of rocks were blasted and cleared from the river bed.

RIVIÈRE OUELLE.

The Rivière Ouelle pier is built at Pointe aux Orignaux on the south shore of the St. Lawrence, $4\frac{1}{2}$ miles north, east of the village of Rivière Ouelle, which is 75 miles below Quebec.

This pier, built of heavily ballasted cribwork throughout, was completed in 1855 at a total cost of \$225,229.87. It is 1,219 feet long and 28 feet wide, and has a head block $237\frac{1}{2}$ feet long by 51 feet wide and 42 feet high, with 14 feet depth along its outer face at low water spring tides; at the outer end stands a lighthouse built by the Department of Marine and Fisheries in 1875.

During the months of May and June, 1897, the planking at the bottom of the slip on the western side of the pier was renewed with 5 inch planks; the top planking was also partly renewed and a pathway 4 planks wide was put down on the middle of the pier. Again, three tiers of face timbers were renewed at the bottom of the slip on the eastern or lower side of the pier, as also the planking of the platform for a length of 100 feet and the sheathing, on the eastern side, for a length of 60 feet.

Total expenditure incurred during 1896-97, viz., up to 30th June, 1897, \$845.39. There remained to be attended to at the close of the past fiscal year some repairs required to the sheathing at the two outer ends.

RIVER RICHELIEU—BELCÉIL CHANNEL GUIDE PIERS.

Belcél, county of Chambly, is a station on the Grand Trunk Railway on the north-west side of River Richelieu, 21 miles north-east of Montreal.

At its session of 1897, Parliament made an appropriation of \$6,000 to be applied in: (a.) Removing the four badly decayed mooring piers and booms on the west side of the Belcél channel in the Richelieu River, which were built many years ago for guiding vessels, etc., in this channel, through the Grand Trunk Railway swing opening in their bridge across the said river, and repaired from time to time.

Department of Public Works.

(b.) Constructing a new guide pier 300 feet long, terminated at its upper end by an ice breaker, the whole of solid cribwork, from the Grand Trunk Railway bridge abutment southwardly. (c.) Dredging the channel along the new works to a minimum depth of 8 feet at low water.

During the latter part of 1896-97, a sum of \$2,170.12 was expended in procuring stone, iron, etc., required for use in the fiscal year 1897-98.

RIVER RICHELIEU—ICE PIERS AT SOREL.

The River Richelieu is about 80 miles in length, and flows from Lake Champlain in a northerly direction through the counties of St. John and Iberville, Chambly, St. Hyacinthe and Richelieu, joining the St. Lawrence at Sorel at the head of Lake St. Peter.

With a view of protecting the properties on both sides of the river near its outlet at Sorel, and the boats which winter here, against disastrous ice shoves from the St. Lawrence, and the run of ice in the Richelieu in the spring, five ice breaking piers were built in the bed of this stream between 1888 and 1892, two of which ice breakers are on the west side of the last named river near its confluence with the St. Lawrence.

All these piers have proved of good service, preventing the destruction of much valuable property.

The two piers at the mouth of the Richelieu measure 30 feet by 24 feet and are some 20 feet high; the top being about level with extreme high water on the St. Lawrence. They are well calculated to resist a great pressure from the St. Lawrence ice; but were, at the time of their construction, insufficiently protected from the run of the Richelieu ice, and for this reason, were considerably damaged by the ice, chiefly in the spring of 1896.

During the fiscal year 1896-97, a sum of \$441.53 was applied in making good the damage done to the piers by the ice and strengthening the works by means of sheathing, bracing, corner plates, &c.

STE. ANNE DE LA PÉRADE.

Ste. Anne de la Pérade, Champlain county, is situated on River Ste. Anne about one mile above its confluence with the St. Lawrence River.

The land slide of 1894 caused a complete change in the physical features of the Ste. Anne River. It is now a rapid river, carrying from the valley where the "éboulement" took place, quantities of sand and fine clay in suspension.

The deposit of this material takes place near the mouth of the river where the current slackens, filling the natural bed of the river opposite the town with quick sand shoals. During freshets these sand banks turn the current against the shores.

Just above the town the west bank is high and unstable. Protection works consisting of five wing dams, constructed of double rows of open piling, filled with brush and stone, were constructed with the view of deflecting the current from the bank. This was only partially successful; the space behind the wings did not fill up permanently. The filling of ballast and brush settled in the sand or was washed away, and some of the piling being entirely founded in the quick sand, failed. Besides this, the sand banks turned the currents in behind the wings, and the eddies continued the work of erosion.

At its second session of 1896, Parliament made an appropriation of \$3,000 for "Repairs to the Protection works," in addition to which a balance of \$3.83 of the \$500 granted by the municipality was on hand, bringing the total amount available up to \$3,003.83.

Work was commenced in October, 1896. Long alders were used instead of balsam branches. Between each course of brush and ballast, round logs were put in to hold the stone in place, and to make the work continuous. Where the pilework

was gone and to renew connection with the shore, rough cribs or mattresses were made of long branches and logs heavily coursed with stone.

The following materials were used in the work: 166 toises of stone, 888 loads of branches, 200 lineal feet of waling and 12,000 lineal feet of round timber.

The municipality having contributed \$5,000, there is dissatisfaction at the non-permanent character of the work. Experience has proved that wing dams will not deflect the current from the river banks against sand shoals.

Permanent shore protection is urgent. It is probable that a sloping embankment or levee, heavily ripped parallel to the bank, and resting on mattresses of long alders, would best resist the current, and be durable on the sand foundation.

Expenditure incurred 1896-97, \$3,003.83.

RIVER ST. MAURICE—GRANDES PILES TO LATUQUE.

The River St. Maurice flows southward and empties into the St. Lawrence at Three Rivers.

From Grandes Piles up to Latuque, a distance of 66 miles, there is a good channel for vessels drawing less than two feet six inches of water.

The greatest impediments to navigation for a boat drawing more than 2½ feet of water, during the low stage of water, which lasted from the 28th July to the 2nd November, during the navigable season of 1896, are at the shoals at l'Île aux Morpions, Pointe à Tom, and at the Mekinac shoal, and Pointe à Trudel.

The only work done during the fiscal year 1896-97, was the placing of the buoys and their removal, and the repairing of the land marks.

Total expenditure, \$162.33.

ROBERVAL.

The village of Roberval, Chicoutimi county, is built on the east banks of River Ouïatchouaniche, near its mouth on the southern shore of Lake St. John, 200 miles north-east of Quebec City, and is the northern terminus of the Roberval branch of the Quebec and Lake St. John Railway, which taps the main line at Metabechowan station. Population about 1,100.

This place contains three churches, three hotels, four saw mills, two grist-mills, four cheese factories, telegraph and express offices, and some 14 stores. It is a favourite resort for sportsmen and tourists generally, in the summer season, when five steamers leave the public wharf every day; carrying freight and passengers to and from important settlements on the lake shores, and also on pleasure excursions undertaken for the special benefit of the large number of people who visit the Lake St. John region every year.

In 1893, this department purchased from H. G. Beemer, Esq., for the sum of \$750, an isolated block of cribwork, 75 feet by 30 feet, which had been built by him a short time previous at the mouth of River Ouïatchouaniche, 425 feet from the shore of Lake St. John, together with the right of way to the public road, viz., with a view of utilizing the block, etc., in connection with the then projected public landing pier.

In the following year this block was connected with the shore, by means of an approach 425 feet by 25 feet, built of six blocks, 20 feet by 25 feet, of ballasted close faced cribwork, an earth embankment 50 feet long and six intervening timber spans.

In 1894-95, a head block, 50 feet by 30 feet and 20 feet high, with slip at outer end was added. Moreover, the entrance channel of the Ouïatchouaniche was deepened and widened; 2,750 cubic yards of earth and about 60 boulders being removed.

The public pier as completed in 1895 is 500 feet long and 25 feet wide generally, with the exception of the head block, which measures 50 feet by 30 feet, and has 8 feet water along its outer face at low water, and 19 feet at high water during the season of navigation; in winter the lake recedes out beyond the head of the pier which is completely dry all around. Total cost of work \$9,669.37.

Department of Public Works.

During the fiscal year 1896-97, a combined freight and shelter shed, 45 feet by 24 feet, was erected on the head block at an expense of \$425.98; a space 20 feet by 24 feet being closed in all around for use as a store and waiting room.

ST. ALPHONSE (BAGOTVILLE).

St. Alphonse de Bagotville, Chicoutimi county, is at the head of the Ha! Ha! Bay, on the north-west side of the River Saguenay, 66 miles from its mouth. Population of village about 750, of parish 2,000.

A landing pier was built at this place, prior to Confederation, by the municipal authorities at an expense of about \$3,200. In 1896 an addition was built by the department on the north side of the original pier, 55 feet long by 26 feet wide. In 1881-82, a length of 378 feet of the original pier, which had been burned down to low water level at the shore end in April and May, 1870, was re-built for an average height of 10 feet, a large portion of the flooring renewed and other repairs made with a view of lengthening the pier. A head block was added in 1883-84, measuring 50 feet in width by 40 feet in length by 57 feet in height, and having the top about 9 feet above high water, ordinary springs, and a movable slip at outer end; moreover, the pier itself was raised 3 feet over its whole length of 460 feet. In 1886-87 a freight shed, 50 feet by 30 feet, and a waiting room, 24 feet by 18 feet, were erected, and from 1888 to 1895, the flooring was renewed throughout and other repairs made from time to time.

During the fiscal year ended 30th June, 1897, a shed 30 feet by 45 feet was erected on the eastern side of the pier, for keeping under cover the large quantities of butter and cheese which are brought every year to this wharf for exportation; the face timbers on the slipway were also renewed. The expenditure incurred in 1896-97 amounts to \$487.78.

Total outlay by Dominion Government on this work up to 1st July, 1897: \$25,092.37

It will be seen from the above that this pier as completed consists of an approach of solid ballasted cribwork 460 feet long by 26 feet wide and a head block 50 feet wide by 40 feet long. Depth of water available along outer face at low water, ordinary spring tides, about 29 feet. Ordinary spring tides rise 18 to 19 feet; neaps, 11 feet.

STE. ANNE DU SAGUENAY.

The parish of Ste. Anne du Saguenay (also called Tremblay) is situated on the north-east side of this river, 75 miles from its mouth, opposite Chicoutimi. Population by census of 1891, 1,663 and in 1897, over 2,000. Besides the church and post office there are in the parish seven stores, four cheese factories, a lime kiln, a brick-yard and a pottery.

The construction of a public landing pier was begun at this place in 1888-89; timber being procured for the work and a block of close faced cribwork, 35 feet wide including an 8 foot slip on south-east side and 77 feet long, built from the shore outward.

In 1889-90, a further length of 50 feet of similar cribwork, 27 feet wide, was added to the original block, its length being thus increased to 127 feet; in 1890-91 a head block, 50 feet by 30 feet by 26 feet high, was sunk in the river at a distance of 250 feet out from the end of the work completed the previous year, and in 1895-96 this block was raised 10 feet and the floor put on at the same level as that of the work built out from the shore, viz., with top about 6 feet above high water ordinary spring tides.

With a view of finally connecting the head block with the shore, a sum of \$5,573.25 was applied during the fiscal year ended 30th June, 1897, in sinking two blocks, each 92½ feet by 27 feet, between the head block and the work built from the river bank outward; an opening 25 feet wide being left between these blocks and one at each end.

Total outlay in connection with this pier up to 1st July, 1897, \$17,588.37.

The openings mentioned are to be bridged over in 1897-98, when the pier will be entirely completed. Its total length is 494 feet and general width 27 feet, the head block being as already said, 50 feet wide, and the depth at the outer end 7 feet at ordinary low water spring tides.

During the whole season of navigation a steamer performs the ferry service regularly every hour between Ste. Anne and the town of Chicoutimi on the opposite side of the Saguenay.

Ordinary springs rise 15 feet and neaps $7\frac{1}{2}$ feet.

STE. FAMILLE, ISLAND OF ORLEANS.

Ste. Famille, county of Montmorency, is a parish on the north shore of the Island of Orléans, some 18 miles east of Quebec.

The public wharf at this place is a block and span structure 475 feet long, having a width of 25 feet for the first 390 feet from the shore and 31 feet for the outer 90 feet. Steamers can come up to the wharf only when the tide is well up; at low tide there is great difficulty in landing freight and passengers by means of lighters. Spring tides rise 19 feet and neaps $12\frac{1}{2}$ feet.

With a view of proceeding in 1897-98, with projected works of repair to make good damage done to wharf by the great storm of 8th of February, 1895, when five inner blocks 25 by 25 were moved bodily 18 to 25 feet out of their normal positions, a large quantity of materials was purchased during month of June, 1897, consisting of square timber, planks and iron; the total outlay amounting to \$1,161.91.

ST. IRÉNÉE.

St. Irénée is on the north shore of the St. Lawrence, in the county of Charlevoix, 90 miles below Quebec. Spring tides rise here 20 feet and neaps 14 feet.

In 1886 an isolated block, 80 feet by 30 feet, was built at this place at a distance of 323 feet from high water mark, and in 1894-95 a length of 60 feet of ballasted cribwork, 22 feet wide, was added to the block to form part of a projected approach from the shore.

In November, 1896, the eastern side of the original block was protected by 15 fenders formed of two pieces of birch, and placed 4 feet apart, and besides about 18 toises of stone ballast were put in the cribwork where found most necessary.

In May and June, 1897, the section of the shore approach constructed in 1894-95, which had been partly carried away by an ice shove in January, 1896, was re-built; the foundation of the cribwork being widened by 12 feet. The work as re-built measures 62 feet in length by 32 feet in width and 33 feet in height; the whole being well filled with stone ballast and covered with plank.

Total cost of works of repair and re-construction carried out in 1896-97, \$3,588.31.

ST. JEAN, ILE D'ORLÉANS.

St. Jean, Ile d'Orléans, county of Montmorency, is situated on the southern shore of this island, 18 miles east of Quebec City.

The public wharf at this place was built of ballasted cribwork many years ago by the municipality.

It is 651 feet long, 30 feet wide, for about 570 feet from the shore and 50 feet for the remaining length of about 81 feet. At the head of the wharf there is a stairway at the end, and two slips, one on each side for landing purposes. The depth along the outer end of the pier at low water ordinary spring tides, is about 8 feet. Springs rise 19 feet and neaps 12 feet.

During the month of June, 1897, a combined freight shed and waiting room, 40 feet by 14 feet, was erected at the end of the wharf, the building being clapboarded, covered with sheet iron and painted. Work done by day labour; total outlay \$389.38.

Department of Public Works

ST. JEAN PORT JOLI.

St. Jean Port Joli is in the county of L'Islet, on the south shore of the St. Lawrence, 55 miles east of Quebec.

The public wharf at this place has a total length of 470 feet, inclusive of shore abutment 40 feet long. It is 18 feet wide on the top for a distance of 277 feet from the abutment outward; thence it widens out for 60 feet up to 35 feet, and retains this width up to the outer end. The structure consists of five blocks of open faced cribwork of various sizes and an abutment, all connected by timber spans; the top of the wharf stands four feet over high water mark of ordinary spring tides, except at the outer block, where it is half a foot lower.

The depth available at the outer end of the wharf at low water ordinary spring tides is about four feet. During the month of June, 1897, the sheathing on the two outer corners was renewed with six inch birch; also, in part, the top planking. Moreover, the two inner blocks which had been somewhat damaged were sheathed with three inch spruce planks and 300 lineal feet of new cap pieces were put on the wharf. Work all done by day labour at a total expense of \$474.56.

ST. MICHEL DE BELLECHASSE.

St. Michel de Bellechasse is on the south shore of the St. Lawrence, 15 miles east of Quebec, in the county of Bellechasse.

The public pier is built of open-faced cribwork, and has a length of 1,090 feet and a width of 30 feet, with the exception of a block about 87 feet long at the outer end, which is 52 feet wide and about 100 feet at the inner end, where the width is only 22 feet. At low water spring tides, the market steamers which call here daily during the season of navigation, cannot come alongside the pier for the want of water, and freight and passengers at such times have to be shipped and landed from a lighter, a scow or a bateau, at a great disadvantage. Spring tides rise 19 feet and neaps 12 feet.

During the fiscal year 1896-97, a sum of \$1,034.82 was applied in carrying out the undermentioned repairs, renewals, improvements, etc.

In October, 1896, a combined freight shed and waiting room, 40 feet by 22 feet, was erected by contract at a cost of \$690. The eastern and western sides of the building are clapboarded and the roof covered with sheet iron. In addition, the slip at the end of the wharf was partly covered with 3-inch pine plank, and other trifling repairs effected.

During the month of June, 1897, the top planking was renewed on a length of 500 feet, and a pathway 3 planks wide was put down on the middle of the wharf for a length of 200 feet.

ST. VALENTIN.

The village of St. Valentin, in the county of St. John, is situated on the western shore of River Richelieu, 12 miles above or south of the town of St. Johns.

As this place had no wharf accommodation, the large quantity of hay which is annually exported to United States ports on Lake Champlain had to be conveyed in scows to barges anchored in the channel of the river, which necessitated double handling and entailed a correspondingly heavy expense. The same may be said of the farm produce which had to be shipped to St. Johns.

At its session of 1897, Parliament made therefore an appropriation of \$5,500 for the purpose of constructing a landing pier at the foot of the Government road leading from the Post Road to the Ile aux Noix Ferry, and for raising and repairing this road so as to prevent it from again being damaged by spring freshets, as heretofore.

Messrs. Messier and Naylor have been awarded the contract for building the projected works, for a bulk sum of \$5,388.54. These works, which are now being proceeded with, consist of the following, viz.:

- 1.—A stone and earth embankment 135 feet long and 25 feet wide, with side slopes of 1 to 1.
- 2.—A trestle approach 150 feet long and 20 feet wide.
- 3.—A block of cribwork, built of square timber and round logs, 60 feet in length along the channel face and 30 feet in width.

THREE RIVERS ICE PIER.

In 1887, an ice pier was built on the foreshore of the St. Lawrence, about 1,600 feet west of Dean's Wharf at Three Rivers, at a total cost of \$1,490; the object being to protect the property along the river front from the ice shoves. This ice breaker has given great satisfaction.

During the winter of 1896-97, the cribwork above low water level was re-built and raised up to 21 feet above this level, so as to render the pier of service at extreme high water.

The total amount expended out of the special appropriation of \$500 granted for 1896-97, is \$499.79.

PROVINCE OF ONTARIO.

BURLINGTON CHANNEL.

Burlington Channel is a channel excavated through Burlington Beach, which connects the waters of Lake Ontario with Burlington Bay or Hamilton Harbour.

The staff employed in carrying passengers and vehicles over this channel on a scow or punt, previous to the construction of the new iron swing bridge, was dispensed with at the end of September, 1896; their wages from the 1st July, 1896, up to that time amounted to \$182.99. Since that period the swing bridge has been in commission, and the wages paid to the tender and his two assistants up to 30th June, 1897, amounted to \$1,117.93, while the expenditure for supplies required for working the bridge, small repairs, etc., was \$381.97. The total outlay for working expenses in 1896-97 was therefore \$1,682.89.

A further expenditure of \$2,083.75 was incurred in building retaining walls, repairing piers and constructing fences. Some 23,500 feet B.M. of timber, 635 lbs. of iron nails and spikes, 41 cubic yards of stone and 8 brls. of cement were used on these works. A sum of \$375.54 was also expended for inspection, superintendence, and contingencies, in connection with the above works.

This swing bridge is opened and closed by electrical power, which is applied and controlled with the aid of an apparatus furnished and installed by the Dominion Bridge Company. Power is supplied by the Hamilton Electrical Radial Railway Company.

In order to guard against accidents and prevent delays, it is desirable that telephonic communication be also established between this company's "power house" and the house on the bridge, that the "anchor" be so arranged that it can be worked from the bridge house.

COLLINGWOOD.

Collingwood is situated on the south side of the Georgian Bay, township of Nottawasaga, county of Simcoe, 94 miles by railway from Toronto, population about 6,000.

Department of Public Works.

At the second session of Parliament held in 1896 the sum of \$2,850 was voted for repairs to the several structures at this place. Up to 30th June, 1897, no urgent repairs have been needed and, consequently, no expenditure has been made for such purpose.

In June, 1896, permission was given to the town of Collingwood to employ plant and labour to remove obstructions from the channel, and in the harbour; the cost of the work performed was borne by the town.

The obstructions were chiefly boulders, and the work of removing the same was carried on during the months of July, August and September last, and some 320 cubic yards taken out at a cost of \$1,100.

Plans and specifications for the work of deepening the harbour and channel were prepared and exhibited in November, 1895, and tenders called for by the department, and a contract was let to Messrs. Boon and Armstrong, of Toronto, on the 29th day of April last (1897) for the bulk sum of \$144,960. The work consists in the removal of some 360,000 cubic yards of material to form a deep water channel to the wharfs.

On the 26th June the contractors brought to Collingwood a large powerful dredging plant to do the work required and expected to commence active operations at the beginning of the fiscal year 1897-98.

GODERICH.

Goderich is situated in the county of Huron, on the east side of Lake Huron, at the mouth of the Maitland River, about 68 miles from Sarnia and 60 miles from London. Population about 5,000. It is the terminus of the Buffalo and Goderich Branch of the Grand Trunk Railway.

On the 9th October last, instructions were issued to expend a sum not to exceed \$1,000 in repairing the north pier at this place. Active operations were at once commenced and the work was all completed on the 22nd of March last. About 47,500 feet B.M. of timber and plank, 2,000 lbs. of iron bolts and spikes and 10 cords of stone ballast have been used in this work of repairs, and the total amount expended for material and labour was \$1,070.79.

Early in July last, a thorough and complete examination was made of the breakwater, and a report prepared upon the re-construction of the same. Plans and specifications were made and tenders for the same were called for by public advertisement. The contract was given to Mr. Luke Madigan, his tender being \$50,999, and was signed on the 25th March last. Early in May the contractor stated he was ready to commence work and accordingly he employed a few men in stripping the old work. These operations were stopped by the department, as the contractor was depositing the old material in the river instead of on the beach, between the north pier and the breakwater, at the western end of the harbour.

Up to the end of the fiscal year 1896-97 the contractor had not delivered any material for the re-building of the work, neither had he any plant or tools provided to carry on operations.

The expenditure upon the above works, for the fiscal year ended 30th June, 1897, was for examinations and inspections, &c., \$370.19.

KINCARDINE.

The town of Kincardine, Bruce county (West Riding) is situated at the mouth of the Penetangore River, which empties into Lake Huron, 31 miles north of Goderich Lake and 30 miles south of Southampton. It is the terminus of the Wellington, Grey and Bruce Division of the Grand Trunk Railway. Population 2,650.

The harbour at this place is an artificial one, being formed between two parallel piers of cribwork of irregular widths, sunk from 100 to 200 feet apart in Lake Huron, and extending out to a point about 700 feet east of the shore and between pile works, built around the banks of an inner basin, about four acres in extent, from the inner ends of the piers up to the bridge over the Penetangore River, which

is about 800 feet to the westward of the lake shore at the piers. At low water the depth available in the harbour varies from say 6 feet to 14 feet.

In the fall of 1896, Messrs. Allan and Fleming's dredge "Arnoldi" dredged to 14 feet depth at various points in the harbour, from the 4th September until the 12th October; removing 9,525 cubic yards of material, chiefly sand, in 185 hours working time. In June, 1897, dredging was continued by the same plant to the same depth of 14 feet at low water, when a further quantity of 10,550 cubic yards of material was removed. Total cost of dredging performed in 1896-97, \$3,412.51.

Besides this dredging, a sum of \$1,934.35 was applied between January and June, 1897, in repairing the outer end of the south pier. This work was done by day labour, and the materials used in connection with the same are as follows:—58 cords of stone ballast; 5,600 feet B.M. of cedar; 5,500 feet B.M. of pine plank; 2,210 lin. feet of pine 12 x 12; 1,320 lin. feet of elm 10 in. by 8 in.; 12,500 feet B.M. of hemlock; and 8 mooring posts.

On the 22nd May, 1897, a contract was entered into with Messrs. Bowman, Bowman & Porter, of Southampton, for renewing the superstructure of the north pier for a length of 367 feet at the outer end, and for strengthening this pier with sheet piling; the total amount of the contract being \$11,000.

Materials were delivered immediately after the signing of the contract, and building operations commenced on the 21st June, 1897.

Total expenditure incurred in 1896-97 in connection with repairs and renewals to north and south piers: \$2,265.42.

KINGSVILLE.

Kingsville, county of Essex South, is on the north shore of Lake Erie, about 25 miles east of the mouth of the Detroit River; it is also a station on the Detroit, Essex and Lake Erie Railway.

The landing pier at this place is the pile structure formerly known as Malette's dock; being on the eastern side of the artificial harbour of refuge formed at Kingsville: at low water a depth of from 10 to 12 feet is available along its outer end. The pier is 860 feet long and 22 feet wide for the first 520 feet from the shore; 28 feet wide for the next 240 feet, and 50 feet wide at the outer end for a length of about 100 feet.

During the fiscal year 1896-97, a sum of \$173.55 was applied in making indispensable repairs. The old structure is much decayed and should be re-built; in its present state the weight of a heavily loaded wagon passing over it, may break some of the piles.

LAKES SIMCOE AND COUCHICHING.

Lake Couchiching forms part of the boundary between the counties of Simcoe and Ontario, the former lying on the west and the latter on the east side. At its upper end Lake Couchiching is connected with Lake Simcoe, through the Narrows at Orillia, and at its lower end there are three outlets which form the River Severn. This stream carries the waters of both lakes in a north-westerly direction into the Georgian Bay, Lake Huron.

Of late years the extreme high water of these lakes in the spring has prevented the cultivation of large areas of rice land; on the other hand, the early drying up of the water courses in the summer has resulted in the lowering of the water level, so as to interfere with navigation.

With the object of regulating the discharge from these lakes so as to lessen either extreme, the following works were commenced in April, 1896, viz.:—1st. The widening above the low water level of the two streams issuing from Lake Couchiching, which flow through narrow gorges, in order to increase the discharge at high water. 2nd. Works for controlling the flow during the low water season by means of stop logs placed across the waterways.

Department of Public Works.

The work was carried on by day labour; during high water, unwatering had to be done by means of temporary dams.

Before the close of 1895-96 the widening at "Little Falls" on one of the streams, was completed, and half the work projected at "Big Falls" on the other, was also done.

In the fiscal year 1896-97, operations were resumed on October 15th, 1896, where left off June 30, 1896.

The widening at Big Falls was completed and stop-logs put in on January 22nd, 1897.

To facilitate the discharge of the increased flow at high water, some excavation was also made further down the Severn River at the first and second chutes. This work being in the wilderness, camps had to be made, and much difficulty was experienced in getting in and out.

All the work was completed and the plant withdrawn, by the end of April, 1897.

The amount of the appropriation was \$5,500 and the expenditure incurred \$4,540.55.

The local interests concerned hold diametrically opposite views relative to the advisability of putting in the stop-logs provided and the manipulation of the same; the property owners wanting them left out, and the mill and vessel owners wanting them kept in.

At a conference of the representatives of the different interests it was decided, as the best possible arrangement, that the stop-logs would be taken out each year on the 15th of December, and left out until the water receded to a certain mark indicating, as nearly as possible, the old ordinary low water.

L'ORIGINAL.

L'Original is situated on the south shore of the Ottawa River, $6\frac{1}{2}$ miles above Grenville, and 3 miles from Calumet, a station on the Canadian Pacific Railway across the river. It is the county seat of the counties of Prescott and Russell.

The pier at this place is the most important on the River Ottawa, between Ottawa City and Grenville; it is the only landing for the heavy freight and passenger traffic of an extensive portion of the county of Prescott, and for the large number of tourists who visit the Caledonia Springs every year.

The present structure is 1,353 feet long over all, including an outer block 120 feet long and 30 feet wide and consists of some 30 cribs of various sizes, but most of them measuring 10 feet by 22 feet and which are connected with each other, the shore abutment and the head block by timber spans of from about 20 to 33 feet.

The depth available along the river face of the outer block is $8\frac{1}{2}$ feet at low water and 24 feet at highest water.

As this pier, excepting the outer block, was in too dilapidated a condition to permit of its being repaired, plans and specifications were prepared for the complete re-construction of the approach to the said block from the shore. On the 8th June, 1897, this work was let to Messrs. J. W. Munro, and Wm. Murray, contractors, of Pembroke, for the sum of \$13,417.12. The works placed under contract comprise the following, viz. :—

1st. A stone and earth embankment 623 feet long and 25 feet wide at the top, with side slopes of 1 to 1, the roadway to stand $19\frac{1}{4}$ feet above the extreme low water level.

2nd. A trestle approach 700 feet long and 20 feet wide, composed of pile bents generally placed 12 feet apart; the whole approach being floored over with 4-inch hemlock spiked to stringers and finished with guard railings, &c., complete.

PENETANGUISHENE.

Penetanguishene is situated on the north side of the eastern peninsula in Georgian Bay, formed between Nottawasaga Bay and the waters of the Severn River, 40 miles N.N.W. of Barrie.

On the 9th October, 1896, orders were issued to repair the piling and to straighten up and strengthen the government wharf at this place, which is 1,200 feet long, and is partly used by the public generally and partly by the Grand Trunk Railway; the work to be done by day labour. Active operations were commenced on the 19th October, and by the 11th December, 1896, the appropriation of \$600 made by Parliament at its second session of 1896 had been all expended, less \$2.72. About 3,985 feet B.M. of pine and elm timber; 30 cedar piles and 1,175 lbs. iron were used in the repairs, and of the total sum of \$597.28 expended, \$362.30 was paid out for labour.

Owing to there being more rotten timber in the structure than could be seen, before it was stripped, the appropriation was exhausted before the flooring could be re-laid. This work will have to be done during the fiscal year 1897-98.

PORT HOPE.

Port Hope is situated on the north shore of Lake Ontario, 63 miles east of Toronto. Population about 6,000. It is in the county of Durham, and is a station upon the main line of the Grand Trunk Railway.

On the 25th November, 1896, orders were issued to repair the east pier at this place by day labour, and the sum of \$1,000 was authorized to be expended. Work was commenced on the 1st December, 1896, and the repairs undertaken were completed on the 31st March, 1897.

Some 22,500 feet B.M. of timber, 780 lbs. of iron for bolts and spikes were used on these repairs, and the amount expended for labour was \$475.62, and for materials \$524.32. Total expenditure incurred to end of fiscal year 1896-97, \$999.94.

PORT STANLEY.

Port Stanley is about 85 miles from the entrance to the Welland Canal on Lake Erie, and is the lake terminus of the London and Port Stanley Railway.

On the 20th October, 1896, instructions were issued to repair the west pier (outer end) at this place by day labour, and the sum of \$2,000 was authorized to be expended. Subsequently, the expenditure of a further sum of \$500 for rebuilding the foundation under the lighthouse on this pier was authorized. Work was commenced on the 7th November, 1896, and completed on the 17th May, 1897. The following materials were used in the above repairs, viz., 53,579 feet B.M. of pine timber; 652 feet of oak; 6,000 feet B.M. of 3 inch plank; 3,175 lbs. of iron bolts and spikes, and 27 cords of stone; and for labour and superintendence the cost was \$843.70.

The outer crib of the west pier was in a very bad shape before the repairs were done, and the lighthouse in a dangerous condition owing to the foundation being rotten. The crib had settled to the south and west, and had parted at the outer end; the south-west corner being over two feet under water. All this cribwork was re-built to the proper height of eight feet above low water level. The total length of pier repaired is 94 feet.

The expenditure incurred during the fiscal year ended 30th June, 1897, is as follows, viz.:—

For repairs to west pier.....	\$1,982 79
For foundation of lighthouse.	497 31
Total.....	<hr/> \$2,480 10

RAINY RIVER.

The Rainy River, about 100 miles long, forms part of the boundary between the province of Ontario and the state of Minnesota, viz., between Rainy Lake and Lake of the Woods. The river is in the north-western part of Ontario, viz., in the District of Algoma, and its navigation is impeded by rapids; the principal obstructions being the Manitou and Long Sault Rapids.

Department of Public Works.

During the fiscal year 1896-97, \$5,332.56 of the \$15,000 appropriated by Parliament for the improvement of the Rainy River at its second session of 1896 was applied in facilitating navigation past the Long Sault Rapids.

These rapids are situated about 40 miles above the outlet of Rainy River on Rainy Lake, and 120 miles east of Rat Portage.

Wing dams were built from both shores at the foot of the "Big Chute," and solid rock was removed by blasting from the bed of the river in the rapids.

On account of the delays experienced in the transportation of the tools required, and the construction, rigging and fitting up of scows and other plant necessary to remove the rock, the dams and excavation commenced in the latter part of 1896 could not be completed before the spring of 1897; 1,500 cubic yards of granite had to be quarried to build the dams and about 1,000 cubic yards of that quantity were placed in the work.

A survey of the rapids had also to be made before the site of the dams could be located.

The removal of rock from the bed of the rapids progressed very slowly on account of the difficulties that were encountered in blasting them, the high stage of the water and the extreme cold weather that prevailed for nearly the whole winter.

When about half the rock excavation contemplated was completed, an unexpected early spring, with accompanying spring freshets, put an end to all further work for the season.

TORONTO HARBOUR.

West Pier.

The superstructure at the south end of this pier was completed and a good portion of the deck planked.

The storms of the winter of 1896-97 caused a settlement at the south end of this pier for some 200 feet. I do not recommend doing any repairs to it at present if it is the intention of the department to extend the pier next season, when it can then be repaired.

The north end of the pier having settled below lake level, it was found necessary to take down and re-build some 120 feet of the superstructure, and to place brush mattresses and large stones around the end and channel face to protect it from further scouring.

East Pier.

The north and south ends of the pier having also settled were partially taken down and re-built; and at the south end brush mattresses and large stones were placed.

When settlement had taken place along the channel side, an extra course of timber was put on and the waling taken off and replaced to proper level.

It is to be regretted that, owing to the unstable foundation upon which the piers rest, the north end of this pier again settled during last winter considerably out of line on the channel side. The work of straightening and protecting this end is now being done and mattresses will be sunk there in 1897-98 to further protect it.

A thorough survey of the whole island was made during the early part of last winter (1896), and soundings carefully taken at every 50 feet in the bay on the ice, on parallel lines run 500 feet apart. Owing to the ice leaving the bay before all the soundings could be taken, this work will have to be continued during next winter (1897-98). A plan of the island has been made, to a scale of 200 feet to an inch.

PROVINCE OF MANITOBA.

WHARFS ON LAKE WINNIPEG.

At its second session of 1896, Parliament made an appropriation of \$8,500 for the construction of wharfs on Lake Winnipeg; but no expenditure has been incurred in this connection, during the fiscal year ended 30th June, 1897.

A project was submitted for the construction of a public wharf, 600 feet long at Gimli on the west shore of Lake Winnipeg, that would reach 8 feet depth at mean low water. The proposed structure was to consist of an outer portion of solid crib-work 20 feet wide and 400 feet long, and a stone approach from the shore 200 feet long; the top of planking to stand 4 feet above the mean low water level.

The object of building this wharf would be chiefly to afford to the inhabitants of the municipalities of Gimli, Woodlands and Rockwood, proper facilities for carrying on the lumber trade and the fishing industry.

PROVINCE OF BRITISH COLUMBIA.

COLUMBIA RIVER.

The headwaters of the Columbia River are a series of small lakes lying between the Rocky Mountains and the Selkirk Range, a little south of the 50th parallel of north latitude. The upper lake is separated from the Kootenay River, which takes its rise in the heart of the Rocky Mountains, but a few miles north of the 51st parallel—by a low sand and gravel divide, 2,700 feet above sea level, a mile and a half wide. The Kootenay at this point, at an ordinary stage of water, is about nine feet or so above the level of the Upper Columbia Lake. While the Kootenay flows in a south-easterly course to the boundary line, the water of the Columbia takes an entirely opposite direction towards the Canadian Pacific Railway at Golden, about one hundred and thirty miles north-west of Canal Flat.

This portion has been known as the "Columbia River above Golden," and is navigable now for steamers of light draught as long as the river is free of ice.

From Golden, the Columbia follows on—about the same course—the line of the railway on the south side, to Donald, where it crosses to the north side of the railway and continues to follow it down to Beaver. Steamers can, it is believed, run down from Golden to Donald, but not to Beaver. Leaving the railway at the latter place, the river continues the same course to the Big Bend; here it doubles and takes a southerly course to Revelstoke, where it again meets the Canadian Pacific Railway. The distance from Beaver round the Big Bend is about one hundred and seventy-four and a quarter miles.

About thirty miles below Revelstoke, the river debouches into Upper Arrow Lake, over a fan-like bar of wandering sand. After passing through the lake—which is about forty-three miles long—the river is entered again; thence it continues to flow for about eighteen miles, down to the Lower Arrow Lake; and extends southwards forty-eight miles, more or less past this lake. The river between the lakes is called "The Narrows." Both of these lakes hardly exceed four miles in width in the widest part. From the Lower Arrow Lake to the Kootenay Rapids—twenty-one miles—the river is deep and wide, with no very acute bends, but a strong current. This portion is known as the "Columbia River, below Revelstoke."

Continuing through the rapids, passing the mouth of the Kootenay River on the left, the Columbia continues a wide and swift river, with many sharp bends, divided

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in one or two places by rock islands, to the international boundary below Fort Sheppard, a distance of thirty-two miles from the head of the rapids. The general direction is due south. This part of the river is known as the "Columbia River, below Kootenay."

The valley of the river, from the Big Bend, south, lies between two ranges of mountains, the Selkirks to the left and the Gold Range to the right. The mountains lose, to a great extent, their rugged appearance as the lakes are reached.

The banks and bed of the river are generally gravel and sand, thickly timbered, with an occasional rock bluff intervening.

IMPROVEMENTS ABOVE GOLDEN.

On the 1st of October, 1896, the dredge "Muskrat," which had been lying in Lake Adela, 5 miles distant from the Upper Columbia Lake, was moved down the river to the Ford or Little Warehouse, 90 miles above Golden, where it was hauled on to skids out of the reach of all danger from ice. As soon as this work was satisfactorily accomplished, the crew were put to work cutting brush and making preparations for building wing dams in the spring, with the object of improving the depth of the water over a shallow gravel bar formed below the Ford. Besides these preparations the men removed several snags and roots from the channel. Cold weather having set in, work was suspended and the men discharged on the 31st of October.

Work was resumed on the 24th April, 1897.

From the 1st to the 18th of May, the crew of the "Muskrat" were employed in fitting up this dredge and caulking the scow, also in repairing the dams below Lake Windermere. From that date to the 30th of June, 1897, the dredge was employed in deepening the channel to a depth of three feet at low water; 1st, over a distance of 1,000 feet at the lower end of the Narrows between Lake Windermere and Lake Adela; and 2nd, over a distance of about 880 feet at the foot of Lake Adela.

The crew of the "Muskrat" consists of a captain and engineer, one assistant engineer and deck hand, one fireman, three deck hands, and one cook.

The expenditure in connection with the dredge "Muskrat," during the part of the fiscal year 1896-97 above mentioned, was as follows:—

Wages.....	\$ 1,325 66
Provisions.....	431 11
Stores	67 35
Equipment	956 03
Contingencies.....	214 93
Total	<u>\$ 2,991 08</u>

IMPROVEMENT OF CAÑON ABOVE REVELSTOKE.

The work of improving the cañon of the Columbia River, above Revelstoke, was commenced in the month of March, 1897, when the lowest stage of water was reached. Operations, which consisted in blasting rocks and removing other obstructions from the cañon, were continued until the 15th of May, when the men had to suspend work on account of the freshet.

The following are the details of the expenditure incurred in connection with this service, during the fiscal year ended 30th June, 1897:—

Wages.....	\$ 836 62
Materials.....	313 90
Total.....	<u>\$ 1,150 52</u>

DUNCAN RIVER.

The Duncan River rises in a meadow or depression lying about the centre of the Selkirk Range a few miles south of the Canadian Pacific Railway.

From this depression flows also: (1) the Beaver northward to join the Columbia River at a point where the railway leaves it to climb the eastern slope of the mountains, and, (2) the north fork of the Spillamacheen south-eastwardly to join the Columbia 40 miles or so, in the latter direction, from Golden, a station on the Canadian Pacific Railway, at the junction of the Kicking Horse and Columbia.

Following a tortuous course for 56 to 60 miles through a narrow alluvial valley, from three-quarters to one mile wide, bearing one point east of true south, the mountains on both sides rising precipitously from the plain, the Duncan widens out into Upper Kootenay Lake, $10\frac{1}{2}$ miles long by from three-quarters of a mile to a mile wide. Two miles from the lower end of this lake the Lardo—a rapid and unnavigable affluent from the north-west, joins the Duncan at an acute angle, and 7 miles further on, the combined waters enter Kootenay Lake about 21 miles from Kaslo, a town situated on the west shore. Below the confluence of the two streams the river has been called the Lardo, notwithstanding the fact that the Duncan, being very much the larger, is properly the main river. To prevent confusion, the river will be referred to hereafter as the Duncan, the Lardo being treated as the tributary.

Kootenay Lake, 1,730 feet above the sea, is about 72 miles long by about an average width of $1\frac{1}{4}$ mile. It is the natural and, at present, the only available route by which the trade of the great southern central valley of the Selkirk Mountains, north of the boundary line, can be carried. There are two points on the lake waters at which transfers can be exchanged with the great railway lines. The first is Nelson, situated on the west arm or outlet of the lake, 36 miles from Kaslo, where freight and passengers are transferred in connection (1) with the Nelson and Fort Sheppard Railway and the Spokane Railway in the state of Washington, and (2), partly by rail and partly by boat, with the Canadian Pacific Railway at Revelstoke. The second is Bonner's Ferry, a small town in the state of Idaho, on the banks of the Kootenay River, about 50 miles south-east, by the river, of the boundary line, where connection is made with the Great Northern Railway Line.

To accommodate the lake traffic there are three steamboat lines giving a daily service between points north of the line, with a bi-weekly service in summer, reduced to a weekly in winter, to Bonner's Ferry.

At Kaslo a small line of railway called the Kaslo and Slocan, 3 feet gauge, said to be in the interest of the Great Northern, has been constructed to tap the Slocum country, lying west of Kootenay Lake, in competition with the Canadian Pacific Railway now operating a line, to the same interior points, called the Nakusp and Slocan, 4 ft. 8½ in. gauge. Nakusp, being situated on the east side of the Upper Avon Lake, connection is made by water thence with the Canadian Pacific Railway at the head of the lake. If an amicable arrangement could be arrived at between these rival lines, of which there is but a remote possibility, the Duncan River country would be in closer connection with the Canadian markets.

To meet the requirements of the increasing outputs of those mines conveniently situated within easy transportation distance of the lake, two large smelters have been erected; one by American capital at Pilot Bay on the east shore of the lake, opposite the west arm or outlet; and the other at Nelson, by the Hall Mines Company, an English corporation, which has been built primarily to treat the ores from their own property lying on Toad Mountain south of Nelson; but also for the purpose of custom smelting.

It is contended that the Duncan country is as rich in minerals as any other part of the district, but that, owing to the difficulties and dangers attending the transportation of freight, it is deprived of the advantages attending reasonable freight rates, and therefore its development is retarded. To mitigate the difficulties under which this section labours, it is proposed that the Duncan River, from the Kootenay Lake, be made navigable as far as practicable.

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All the above claims are simply prospects, no development work having been done.

At the mouth of the Duncan River, on Kootenay River, there are extensive sand bars, through which by many channels the river finds the lake, the main channel being close to a rock bluff on the west side. There was not, on the 7th September, 1895, more than two feet of water in the deepest channel. Upon entering the river the low land bordering the banks is found to be of alluvial character, covered at first with alders and willows, which afterwards give place to larger and merchantable timber. The current varies from two to six miles an hour and cuts the banks rapidly on the convex curve of the river. At intervals, up to the mouth of Cooper Creek, sharp, short pitches or riffles, where the river splits, are met with; the difference in level varying from 10 inches to 2 feet. The most serious of these riffles and splits, which will always, at low water, unless ameliorated, prove obstacles to navigation, occur below the mouth of Cooper Creek.

The difference in level between the lake and the mouth of the Lardo, a distance of $7\frac{1}{2}$ mile, is estimated to be approximately 28 feet.

Duncan City, consisting of three houses with no permanent inhabitants, is situated about $1\frac{1}{2}$ mile from the outlet of Upper Kootenay Lake on its west shore.

Between the mouth of the Lardo and the Upper Lake, there are two places where the channel is split by islands, rocks and gravel bars.

The drop, or difference in level, from the crest of the riffle to comparatively still water below, is in both instances not less than 2 feet. The depth of water in the shoalest parts was found not to exceed 24 inches.

The approximate elevation of the Upper Lake above Kootenay Lake is assumed to be not more than 36 feet. Allowing the distance between the lakes to be 9 miles, the average water slope would be 4 feet per mile. As will be inferred, however, the slope is not uniform, the river being a series of shallow riffles, in some instances short and sharp, with comparatively deep pools of water between, flowing with moderate velocity.

It is at these riffles—met with either at the mouths of tributaries or where the channel is divided, that the greatest difficulties to navigation will have to be overcome.

Throughout the entire course of this portion of the river, which may be termed the Lower Duncan, erosion is constant wherever the current strikes the bank. The consequence is that trees are either constantly falling into the stream, or overhang the banks sometimes partially submerged. These latter are called sweepers, and especially in bends are dangerous to boatmen. There are also to be found in every reach of low velocity, a number of sunken or partially sunken snags, and on the upper ends of islands and bars accumulations of drift timber.

Duncan City is laid out on a gravel beach, the highest point being 195 feet above the lake, which appears to have been formed by the detritus deposited at the mouth of an ancient channel of the Lardo River, now flowing south-east about $1\frac{1}{2}$ mile to the westward. This ancient channel, it is assumed, discharged into the Upper Lake through a narrow rocky gorge or cañon, now a pass, in a low spin or ridge of the mountains.

By careful barometric readings, it was ascertained that the water level of the Lardo, $1\frac{1}{2}$ mile to the west of Duncan City, was about 60 feet above the lake. Allowing 6 feet as the fall from the lake to the confluence of the Duncan and Lardo, the latter falls $63\frac{1}{2}$ feet in $3\frac{1}{2}$ miles. This settles at once the question of the navigability of the Lardo.

At the upper end of Upper Kootenay Lake, about 8 miles long, the Upper Duncan River enters the lake. The mouth here is similar in character to that of the lower river. There are the same extensive sand bars through which the river enters the lake by three channels, the principal one, however, being in this instance on the east, instead of on the west side along a rock bluff.

Continuing up the river on the east bank, 8 miles from the mouth what is called Two-Mile Creek is reached.

The river over this portion passes with a sluggish current from side to side of the valley, three-quarters to a mile wide, sometimes skirting the foot of the mountains. The width varies from 200 to 400 feet. When the latter width exists, the current being further retarded, the depth is shallow, and numerous sand bars to some extent obstruct the channel. There are also present the usual snags, drift timber and overhanging trees or sweepers.

From Two-Mile Creek to Bear Creek the general features remain the same, though the width is generally less, the current in places is greater, and there are a larger number of snags obstructing the channel. About two miles above the creek there is a big log jam over 150 feet long. Above this jam the river is comparatively clear for about a mile, when a rapid formed by a large number of snags and drift timber is encountered. This is evidently the remains of a large timber jam. Another such rapid has to be passed before Bear Creek, twelve miles from the mouth, the terminus of boating on the river, is reached.

It may be mentioned here that those who have prospected in the country, and freighted on the river, are of the opinion that above Bear Creek all freighting must be done by land trail or wagon road.

For reference the following recapitulation of distances is given:—

Kootenay Lake to mouth of Lardo River	7 miles.
Lardo River to Duncan City	3 “
Dawson City to Upper Kootenay Lake.....	8½ “
Upper Kootenay Lake to Bear Creek	12 “
<hr/>	
Total	30½ miles.

The alluvial land on either side of the river up to the foot of the mountains would, no doubt, prove valuable for farming purposes, if cleared, and provided overflow was prevented. The timber is of fair size and comprises cedar, fir, spruce, cottonwood and alder.

The Duncan River, fed mainly by glacier and snow field streams, is highly charged with sediment during freshets.

The waters of the Upper Duncan, however, find a settling basin in the Upper Lake, thus relieving the Lower Duncan of its contribution. The finer sediment of the latter is deposited at the outlet forming the bar already referred to.

The watershed, or catchment basin, of the Duncan is of limited area, and in consequence of the steep shore, and comparatively bare mountain slopes, the ice and snow within its narrow bounds disappear rapidly when the weather is hot. To this may be attributed the short duration, and intermittent character of the high water season, in those years when the freshet is not abnormal, and the weather variable. When, however, the freshet is unusual—such as prevailed in 1894—there is but a slight difference in level between the upper and lower lakes, the whole valley between being submerged during the highest of the flood.

Continual rain does not seem to have any effect on the river, for what is rain in the valley is snow during the same season on the mountains. The water in the lower lake fell fully twelve inches between the 7th and 19th September, 1895, notwithstanding that it had been almost continuously raining since the 2nd of that month.

The obstructions to navigation in this river consist, first of snags, drift timber, and overhanging trees or sweepers, almost throughout its entire course, except in the Upper Kootenay Lake, and secondly, of bars at the mouths of the river in the upper and lower lakes, and of bars, splits in the channel, and rock in the channel between the lakes.

The river as far up as Bear Creek, in round numbers 30 miles from Kootenay Lake, can be made safe and passable, at high water only, for moderately large and powerful stern wheel steamboats, by the removal of all the snags, drift wood and sweepers from the channel, at a moderate cost. But to attempt to train the river and deepen bars at the mouth, to make navigation possible at low water stage, would entail an expenditure larger than the present developments would justify.

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The work of clearing the Duncan River, from Kootenay Lake up to Little or Upper Kootenay Lake, of snags, overhanging trees, and other obstructions to safe navigation was commenced on the 6th of March and continued until the end of April, when it had to be abandoned on account of the river rising rapidly.

The following are the details of the expenditure incurred in connection with this service in 1896-97:—

Wages.....	\$ 1,676 00
Material..	178 41
Boat-hire	45 00
Fares.....	20 00
Total.....	<u>\$ 1,919 41</u>

FRASER RIVER.

The Fraser River is one of the largest besides being the most important of the many rivers of the Pacific province. It traverses, or rather penetrates, a country most diversified in its productions and undeveloped resources, both as regards the precious and other metals, as well as the products of the forest and soil. It has been well known since the early fifties, if not before, and therefore there is no need, for the purposes of this report, to give a very extended description, except in the direction of those natural features which bear directly upon the works undertaken, or upon those contemplated, for the training of the channel with the view to prevent erosion and overflow; and for the conservation, in a permanent and stable manner, of the ship channel from the city of New Westminster to deep sea water in the Gulf of Georgia.

The topographical characteristics of the Fraser throughout its entire course are in many respects similar to those of the Columbia River, lying to the south. Like it the Fraser takes its rise in small lakes at the western base of the Rocky Mountains, and, keeping close thereto for some distance, flows in a north-westerly direction before it bends to the west, and eventually turns south. The headwaters are at an elevation of about 3,000 feet above the sea, in the vicinity of the Yellow Head Pass, through which it was at first the intention to build the Canadian Pacific Railway; lying a little to the south of the 53rd parallel of north latitude, between the 118th and 119th meridians of west longitude and but a short distance from Canoe River, which flows southward to join the Columbia at the Big Bend. The most northerly point of the stream is about 16 miles north of the 54th parallel on or about the 122nd meridian, whence its course is west for about 10 miles. Thence leaving the summit waters of the Peace River, which flow to the north, five miles or so to the right, the Fraser takes a general direction a little east of south as far as a place called Hope, situated on the left bank about 15 miles below Yale, which is the highest point of practical steamboat navigation, and about 25 miles north of the 49th parallel, the international boundary line. From this point the stream gradually changes its direction, eventually taking a general course through the arable lands of the Fraser Valley, almost due west down to the Gulf of Georgia, into which it empties about eight miles north of the boundary and six miles west of the 123rd meridian. Allowing for the many bends and the frequent traverses of the valley, it is a very close approximation to say that the length of the Fraser from its source to the gulf is not less than 900 miles.

Throughout this distance the river passes between and pierces many ranges of lofty mountains, on whose sides and summits glaciers and snow fields abound, and among which, at the higher elevations, the snow measured as it fell, has been known to attain, in one winter, the great depth of 50 feet.

These mountains are also pierced by the lateral valleys of the many tributaries of the Fraser River, which range from the short lived mountain torrent to the large rivers whose sources are generally mountain lakes, the receptacles of the water from the melting glaciers and snow fields which surround them.

Commencing at the upper reaches and proceeding down stream, the principal tributaries entering the Fraser River from the right bank may be described briefly as follows:—

1. The North Fork, which penetrates by two branches, the western slope of the Rocky Mountains and enters at the point where the Fraser turns westward from the base of the mountains.

2. The Salmon River, which flows from the north-west, near by, and in a direction parallel, though opposite to that of the Peace River, and joins the parent stream where it bends to the southward.

3. The Nechaco River, whose numerous branches spread out fanlike northward to the 56th parallel, almost mingling with the headwaters of the Skeena, and westward and southward, and penetrate deeply into the heart of the Coast Range and which connects with the Fraser at Fort George.

4. The Blackwater River, which flows from the west also; but is not so far reaching as the Nechaco, and joins the main stream, 50 miles south of the Nechaco.

5. The Chilcotin River, flowing from the same direction as the two former branches, which rises in a large lake, of the same name, lying at the eastern base of the Coast Range.

6. The Harrison River which flows southward from a chain of large lakes and enters the Fraser about 45 miles below Yale.

7. The Pitt River which rises in a lake, situated a few miles north of the railway, fed by mountain streams, and flows in a south-westerly direction, joins the Fraser about eight miles above New Westminster.

8. The Coquitlam River which has its origin in the lake, of the same name, whence is drawn the water supply of New Westminster, flows south and joins the Fraser two miles below the mouth of the Pitt.

The chief tributaries entering from the left bank are:—

1. The Willow River, which rises in the heart of the notable placer gold mining country of Cariboo, and flows northward, joining the Fraser opposite the mouth of Salmon River already referred to.

2. The Quesnelle River, which also flows from the Cariboo country, but in a westerly direction, and empties into the Fraser at Quesnelle Mouth, some eighty miles south of Fort George.

3. The Thompson River, which joins the Fraser at the town of Lytton. This is a large river with many subsidiary streams, draining a large area extending east as far as the summit of the Gold Range; south, almost as far as the summit lake of the Fraser, from which it is divided by a narrow neck in the midst of which the Canoe River flows to join the Columbia at the Big Bend; and south about fifty miles. The Thompson is navigable from Savona's Ferry, lying at the west end of Kamloops Lake, about seventy miles above Lytton up to the town of Kamloops opposite the confluence of the North Thompson (which latter stream is also navigable for about 100 miles north) and thence continues eastward into Shuswap Lake and Salmon Arm, lying at the western base of the Gold Range. At a high stage of water, navigation may be continued south of the railway through Mara Lake up the Spillamacheen River to Enderby, a distance of twenty-three miles.

The Canadian Pacific Railway follows closely the Thompson waters from the summit lake in Eagle Pass to the confluence of the Thompson with the Fraser. In only one instance does it depart therefrom, and that is, where, to avoid a long detour, if the shores of Salmon Arm and Kamloops Lake were followed, a narrow neck of land separating them is crossed at an elevation of six hundred feet above the lake level.

Below Lytton to salt water, though many other streams enter from the left, none of them are of sufficient size or importance to require special mention here.

Viewing the river above Lytton, and keeping in mind its immense watershed and innumerable feeders, it is all but impossible to understand by what means such a body of water passes through the narrow cañon above Yale.

Thus the watershed of the Fraser River and its tributaries extends from the 49th northward to the 56th parallel of north latitude, and from the summit of the

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Coast Range on the west to the summit of the Rockies and the Gold Range on the east, embracing an area of not less than 70,000 square miles, equal to about one-third of the area of the mainland of British Columbia.

Between Yellow Head Pass and the mouth of Salmon River, the Fraser flows through a heavily timbered country. The banks are either of rock where the channel narrows, or in wider portions, of friable material, such as gravel, sand and clay. Navigation is said to be possible for steamers of light draught above Grand Rapids. Below Salmon River, the river widens out to about one thousand feet or more, having the appearance of a lake. The banks are low and heavily timbered with cottonwood. Below Fort George the river narrows again and flows with a steadily increasing current through a country, but sparsely timbered for some distance back from the banks of occasional elevated benches of good arable land where water can be turned on, divided at intervals by the inevitable cañon. Through the bench lands the banks are steep and always of material easily disintegrated by the erosive energy of the rapid current. These natural features continue through the Cottonwood Cañon, referred to hereafter, past Quesnelle, Soda Creek, and the mouth of the Thompson to the point where the dry belt ends and the timber returns to the river bank again. The return of the timber gradually becomes evident below Lytton. Between Fort George and Soda Creek the river is navigable.

The white population above Yale is somewhat scattered and may be described as mainly agricultural and mining.

Though the cañon of the Fraser, through the Cascades Range, practically ends at Yale, the valley does not widen out appreciably for some distance below Hope. From this latter point to the mouth, the most densely populated part of the province, the river passes between low banks, frequently split up into sloughs or subsidiary channels, with here and there a rocky point or bluff jutting out, of most soluble alluvial soil, generally timbered with cottonwood along the banks, most fertile, but, with few exceptions, liable every year to overflow, the extent of which depends, in a great measure, upon the snow fall of the previous winter and the continuance of early and sudden extreme hot weather. At New Westminster the river is divided permanently by Lulu Island into two channels called respectively the North Arm and the Main Ship Channel. This section of the valley is what is known as the Delta of the Fraser. It is very rich agricultural land, but subject to tidal overflow.

Four bridges only have been as yet thrown across the main channel of the Fraser. The first, a road bridge at Lillooet, 340 feet span, built of wood and iron; the second, a steel cantilever railway bridge, below Lytton, with a centre span of 300 feet, which carries the Canadian Pacific Railway from the left to the right bank, which it follows thereafter closely to New Westminster; the third, the Alexandria suspension bridge, of 256 feet span, whereby the old Cariboo wagon road crosses the Fraser two miles above Spuzzum, and the fourth, the Canadian Pacific Railway Company's bridge at the Mission, consisting of 1 span of 100 feet, 8 spans of 150 feet each, and a swing truss of 239 feet over all; there are also 1,400 feet of trestle approaches on both sides of this bridge.

The lowest water occurs in the Fraser for a short period after the ice goes out, it then rises gradually by reason of the early spring rains; but it is not until the beginning of May, when the sun shines hotly melting the mountain snow, that the settlers below Hope begin to anxiously watch the river. The first rise usually takes place in May, when the snow on the mountains along the lower reaches melts and seeks its natural outlet. This is generally followed by another and greater rise about June, or early in July, when the water of the melting snow and glaciers of the upper Fraser comes down. This is the time most dreaded, but strange to say in 1895-96, contrary to past experience, the unprecedented high water, which has proved so disastrous to the lower Fraser Valley, was caused by the waters of the Thompson. Fortunately the first rise receded before the great bulk of the Rocky Mountain water arrived. Had both come simultaneously it is impossible to say to what greater extent the destruction of lands and changes of river bed would have been carried.

Previous to the commencement of railway construction the high water of 1876 was the highest known and was accepted as the extreme. In 1882, however, the river

rose higher, and this was similarly accepted as the extreme limit. This confidence was rudely dispelled in 1895-96. In one direction at least, the occurrence of this freshet may be considered as not altogether an unfortunate one, not unmixed with good. Had all the dyking and reclamation schemes proposed, based upon the high water of 1882, been completed, the destruction and loss of property from Hope to the Gulf of Georgia would have been incalculable. The result will now be that all works undertaken, likely to be affected by another high water, will be designed to meet a flood of still greater height. It is not probable, but still possible, that a combination of all conditions necessary to ensure the coming together of all the waters from the melting snows and glaciers over the whole area of the watershed of the Fraser, may happen. Such a contingency, even though it may be considered by some remote, must be guarded against.

The erosion of the shores and bed of the channel, where it passes through or over easily disintegrated material, is constant, but of course is least during low water. As the river rises, the erosive energy of the current increases rapidly until the maximum is reached at the highest stage of water. The result of this constant and increasing eating away of the shores and bed, is that an immense amount of material is carried down stream in suspension; the quantity being augmented by every tributary large and small, until, in the lower reaches, the water is in such a turbid state, so charged with sediment, that it more closely resembles a thick pea soup than anything else it can be compared to. The extent of the sedimentation that must occur every year, at the mouth of the river or elsewhere, where the current is at all retarded, as for instance where the banks are overflowed, or where the inflowing tide meets the river current, may be easily imagined.

Another source of sediment is the hydraulic mining operations now being carried on, with every prospect of being extended, along the Fraser and all its branches. Should the expectations of those interested, even only in part, be realized, it will be necessary to take steps to supervise operations, and insist upon reservoirs being constructed at the points where such precautions are or may be considered necessary, for the purpose of impounding the material and preventing it being carried down stream in great quantities and deposited on any valuable land that may be overflowed, to its total destruction, or on bars in the river channel to the detriment of navigation. Such has happened in California, and it is stated by those familiar with both countries, that the available paying hydraulic properties on the Fraser River are much in excess of those in California.

Below the cañon at Yale, the bars and bed are chiefly coarse gravel and sand, the former becoming finer and finally disappearing below Miller's Landing. From thence outwards to the extreme limit of the Sand Heads in the Gulf of Georgia, the material composing the bars and the sides of the channel, for the most part, is a very fine, flaky silt, which when dry has a pearly or semi-metallic lustre. It is probably the result of the attrition of mica or talcose slate.

The destructive energy and capabilities of this surcharged freshet water are added to by the enormous quantities of drift timber borne along by the current. This drift comprises trees and timber of all sizes and descriptions, ranging from a cottonwood, cedar or fir, 150 to 200 feet long, with roots, from 15 to 20 feet in diameter, and branches intact, to the ordinary saw-log or tree top. It may be either green timber recently fallen in, where the bank has been undermined, or previously stranded timber and part of log-jams floated off by a higher water. The drift sometimes gathers together in large rafts, and it is not difficult to realize the inherent destructive power of such a mass carried along by a current of great velocity, and the damage that it will inflict when driven against a friable bank, dyke, bank protection, mattress work, wharf or bridge piers.

The river flow is affected by the inflowing tide, that is backed up, to Chilliwack, about 48 miles above New Westminster, or 65 miles from its mouth. The diurnal fluctuation at Miller's Landing has been observed to vary between 12 and 30 inches in winter time.

At New Westminster, the range is for ordinary spring tides about five feet, but during freshet time, the water seldom falls more than a foot or eighteen inches.

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There is no surface movement up stream except during low fresh water stages.

At the rock wharf, inside the mouth of the river, the greatest range of one tide is eleven feet, though the extreme range, that is the difference between the highest and lowest observed tides is eleven feet. The greatest tidal range recorded by the automatic tide gauge put up in the channel through the Sand Islands, two miles from shore, is fourteen feet; this occurred on 11th January, 1894, at the full moon, though the difference of level between the lowest and highest tides known is only 14.7 feet.

For the purpose of ascertaining the surface slope of the river during the freshet at all stages of the tide between New Westminster and the tide gauge on the sand heads, a distance of $18\frac{3}{4}$ miles, and between intermediate points, simultaneous tide gauge observations were taken on the 21st June, 1896, all the gauges being referred to one datum. The following table gives the condensed information thus obtained:—

River stretches.	Distance in Miles.	Difference of level at H. W. in feet.	Surface slope in feet per mile.	Difference of level at L. W. in feet.	Surface slope in feet per mile.
New Westminster to Ewen's Cannery...	5.8	2.08	0.39	3.70	0.65
Ewen's to Laidlaw's Cannery.....	4.0	1.58	0.395	2.67	0.6675
Laidlaw's to Stone Wharf.....	5.0	0.92	0.185	3.37	0.674
Stone Wharf to Tide Gauge.....	3.9	0.75	0.192	3.71	0.95
Totals.....	18.7	5.33	.....	13.45	.....

From the above it will be seen that the greatest surface slope between New Westminster and the gulf, and therefore the swiftest current, is between the last mentioned points in above table, and it is in the vicinity of the wharf, both up and down stream, that the greatest cutting of the banks has taken place.

The motive for the foregoing, perhaps rather extended description of the physical characteristics of the Fraser Valley, is the desire to convey a clear impression of the magnitude of those elements or factors which enter so largely into the solution of all problems connected with the regulation of river channels, in the direction either of preventing erosion of the banks or of improving navigation.

A suggestion has been thrown out that perhaps the main river might be permanently relieved of some of the surplus flood water by diverting the sources of some of its many feeders into the head waters of other rivers, to which in many instances they are in very close proximity. The practicability of such a scheme can only be determined by examination and correct levels. It may be added that such a proposition, however, appears to be, if anywhere, only possible with the branch streams above Lytton, and cannot seriously be considered with regard to the Thompson waters.

The work carried on during the fiscal year 1896-97 on the Fraser River consisted:

(a.) In sounding and carrying on the survey of the river from New Westminster to the Sand Heads and maintaining the tide gauges; and (b.) In making a hydrographic survey of the river from New Westminster to Agassiz with a view of preventing the further erosion of its banks and the shoaling of the channel caused by it. (c.) In removing snags from the channel and performing the usual buoy service at the mouth of the river for the Department of Marine and Fisheries, for which this department is paid the sum of \$1,065.

(a.) The soundings taken in the fall of 1896 covered two portions of the Fraser River. The first extended from the bell buoy marking the outer edge of the Sand Heads in the Straits of Georgia to Garry Point— $5\frac{1}{2}$ miles—and thence up the river 4 miles, a total distance of $9\frac{1}{2}$ miles. The second portion embraced Annieville Bar and vicinity a short distance below New Westminster. At the mouth the soundings indicate: 1° That the least depth in the channel outside Garry Point was 21 feet at

low water spring tides, a gain in depth since the works were commenced, for the improvement of the 13 foot channel, and that the outer end of the protection works, extending outside Garry Point, is being cut off owing to the erosion of the banks behind the works by the current. 2° That the bar abreast of Garry Point has pushed northward, narrowing the channel along the Lulu Island shore, but that at the same time the channel over the bar has somewhat deepened; 3° That cutting above the protection works at Garry Point has increased in extent; 4° That the bank of Westham Island is still being eroded, and 5° That the upper end of the flood channel along Lulu Island has rapidly shoaled to the serious detriment of navigation to and from the Canneries at that point. At Annieville Bar it was found that very extensive shoaling had taken place during the summer freshet of 1896. The deposit of sand forming the bar is intermittent. Before 1894 the shoaling was gradual, and after or during the extraordinary flood of the latter year it completely ceased. Since 1895 it has been gradually returning though not exactly in the same place, so as to render the depth to that which obtained a year or two previously. It is possible that next year deepening may again take place.

(b.) The hydraulic survey between New Westminster and Agassiz was commenced on the 1st March, 1897, and carried on from New Westminster to the mouth of Sumas River.

The system of triangulation adopted is the following:—Main trigonometrical stations opposite (or nearly opposite as may be) to one another were established along either bank of the river at intervals of about the width of the river, so as to insure the formation of well conditioned triangles, and subsidiary stations were placed on islands and bars.

The principal trigonometrical stations consist of cedar posts, five feet long and about 8 inches square, planted securely to a depth of about 3 feet in the ground, about two feet of the posts projecting above the surface. The stations are numbered, even numbers being used on the right, and odd numbers on the left bank. On the top of the post a hole of one inch in diameter is bored to a depth of one inch. In this hole a flag (secured to a white and red pole) is planted and plumbed by the station men for observing angles.

Stadia traverses start from and close on trigonometrical stations, and the field notes show all topographical details between these points. Stadia traverses are also run from trigonometrical stations at mouth up all minor affluents as well as along sloughs.

The velocity of the current was determined at different points with the aid of an electrical current meter. Experiments were also carried out to determine the amount of sediment carried by the water during the freshets.

Automatic tide gauges were established at Port Haney and Sumas and during the freshets, observations and reports were made daily, of the rise and fall of the river at Harrison, Lytton, and Quesnelle on the Upper Fraser.

A tide table has been computed showing the time and height of high and low water at Garry Point and New Westminster, and extracts from this table are published daily in the local newspapers for the information of pilots and fishermen, an innovation which has proved of great service. The total expenditure incurred during the fiscal year ended 30th June, 1897, in connection with the tidal observations and surveying operations above described, amounts to \$12,028.75.

(c.) The removal of snags and keeping marked out by buoys the channel properly was, as usual, done by the "Samson," which was actively engaged on such works, and also in connection with the surveying operations and installation and inspection of tide gauges from the 13th September to the close of the fiscal year 1896-97.

In the early part of the year extensive repairs were undertaken on this vessel, comprising the removal of the old shaft of the stern wheel, and the substitution of a new steel shaft 6 inches in diameter, at a cost of \$331.50, and various repairs to her hull, together with some minor repairs to her machinery which were carried out at a further expense of \$1,896, the total expenditure incurred for works of repair and renewal thus amounting to \$2,227.50. The "Samson" was engaged principally,

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when the weather permitted, in removing 387 snags from the channel of the Fraser River between Sumas and the mouth, a distance of 60 miles. When not employed on this work, the snag boat was used for sounding and surveying the ship channel between New Westminster and the mouth of the river.

In the following table are given, in detail, the number of hours the "Samson" was employed on each one of the services above referred to, as well as the time spent on repairs, &c., &c., between the 13th September, 1896, and the 30th June, 1897, a period which covers 245 working days, equal to 2,470 working hours exclusive of Sundays.

	Hours.
Boat engaged, snagging	478
" " on buoy service	355
" being repaired and painted... ..	77½
" engaged on soundings and surveying operations.....	417½
" " in pile driving	70
" " in cleaning wharf of drift wood, etc	13
Work performed on wheel during	20
Boom, winter quarters repaired during	23
Boat engaged on work required in connection with tide gauges, visiting same, etc.....	280
Time spent building two gangways, one for "Samson" and one for observatory	93
Boat detained by storms, fogs, rain and snow	179½
Time spent extending wharf.....	139
Holiday time.....	40
Time spent in shipping supplies, washing out and filling boiler, etc	278
Total.....	2,473

Steam kept up during.....	1,745½ hours.
Coal used (washed nut).....	318,050 lbs.
Wood used	220½ cords.
Miles run (travelling).....	2,287
" (working)	220½

The details of the expenditure, incurred in 1896-97 for working the "Samson," may be stated as follows:—

Paid for wages.....	\$5,560 81
" coal.....	737 50
" wood.....	295 25
" water	30 00
" provisions	1,025 90
" stores.....	190 39
" equipment	183 71
" towage	47 00
" contingencies	48 23
Total.....	\$8,118 79

SKEENA RIVER.

The Skeena River lies in the north-western section of the western portion of British Columbia. It derives its source from lakes and glaciers situated between the 55th and 56th parallels of north latitude, and between the 126th and 128th degrees of west longitude. It flows generally in a south-westerly direction, and empties into the waters of the Pacific Ocean opposite the north-easterly point of

Graham Island, of the Queen Charlotte group, by way of North Skeena, Telegraph, and Mallaqua passages, Chatham Sound, &c., at a point a little north of the 54th parallel of north latitude, and a few miles west of the 130th degree of west longitude, and about 650 miles, by the inner passage, north-west of Victoria. The principal post-office and port on the Skeena is Port Essington, lying on the south shore of the estuary, at the confluence of the Skeena and Oxtail Rivers, 13 miles east or inland of the entrance passages. It is navigable by light draught steamers, when the water is not too high, from May to the end of September, as far up as Hazelton, a Hudson's Bay Company post, established on the south bank at a distance of about 173 miles from the mouth of the river. This post is the distributing point for the mining and grazing country lying to the north and west towards the Rocky Mountains and Peace River country, and to some distance to the south.

The Skeena River owes its importance in the province of British Columbia chiefly to its rich fisheries. There are in active operation on this river eight salmon canneries, employing about 300 boats and nets. The annual license is \$10 per boat, representing from this source alone a yearly revenue of \$3,000. In 1895 the total pack was 67,797 cases, which, at \$5 a case, the average market price in England, aggregated \$338,785.

The works carried on during the fiscal year ended on the 30th June, 1897, were confined to the improvement of the salmon fishing grounds in the tidal waters of the estuary which extends inland, about 25 miles from the mouth of the river. They consisted in the removal of some of the snags and drift timber from the bars and channels of the river bed, which are brought down every year by the freshets and prove very destructive to the drift nets.

A total expenditure of \$1,347.55 has been incurred in this connection which may be subdivided as follows:—

Wages.....	\$666 25
Tug hire.....	498 00
Materials.....	185 78
Total	\$1,347 53

There are in the upper reaches of the river two or three points in the Kitsilas Cañon which, owing to changes in the direction of the current, have lately developed as dangers to navigation. These points, together with a little inexpensive work required in the cañon, should receive attention.

The Skeena River appears at present to be the natural highway by which freight and passengers can be most conveniently transported to the rich mining district of the northern and north-eastern portion of the province, and to the Peace River country, and for this reason expenditure with the object of securing safe navigation is justifiable.

WILLIAM'S HEAD QUARANTINE STATION.

The British Columbia quarantine station at William's Head is situated about 8 miles south east of the city of Victoria, and covers an area of about 60 acres.

In the spring of 1892, a deep water pile wharf was built in connection with this quarantine station, the government supplying the Muntz metal required for covering the piles, to prevent them from being destroyed by the sea worms.

The wharf is situated at Parry Bay, which opens towards the north and Victoria on the west side of William's Head. It is 480 feet long by 40 feet wide, and has an approach 320 feet on the south side leading to the hospital residence and first class passenger shelter houses, and another on the north side leading to the disinfecting apparatus house and to the Chinese and Japanese shelter houses.

During the fiscal year ended 30th June, 1897, a large number of unprotected fender and other piles, which were honeycombed by the teredo, were removed and replaced by new ones, and other works of repair done on the wharf; the total expenditure for such works of repair and renewal amounting to \$3,422.02.

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A further sum of \$136.90 was applied in carrying out improvements required in connection with the water service in order to ensure the purity of the water supply, etc.

DREDGING OPERATIONS.

During the fiscal year ended 30th June, 1897, dredging operations were carried on in the following localities, chiefly with the government dredging fleet, but also in some instances with hired dredging plant. The number of dredges owned by the Public Works Department is far from being sufficient to carry on satisfactorily the extensive operations which the Federal Government is from year to year called upon to undertake, owing to the steady increase in the tonnage and draught of vessels generally, and the pressing need of deepening harbours on the sea coasts so as to render them accessible and afford accommodation to vessels at all stages of the tides, improving existing highways of navigation, opening new routes on inland waters, etc.

PROVINCE OF NOVA SCOTIA.

Fourchu harbour—South East coast, Cape Breton Island.
Larry's River—South-east coast, Nova Scotia.
Liverpool harbour—do do
Port Mouton harbour—do do
Wallace harbour—Northumberland Strait.
Yarmouth harbour—South-west coast, Nova Scotia.

PROVINCE OF PRINCE EDWARD ISLAND.

Connolly's wharf, Charlottetown harbour.
Crapaud, Victoria—Northumberland Strait.
Dominion Building Sewer, Gt. George St. slip—Charlottetown.
Ferry Slips, Prince St. do
McMillan's slip do
Prince Edward Island Railway slip do
Poole's wharf and slip do
Webster's Corner, East or Hillsborough River do

PROVINCE OF NEW BRUNSWICK.

Fredericton—River St. John.
Jemseg River—An affluent of the St. John.
Purves Mills—St. John Harbour.
Richibucto harbour (mouth of river) Northumberland Strait.
Spoon Island—St. John River.
Traverse—Restigouche River.
Winter Port, berths—St. John harbour.

PROVINCE OF QUEBEC.

SHIP CHANNEL BETWEEN MONTREAL AND QUEBEC, (River St. Lawrence).

Belœil—River Richelieu, west side.
Berthier (en haut)—Berthier channel, north side River St. Lawrence.
Boucherville—South shore, River St. Lawrence.
Calumet—River Ottawa, north side.
Chateauguay—Chateauguay River, affluent River St. Lawrence, south shore.
Grenville—River Ottawa, north side.
Laprairie—South side, River St. Lawrence.
Louise Basin—Quebec Harbour, north side, estuary, St. Lawrence.
Papineauville—River Ottawa, north side
Pointe aux Trembles (en haut)—River St. Lawrence, north side.
River St. Francis—Affluent, River St. Lawrence, north side.
Sillery Cove—St. Lawrence estuary, north side Quebec Harbour.
St. Jean des Chaillons—River St. Lawrence, south side.
St. Valentin—River Richelieu, west side.

PROVINCE OF ONTARIO.

Belle River—Lake St. Clair, south side.
Belleville—Bay of Quinté, mouth of River Moira.
Bowmanville—(Port Darlington) Lake Ontario.
Cobourg—Lake Ontario.
Frenchman's Bay (Pickering Harbour)—Lake Ontario.

Hamilton—Lake Ontario.
 Hawkesbury—River Ottawa, south side.
 Kaministiquia River—Mouth of river, Thunder Bay, Lake Superior.
 Meaford—Georgian Bay (south side) Lake Huron.
 Midland—Georgian Bay, Lake Huron.
 Newcastle—Lake Ontario.
 Owen Sound—Georgian Bay, Lake Huron.
 Penetanguishene—Georgian Bay, Lake Huron.
 Pointe Edward—St. Clair River.
 Port Arthur—Thunder Bay, Lake Superior.
 Port Hope—Lake Ontario.
 Port Stanley—Lake Erie, north shore.
 Prescott—Upper St. Lawrence, north side.
 River Thames—Mouth of river on Lake St. Clair.
 Sandwich—Detroit River, south side.
 South Nation River—A tributary of the Ottawa, south shore.
 Whitby—Lake Ontario.

PROVINCE OF MANITOBA.

Red River—Mouth of Lake Winnipeg.

PROVINCE OF BRITISH COLUMBIA

Nanaimo Harbour—Vancouver Island.
 Vancouver Harbour, Burrard Inlet—New Westminster District.
 Victoria (Inner harbour)—Vancouver Island.

PROVINCE OF NOVA SCOTIA.

DREDGING AT FOURCHU HARBOUR.

Fourchu Harbour or Inlet, in Fourchu Bay, is on the north side of Fourchu Head, and affords shelter to boats and small fishing craft only. The locality has a population of about 200, principally engaged in fishing, and contains two stores, a saw-mill, lobster factories, Canadian express office, etc.

Fourchu Bay affords no shelter and is dangerous of approach. To the westward are many rocks and shoals, and Fourchu Inlet has a bar at its entrance, nearly dry at low water.

In 1895-96 the dredge "Geo. McKenzie" commenced the opening of the passage through the bar and the deepening of a channel in the harbour to 8 feet depth at low water springs. Spring tides rise 5 feet, neaps 4 feet.

During the fiscal year (1896-97) this dredge continued the same work, deepening the water a further distance through the bar toward the outlet to 8 feet L. W. S. T. On the 30th June, 1897, the straight passage opened was 80 feet wide for 1,100 feet in length, and 50 feet wide for 550 feet in length; leaving 550 feet to be widened 30 feet and 600 feet to be dredged to the full width of 80 feet, to complete the projected channel out to the Atlantic Ocean to a depth of 8 feet, besides which there remained a basin 1,200 by 24 feet to be formed inside of where work was commenced in 1895-96. Owing to the exposed position of this place, open to south and east winds, the dredging had to be performed from the inside and could only be proceeded with while the tide was in, as at other times the lighters could not be taken over the bar. This, with gales and fog, made the work very slow and at times dangerous. Dredging was carried on from the 22nd August to the 24th October, 1896; the further quantity of 3,600 cubic yards of mud and stone being taken out and removed to a distance of $\frac{3}{4}$ mile. At the date last mentioned the dredge was ordered to winter quarters.

DREDGING AT LARRY'S RIVER.

Larry's River, Guysboro' county, is a settlement at the west end of Tor Bay, where is the landing place of an Atlantic cable and 13 miles from Molasses Harbour.

It has a population of about 400, principally engaged in fishing. Dredging has been done here in the past, by the department, improving the depth of water in the

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channel of the river and making a new channel to the wharf. During the fiscal year 1896-97, the dredge "George McKenzie" operated here under unfavourable conditions; high winds and heavy seas were experienced at this exposed place, and delays occurred on account of breakdown of dredge and tug. The dredging was done to a depth of 8 feet L.W.S.T., the materials removed being mud, sand, stone and gravel, all of which were deposited at a distance of 1 to $1\frac{1}{2}$ mile. The channel and the approach to the wharf were straightened and deepened, and up to the end of the year, the total quantity of materials removed had been 6,135 cubic yards, the work to be continued during the fiscal year 1897-98.

Spring tides here rise about 6 feet, and neaps 5 feet.

DREDGING AT LIVERPOOL.

The town of Liverpool at the head of Liverpool Bay, on the south-east of Nova Scotia, is the county town of Queen's and has a population of about 2,500; taking in the village of Milton, two miles farther up the Liverpool River, and where there are important saw-mills, this population is increased to about 3,700. These places carry on an extensive trade with Halifax, the United States and the West Indies.

Liverpool harbour is never frozen over. Spring tides rise 8 feet and neap tides 5 feet.

The dredging done in this harbour by the department in the past, was near the entrance of the River Mersey, abreast the town: a bar over which there were but 5 feet of water being reduced in height.

During the past fiscal year 1896-97, the dredge "Canada" operated here from 10th September, 1896, to 7th December, 1896, then it went into winter quarters. Again from 4th to 23rd May, 1897, when the work was completed, and the dredge was ordered to Port Mouton for work there.

The dredging done at Liverpool consists in a cut 175 feet wide and some 11 feet deep, across the bar to secure a depth of 13 feet at L. W. S. T., and improvements in the harbour channel and the approach to the wharf.

A total quantity of 20,790 cubic yards of material was removed, principally mud, saw-dust and sand, the whole of which was deposited at a distance of $3\frac{1}{2}$ miles.

DREDGING AT PORT MOUTON.

Port Mouton, Queen's county, is a small village of less than 400 of population; situated 10 miles west of the town of Liverpool, in a bay of the same name. It contains two stores, a lobster factory, a hotel, a saw-mill and an office of the American Express Company.

The settlers of the surrounding district are principally fishermen. The dredge "Canada" was sent here by the department to straighten and deepen the channel at the entrance to the harbour and approaching the wharfs. It commenced operations on the 24th June, 1897, and was prosecuting the work at the close of the fiscal year 1896-97; having in those few days removed 1,350 cubic yards of fine sand from the channel and given a depth of 9 feet at L. W. S. T. The place of deposit was at a distance of one mile from the work.

Spring tides rise here $7\frac{1}{2}$ feet, and neaps $5\frac{1}{2}$ feet.

DREDGING AT WALLACE.

Wallace, Cumberland county, is a seaport on Northumberland Strait, with 16 feet of water over its bar at low water and the finest harbour on this coast excepting Pictou. The entrance to the harbour is about two cables wide, but the approach to it and through the bay for three miles is by a crooked channel. Opposite the town of Wallace the harbour is over half a mile wide, but the channel between the flats is only some 60 or 70 yards wide with five or six fathoms of water at O.L.W.S.; spring tides rise 8 feet and neaps 5 feet.

There are some 12 stores, saw-mills, grist-mills, tannery and factories at Wallace, and extensive quarries of freestone, limestone and gypsum in the vicinity. Population about 400.

The improvement of the channel, the ferry approach and loading berths at wharfs was undertaken by the dredge "Geo. McKenzie" in 1895-96, and during the present fiscal year from 1st July to 11th August, 1896, the further quantity of 10,260 cubic yards of mud, &c., was removed in deepening through the flats from ferry wharf to the channel, and forming a basin at the outer end of the wharf to a depth of 7 feet at L.W.S.T. The material removed, all mud, was deposited at a distance of 2 miles.

DREDGING AT YARMOUTH.

The seaport town of Yarmouth, Yarmouth county, is of considerable extent, being over two miles in length in one and the same direction. The population is over 6,000, and the town has a large trade in products of the fisheries, also in manufactured articles. Yarmouth is the terminus of the Dominion Atlantic Railway and of a line of steamers to Boston owned by the Yarmouth Steamship Company, &c.

The channel leading to the wharfs is narrow and circuitous, but well marked with buoys. The anchorage within Bunker Island is safe from all winds. The channel has had the attention of the Federal Government with regard to dredging, since 1875, and in consecutive years up to 1895, from 1885 to 1889 and also in 1893-94.

During the fiscal year 1896-97, the dredge "St. Lawrence" arrived at Yarmouth on the 28th October, 1896, and got to work without delay in further deepening, widening and straightening the channel; the work being closed on the 31st December, 1896, when the dredge went into winter quarters in the harbour.

In the spring of 1897, dredging was resumed by the "St. Lawrence" on the 22nd April, and continued without interruption up to the close of the fiscal year. The work is being done to a depth of 17 feet at L.W.S.T., and the improvements made have given much satisfaction to seafaring people and vessel owners of the locality. In 1896-97, the further quantity of 42,700 cubic yards of clay, stone, gravel, sand, mud, &c., was removed; the hauling distance to place of deposit being 4 miles.

Spring tides rise at Yarmouth 16 feet, neaps 13 feet.

PROVINCE OF PRINCE EDWARD ISLAND.

DREDGING AT CONNOLLY'S WHARF, CHARLOTTETOWN.

Between August 24th and September 2nd, the dredge "Prince Edward" improved the depth of water at berths along Connolly's wharf at Charlottetown and in the approach to the same; removing in all 4,635 cubic yards of mud and sand to depths of from 13 to 17 feet at low water.

DREDGING AT CRAPAUD, VICTORIA.

Crapaud Road, (Victoria,) Queen's County, is a small but secure anchorage off the mouth of Brockelsby River.

The space in which vessels may ride, from 12 to 15 feet at low water, is only about half a mile long and two cables wide, but more extensive for smaller craft. The entrance to this road is between shoals and but 180 yards wide.

The country is well settled and Crapaud is an important shipping point. Spring tides rise 8 feet and neaps 6 feet.

Considerable dredging has been done here by the department in the past in improving the entrance channel over the bar, also the approach to the wharfs.

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During the fiscal year ended 30th June, 1897, the dredge "Prince Edward" operated in this roadstead from the 4th September to the 17th November, 1896, deepening the channel as well as the approach to the wharfs to $9\frac{1}{2}$ feet at L. W. S. T.; 19,870 cubic yards of sand and mud were removed, the material being deposited at a distance of $1\frac{1}{4}$ mile.

The progress of the work was much impeded by stormy weather, etc.

DREDGING AT DOMINION BUILDING SEWER, GREAT GEORGE ST., CHARLOTTETOWN.

For the purpose of extending the sewer of the Charlottetown Dominion building from the slip in front of Great George Street, where it formerly discharged, to low water, the dredge "Prince Edward" was kept at work from the 10th to the 26th August, 1896, excavating a trench 8 feet deep, etc., which necessitated the removal of 5,355 cubic yards of mud and the conveyance of the same to a place of deposit one mile distant.

DREDGING AT FERRY SLIPS, PRINCE STREET, CHARLOTTETOWN.

The Prince Street Ferry, in Charlottetown harbour, is owned and operated by the local government of Prince Edward Island; it is of considerable importance and much traffic passes over it, as it connects the Charlottetown with the Southport and Rocky Point ferry landings.

Dredging has been done here in the past by the Federal Government with the object of improving and deepening the approaches to the ferry and the connecting slips.

During the fiscal year 1896-97 the dredge "Prince Edward" operated here from May 26th to 29th and June 15th to 30th, 1896. At the latter date the work was still in progress, 3,420 cubic yards of mud and clay were removed during the time the dredge was at work, so as to afford a clear depth of 12 feet at low water spring tides. The deposit of dredged material was made at a distance of $1\frac{1}{4}$ mile.

DREDGING AT McMILLAN'S SLIP AND WHARF, CHARLOTTETOWN.

From the 3rd to the 25th July, 1896, the "Prince Edward" was kept at work improving the depth of water available for berths of vessels at McMillan's slip and wharf, in Charlottetown harbour.

The total quantity of material removed around this wharf and slip, which adjoins the Prince Street Ferry Slip, was 6,165 cubic yards, chiefly mud; the depth made being 10 feet at low water spring tides.

DREDGING AT PRINCE EDWARD ISLAND RAILWAY WHARF, CHARLOTTETOWN.

This wharf is a terminus of the Prince Edward Island Government Railway in the harbour of Charlottetown; it is a landing of great importance, and much traffic passes over it.

Considerable dredging has been done by the Public Works Department in the past in connection with this wharf.

During the fiscal year ended 30th June, 1897, the dredge "Prince Edward" worked here from the 17th to the 26th May, and from the 7th to the 15th June, 1897.

The water was deepened on the west side of the railway wharf, a depth of 18 feet at low tide being secured for a distance of 300 feet from the outer end and 65 feet in width, which necessitated the removal of 5,400 cubic yards of mud and clay.

Operations had to be suspended on the date last mentioned, on account of an ocean steamer requiring the berth to load grain, etc. The dredged material was deposited at a distance of $1\frac{1}{4}$ mile from the wharf.

Ordinary spring tides rise $9\frac{1}{2}$ feet and neaps 8 feet. The tides are, however, much influenced by the winds.

DREDGING AT POOLE'S WHARF, CHARLOTTETOWN.

This wharf, in Charlottetown harbour, fronts on a slip which is the extension of Great George Street.

The dredge "Prince Edward" operated here seven days in July, and seven in August, 1896, and removed 6,030 cubic yards, principally mud, working to a depth of 17 feet at low water springs, at the berths of and approaches to the wharf.

DREDGING AT WEBSTER'S CORNER, EAST RIVER.

Webster's Corner is a point on the East River of Prince Edward Island, about half way between Charlottetown and Mount Stewart, where some improvement by dredging was needed in the channel.

But one day's work was done here by the dredge "Prince Edward," viz., on the 25th November, 1896, 203 cubic yards of brick clay were removed, leaving a depth of 12 feet at low water over the shoal spot, when ice made in the river and the work was closed.

PROVINCE OF NEW BRUNSWICK.

DREDGING AT FREDERICTON.

The city of Fredericton, York county, situated on the St. John River about 67 miles above the city of St. John, has about 7,000 to 8,000 inhabitants. It is the capital of the province of New Brunswick, and a growing trade and manufacturing centre of some importance.

The St. John River is here over $\frac{1}{2}$ mile wide and the head of navigation for sea-going vessels.

Dredging was done at this point during the fiscal year 1896-97, by the dredge "New Dominion" from July 30th to 9th August, 1896. The river channel was deepened to 11 feet at low water for a width of 100 feet in front of the city, and 2,850 cubic yards of sand, gravel etc., were dredged and deposited at a distance of 2 miles. At the above named date of closing of the work, the dredge was ordered to St. John.

DREDGING IN THE JEMSEG RIVER.

The Jemseg River, Queen's county, a short affluent of the St. John from the Grand Lake, has a considerable navigation both of steamers and sailing vessels.

The villages of Upper and Lower Jemseg with their piers, are close to the entrance into the St. John River, and much freight is shipped from these points of call to St. John, etc.

The channel in which there are shoal places and short bends has, at various times in the past, been improved by dredging.

During the fiscal year 1896-97, the "New Dominion" operated here from 1st to 30th June, 1897, and was still in progress at the latter date. In the channel in front of the wharf, near the entrance to the river, a depth of 12 feet was made, and at two shoal places in the vicinity of Oakley's wharf and in the raft channel, the depth was increased to 11 feet at low water.

A total quantity of 9,275 cubic yards of sand and mud was removed; the place of deposit being at a distance of 2 miles.

DREDGING AT PURVIS MILL, ST. JOHN HARBOUR.

Between the 16th and 18th July, 1896, the dredge "New Dominion" removed 400 cubic yards hard pan at Purvis Mill, St. John harbour, deepening the water 3 feet at the tail of the mill slip.

Department of Public Works

DREDGING AT RICHIBUCTO.

The Richibucto is one of the most important of New Brunswick rivers, and is annually visited by a large number of vessels for cargoes of lumber.

There are flourishing settlements on its banks and the population is engaged in agriculture, lumbering, shipping, fishing, etc.

Three miles within the entrance of the river is the town of Richibucto, the capital of the county of Kent.

Within the entrance the river is rendered irregular by numerous bays; but it is nowhere less than 160 yards wide, the navigable channel, however, is much narrower.

The bar of the Richibucto is dangerous and is subject to changes. A large amount of dredging has been done at different times at Richibucto to improve the navigation, by deepening over the bars and shoals and straightening and deepening the channel generally.

During the fiscal year the dredge "Canada" operated from 1st July to the 27th August, deepening and straightening Albion Channel through the bar, with a view of affording to vessels a passage 12 feet at L. W. S. T. and having a minimum width of 100 feet.

Total quantity of material removed 13,230 cubic yards viz.:—sand, &c.; the whole deposited at a distance of about 2 miles.

At Richibucto, spring tides rise 4 feet, neaps $2\frac{1}{2}$ feet.

DREDGING AT SPOON ISLAND WHARF, ST. JOHN RIVER.

In the vicinity of the Spoon Island wharf, St. John River, there are two quarries of gray granite stone which are extensively worked to supply the demand of stone both for use in the Dominion and for shipment to the United States. With a view of facilitating shipments from this wharf, the dredge "New Dominion" deepened the approach from the main channel to the wharf and the landing ground in front of the same, by removing 3,000 cubic yards of mud, viz., between the 21st and 30th July, 1896.

DREDGING AT THE TRAVERSE, RESTIGOUCHE RIVER.

The Restigouche River in its navigable part (exclusive of the reaches navigable only for bateaux) is an estuary or inlet of the sea, varying in width for the first 17 miles from $1\frac{1}{2}$ to 3 miles. There are many flourishing settlements on the banks of the river and its trade in the shipping of lumber, timber, salmon and lobsters, &c., is large and steadily increasing. It is one of the most important rivers of Canada, with Dalhousie, the capital of the county of Restigouche, at its mouth on the Baie des Chaleurs, and Campbellton, a most important and growing place seventeen miles farther up, along its banks.

The Traverse is a part of the Restigouche River below Campbellton, obstructed by shoals, viz., between Oak Point lights and Campbellton lights. Considerable dredging has been done by the department between these lights in the past, in deepening and straightening the channel through the Traverse; and during the fiscal year 1896-97, the dredge "St. Lawrence" operated there from the 1st July to the 10th October, deepening to 16 feet at L.W.S.T. and removing a further quantity of 47,950 cubic yards of sand, &c. The material was deposited at a distance of 6 miles.

At Restigouche, tides rise, springs 9, neaps 6 feet.

DREDGING AT WINTER PORT BERTHS, ST. JOHN HARBOUR.

St. John City, the commercial metropolis of the province of New Brunswick, is situated at the entrance of the St. John River into the Bay of Fundy.

Its geographical position and all the year round open harbour give it rank as a Canadian winter port, and its business in this connection is largely increasing. Much money has been expended and many efforts made by the city and this department in furthering the facilities needed for shipping. New wharfs and extensive dredging are under way and accommodations are being provided for the largest steamships to lie afloat and load or discharge cargoes.

During the fiscal year 1896-97, the Public Works Department had two dredges employed in deepening an extensive basin on the west side of the harbour where the city is building fine wharfs and providing all possible facilities for the winter export trade.

The dredge "New Dominion" operated here in making this basin from 18th August, 1896, to 21st May, 1897, removing 72,352 cubic yards of hard pan, clay, mud, sand, old piles, &c., down to a depth of 18 feet at L.W.S.T. The dredge "Cape Breton" commenced operations on the 6th October, 1896, and by the end of said fiscal year had removed 54,918 cubic yards of clay, stone, &c., deepening to 28 feet at L.W.S.T. The total quantity of material removed was 127,240 cubic yards, the whole of which had to be hauled to a place of deposit, a distance of 1 to 2½ miles.

Ordinary spring tides rise here 26 feet and neaps 20 feet.

Department of Public Works

DREDGING—MARITIME PROVINCES.

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department, during the Year ended 30th June, 1897.

DREDGE "ST. LAWRENCE."

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	488 33	476 42	480 52	472 97	483 33	483 33	394 71	182 33	224 67	411 75	483 33	483 33	5,050 02
Coal.....	.....	.....	1,038 00	200 00	.....	424 08	.....	.....	.....	.....	188 19	.....	1,940 27
Provisions.....	.....	.....	457 15	141 29	175 46	175 40	68 15	.....	.....	122 88	138 70	155 76	1,444 79
Stores.....	.....	.....	17 57	27 51	.....	.....	11 35	.....	.....	.....	.....	69 43	125 86
Equipment.....	.....	.....	150 44	.....	.....	9 71	.....	.....	203 94	14 33	.....	250 00	628 42
Water.....	.....	.....	36 10	3 75	.....	12 06	.....	.....	.....	.....	.....	7 02	58 93
Repairs.....	.....	.....	107 51	8 45	147 65	.....	.....	.....	324 19	473 32	946 54	68 95	2,976 61
Pilotage.....	78 00	78 00	78 00	115 00	50 00	54 00	.....	.....	.....	16 00	52 00	52 00	573 00
Contingencies.....	.....	.....	15 78	.....	5 65	17 30	8 60	.....	4 14	15 49	.....	5 48	72 44
Totals.....	561 33	554 42	2,381 07	1,058 97	862 09	1,175 88	472 81	182 33	756 94	1,053 77	1,818 76	1,091 97	11,970 34
Working expenses.....	561 33	554 42	2,273 56	1,050 52	714 44	1,175 88	472 81	182 33	228 81	566 12	872 22	803 02	9,455 46
Repairs, ordinary.....	.....	.....	107 51	8 45	147 65	.....	.....	.....	7 20	33 11	.....	.....	303 92
do extraordinary.....	.....	.....	.....	.....	.....	.....	.....	.....	520 93	454 54	946 54	288 95	2,210 96
Totals.....	561 33	554 42	2,381 07	1,058 97	862 09	1,175 88	472 81	182 33	756 94	1,053 77	1,818 76	1,091 97	11,970 34

DREDGING—MARITIME PROVINCES—Continued.

CLASSIFICATION OF DISBURSEMENTS of Dredges operated by the Public Works Department, during the Year ended 30th June, 1897—
Continued.

DREDGE "CANADA."

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	403 00	404 02	415 50	403 00	403 00	328 84	208 85	155 00	172 49	335 78	402 66	403 00	4,035 14
Coal.....			487 38	5 30	5 00						349 12		846 80
Provisions.....			316 39	94 71	93 38	77 61	31 97				102 89	84 43	801 38
Stores.....			21 94	2 77		6 25			19 76	37 88	1 00	5 61	95 21
Equipment.....			240 53					25 00	164 89	72 53		139 70	642 65
Water.....			27 10			15 15							42 25
Repairs.....			16 95	5 78	1 40			35 99	406 42	108 82	448 94	20 57	1,051 57
Pilotage.....	65 00	65 00	96 00	42 00	42 00	4 00					46 00	46 00	406 00
Wharfage.....			33 00	61 84	15 00	15 00	15 00	15 00		30 00	15 00	17 00	216 84
Contingencies.....					10 00	20 08	15 72	13 75		3 10	12 21	6 41	81 27
Totals.....	468 00	469 02	1,654 79	615 40	569 78	473 63	271 54	244 74	703 56	588 11	1,377 82	722 72	8,219 11
Working expenses.....													
Repairs, ordinary.....	468 00	469 02	1,637 84	609 62	568 38	466 93	271 54	208 75	192 25	31 00	921 33	456 42	6,301 08
do extraordinary.....			16 95	5 78	1 40	6 70		35 99	571 31	557 11	9 08	256 30	1,878 12
Totals.....	468 00	469 02	1,654 79	615 40	569 78	473 63	271 54	244 74	703 56	588 11	1,377 82	722 72	8,219 11

Department of Public Works.

DREDGE "NEW DOMINION."

Wages.....	439 44	576 42	466 24	470 00	468 14	464 19	468 49	470 00	438 12	473 13	.....	.....	4,734 17
Coal.....			273 75	84 87	82 50	53 34		101 61	187 74	52 14	52 06	39 62	927 63
Provisions.....												32 83	32 83
Stores.....			93 78	21 00	15 30	37 84	6 30	15 92				84 10	274 24
Equipment.....			45 76		63 25				344 54			101 26	554 81
Water.....						81 60			264 20			115 00	460 80
Repairs.....			837 30	131 86	13 35	172 38	41 61	52 77	98 66	80 34	147 43	95 29	1,670 99
Towage.....			204 00	12 00		107 50	13 75	23 50				360 00	720 75
Wharfage.....					80 00								80 00
Contingencies.....						2 89							2 89
Totals.....	439 44	576 42	1,920 83	719 73	722 54	919 74	530 15	663 80	1,333 26	605 61	199 49	828 10	9,459 11
Working expenses.....	439 44	576 42	1,083 53	587 87	709 19	737 36	488 54	611 03	1,234 60	525 27	52 06	531 54	7,576 85
Repairs, ordinary.....			837 30	131 86	13 35	172 38	41 61	38 91	40 74	80 34		296 56	1,276 15
do extraordinary.....						10 00		13 86	57 92		147 43		606 11
Totals.....	439 44	576 42	1,920 83	719 73	722 54	919 74	530 15	663 80	1,333 26	605 61	199 49	828 10	9,459 11

DREDGE "PRINCE EDWARD."

Wages.....	551 84	538 69	534 50	537 75	531 25	212 89	140 18	50 00	50 00	97 00	331 18	351 50	3,926 78
Coal.....			459 99	36 00		20 20						117 48	633 67
Provisions.....												156 66	156 66
Stores.....			403 45		44 17	49 35	1 72				38 50	40 95	537 19
Equipment.....						20 70			233 87		46 46	341 98	341 98
Water.....	46 50	46 50	72 01	46 50	56 50	22 61					51 97	51 97	342 59
Repairs.....			433 14	8 25	3 66						564 20	416 14	1,425 39
Towage.....				10 00									10 00
Wharfage.....			27 50		2,317 50	5 00					325 00		2,047 50
Contingencies.....				14 05	39 68	0 50	0 85					51 86	79 36
Totals.....	598 34	585 19	1,930 59	652 55	2,992 76	331 25	142 75	50 00	283 87	97 00	1,305 34	1,195 28	10,164 92
Working expenses.....	598 34	585 19	1,497 45	644 30	2,989 10	331 25	142 75	50 00	50 00		741 14	425 17	8,054 69
Repairs, ordinary.....			433 14	8 25	3 66						105 98		551 03
do extraordinary.....									233 87	97 00	458 22	770 11	1,559 20
Totals.....	598 34	585 19	1,930 59	652 55	2,992 76	331 25	142 75	50 00	283 87	97 00	1,305 34	1,195 28	10,164 92

DREDGING—MARITIME PROVINCES—Continued.

CLASSIFICATION OF DISBURSEMENTS of Dredges operated by the Public Works Department during the Year ended 30th June, 1897—
Continued.

DREDGE "GEO. MCKENZIE."

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	524 25	404 50	493 95	497 75	303 07	105 00	35 46	38 40	38 75	238 51	348 25	367 18	3,485 07
Coal.....			150 00	48 00								202 00	400 00
Stores.....			2 00	7 86		2 68				88 80	33 20	75 91	198 00
Equipment.....							7 25		194 25	90 09	23 01		125 64
Water.....	69 00	46 00	28 75	7 00							32 81	12 60	246 91
Repairs.....			35 48	64 05	3 19						72 00	75 00	297 75
Towage.....			400 00		2,523 84				19 00		53 44	92 93	268 09
Wharfage.....				24 00							1,009 00	445 00	4,467 84
Contingencies..			27 51	12 65			2 23	0 89		12 93	150 00		174 00
Totals.....	593 25	540 50	1,137 69	661 31	2,830 10	107 68	44 94	39 29	252 00	430 42	1,825 34	1,274 71	9,737 23
Working expenses.....	593 25	540 50	1,102 21	597 26	2,826 91	107 68	44 94	39 29	38 75	430 42	1,721 90	1,109 18	9,212 29
Repairs, ordinary.....			35 48	64 05	3 19				19 00		22 00		143 72
do extraordinary.....									194 25		81 44	106 53	381 22
Totals.....	593 25	540 50	1,137 69	661 31	2,830 10	107 68	44 94	39 29	252 00	430 42	1,825 34	1,274 71	9,737 23

Department of Public Works

DREDGE "CAPE BRETON."

Wages.....	421 85	409 15	419 44	415 28	412 46	425 00	425 00	416 44	418 08	424 66	4,187 36
Coal.....	.....	66 71	89 11	167 33	.....	175 70	169 61	50 16	180 13	143 48	1,042 23
Provisions.....	135 92	36 17	94 09	50 61	53 98	73 87	36 43	9 80	9 90	138 31	639 08
Stores.....	.....	180 10	14 15	141 76	34 30	15 36	34 85	.....	.....	.....	420 52
Equipment.....	427 23	996 35	268 76	64 00	46 00	.....	170 07	60 50	.....	235 41	2,268 32
Water.....	24 00	.....	.....	30 20	.....	15 00	15 00	257 07	85 73	506 88	69 20
Repairs.....	.....	.....	3 53	1,165 58	109 47	160 99	278 01	.....	2 50	.....	2,567 26
Towage.....	.....	.....	.....	28 50	24 00	15 50	.....	.....	.....	.....	42 00
Wharfage.....	.....	7 88	.....	.....	3 00	.....	.....	.....	.....	5 99	31 50
Contingencies.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13 82
Totals.....	1,009 00	1,696 31	889 08	2,063 26	683 21	866 42	1,128 97	793 97	696 34	1,454 73	11,281 29
Working expenses.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Repairs, ordinary.....	1,009 00	1,696 31	885 55	897 68	573 74	705 43	850 96	503 90	610 61	741 48	8,474 66
do extraordinary.....	.....	.....	3 53	1,100 29	109 47	128 10	103 70	.....	.....	.....	1,445 09
Totals.....	1,009 00	1,696 31	889 08	2,063 26	683 21	866 42	1,128 97	793 97	696 34	1,454 73	11,281 29

DREDGING, MARITIME PROVINCES—Continued.

CLASSIFICATION AND QUANTITIES OF MATERIAL REMOVED BY DREDGES OPERATED BY THE PUBLIC WORKS DEPARTMENT, DURING THE YEAR ENDED 30th JUNE, 1897.

DREDGE "ST. LAWRENCE."

Description of Material dredged.	July,	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard pan.....													
Boulders.....													
Gravel, sand and mud.....	3,850	8,050			1,750								11,900
Clay.....					7,350	1,750							1,750
Clay, stone and gravel.....													9,100
Sand, mud and rotten wood.....	11,900	700								3,850	12,600	11,200	12,600
Mud.....		8,750		3,500		4,200							27,650
Mud, sand and clay.....			11,200										27,650
Totals.....	15,750	17,500	11,200	3,500	9,100	5,950				3,850	12,600	11,200	90,650

DREDGE "CANADA."

Description of Material dredged.	July,	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard pan.....													
Boulders.....													
Gravel.....													
Clay.....													
Clay and stone.....													
Sand—ordinary.....	2,160	3,780											5,940
Sand—very fine.....	5,130	2,160									1,700	1,350	10,340
Mud and saw-dust and sand.....			2,610	5,310	4,320	270					2,710	3,870	19,090
Totals.....	7,290	5,940	2,610	5,310	4,320	270					4,410	5,220	35,370

Department of Public Works.

DREDGE "NEW DOMINION."

Hard-pan.....	400			1,475	2,423	2,600		75	1,900	2,600	3,400		12,273
Piles.....		2,750			1,800								4,400
Gravel and sand.....		7,625			3,612		3,050	9,499	6,636	2,640			2,750
Clay.....			4,175	5,510									42,747
Clay, stone and edg- ings.....			4,300			2,560	1,200						8,000
Sand—ordinary.....		100	2,100									9,275	2,200
Sand—very fine.....	3,000			2,722	450								9,275
Mud.....													6,172
Totals.....	3,400	10,475	10,575	9,707	8,285	5,160	4,250	9,574	8,536	5,240	3,400		87,877

DREDGE "PRINCE EDWARD."

Hard-pan.....													2,250
Rock.....					2,250								4,395
Gravel.....					2,295							2,100	2,948
Mud and sand.....	1,035			1,170	743								17,415
Clay, stone and sand.....	830	2,070	6,370	8,145							4,905	1,815	6,720
Sand—ordinary.....													17,350
Mud and clay.....	7,720	9,630											
Mud.....													
Totals.....	9,585	11,700	6,370	9,315	5,288						4,905	3,915	51,078

DREDGE "GEO. MCKENZIE."

Hard-pan.....													
Boulders.....												1,035	1,035
Gravel, stone and mud.....													
Clay.....													
Clay and stone.....											1,940	3,060	8,600
Sand and mud.....		675	2,925										10,260
Sand—very fine.....													
Mud.....	8,055	2,205											
Totals.....	8,055	2,880	2,925								1,940	4,095	19,895

DREDGING, MARITIME PROVINCES—Continued.

CLASSIFICATION AND QUANTITIES of Material removed by Dredges operated by the Public Works Department, during the Year ended 30th June, 1897.

DREDGE "CAPE BRETON."

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard-pan.													
Boulders.													
Gravel.													
Clay.				2,183		1,212		2,000	2,585				7,980
Clay and stone.							5,545	4,552	5,319	8,012	9,897	13,613	46,988
Clay.													
Sand—ordinary.													
Sand—very fine.													
Mud.													
Totals.				2,183		1,212	5,545	6,552	7,904	8,012	9,897	13,613	54,918

Department of Public Works.

DREDGING—MARITIME PROVINCES—Continued.

DETAILS OF DREDGING OPERATIONS for Fiscal Year ended 30th June, 1897.

Dredge.	Locality.	Dates.	Time.	Quantity Cubic yards.	Expenditure at Locality.	Wintering, repairs, equipment and superinten- dence, pro rata.	Total Cost.	Rate per cubic yard based on Total Expenditure
"St. Lawrence"	Traverse, Restigouche Co., N.B.	July 1 to Oct. 10.....	102 days	47,950	\$ 3,331 11	\$ 1,843 45	\$ 5,374 56	\$ 0 11-20
	Yarmouth, Yarmouth Co., N.S.	Oct. 12 to Dec. 31.....						
		April 22 to June 30.....	151 do	42,700	4,931 29	2,574 43	7,505 72	0 17 57
"Canada"	Richibucto, Kent Co., N.B.	July 1 to Aug. 27.....	58 do	13,280	1,418 72	1,017 78	2,436 50	0 18 41
	Port Mouton, Queen's Co., N.S.	June 24 to 30.....	7 do	1,350	191 08	137 07	328 15	0 24-31
	Liverpool, Queen's Co., N.S.	Aug. 28 to Dec. 8, May 4 to June 23.....	153 do	20,790	3,539 81	2,539 43	6,079 24	0 29-27
"New Dominion"	Purves Mill, St. John, N.B.	July 15 to 18.....	4 do	400	113 00	62 91	175 91	0 43 97
	Spoon Island, Queen's Co., N.B.	July 20 to 30.....	11 do	3,000	291 75	160 85	452 60	0 15-08
	Frederickton, York Co., N.B.	July 31, 1896, to Aug. 9.....	10 do	2,850	358 70	198 34	557 04	0 19 54
	**St. John, N.B., winter port berths.	Aug. 10 to May 21, 1897.....	285 do	72,352	5,640 21	3,118 56	8,758 77	0 14-87
	Jenaseg, Queen's Co., N.B.	June 1 to 30.....	30 do	9,275	1,189 10	657 48	1,846 58	0 19-90
"Prince Edward"	+Poole's Wharf, Charlottetown, P.E.I.	July 1 and 2, and 27 to 31, Aug. 1 to 6 and 24.....	13 do	6,030	299 08	161 01	460 09	0 07-63
	+McMillan's do	July 3 to 25.....	23 do	6,165	388 16	269 01	597 17	0 09-68
	Dominion Public Building sewer, P.E.I.	Aug. 10 to 23.....	14 do	5,355	530 00	285 39	815 39	0 15-22
	+Connolly's Wharf, P.E.I.	Aug. 24 to Sept. 2.....	10 do	4,635	202 40	108 18	311 38	0 06-71
	Crapaud, Victoria, P.E.I.	Sept. 4 to Nov. 17.....	44 do	19,870	3,226 75	1,737 54	4,964 29	0 29-83
	Webster's Corner, East River, P.E.I.	Nov. 18 to 26.....	9 do	203	361 30	194 55	555 85	2 73-81
	P.E.I. Ry. Wharf, Charlottetown, P.E.I.	May 17 to 26, June 7 to 15 May 26 to 29 and June 15 to 30.....	18½ do	5,400	1,168 54	629 25	1,797 79	0 33-29
	Ferry Slip, Charlottetown, P.E.I.	July 1 to Aug. 11.....	19½ do	3,420	933 16	502 50	1,435 66	0 41-97
"Geo. McKenzie"	Wallace, Cumberland Co., N.S.	July 12 to Oct. 24.....	42 do	10,260	1,623 25	- 701 88	2,325 13	0 22-68
	Fourchu, Richmond Co., N.S.	Aug. 12 to Oct. 24.....	74 do	3,600	2,708 84	1,171 26	3,880 10	1-07 80
	Larry's River, "Guysboro Co.," N.S.	April 19 to June 30.....	73 do	6,035	2,982 58	1,289 60	4,272 18	0 70-79
"Cape Breton"	**St. John, N.B., winter port berths.	Oct. 6 to June 30, 1897.....	268 do	54,918	4,160 33	7,978 51	12,138 84	0 22-66
				339,788	39,789 16	27,279 78	67,068 94	0 19-75

* Pro rata of each dredge's total working expenses in 1896-97, to her working expenses in each locality, viz.:—
Dredge's expenditure in any one locality × Total wintering expenses, &c., of dredge.

Sum of local expenditures of dredge.

** St. John tug service provided by city.

do total quantity for two dredges, 127,270 cubic yards. Expenditure of two dredges in locality, \$9,500 58, add for wintering and repairs, \$11,097.07, total for both dredges, \$20,597 65.

+ Poole, McMillan and Connolly paid for their own tug service.

DREDGING—MARITIME PROVINCES—Continued.

EXPENDITURE FOR DREDGING in Nova Scotia for the twenty-five Years ended 30th June, 1897.

County.	Locality.	Total for the twenty-five years ended 30th June, 1897.			For the Year 1896-97.			Total Quantity.	Total Cost.	Total cost for each County.
		Quantity.	Cost.	\$ cts.	Quantity.	Cost.	\$ cts.			
Antigonish.	Antigonish.	c. yds.	\$	cts.	c. yds.	\$	cts.	c. yds.	\$	cts.
	Harbour au Bouche.	22,025	3,649	15	.....	.....	.....	22,025	3,649	15
	Tracadie.	10,568	2,498	48	.....	.....	.....	10,568	2,498	48
	McNair's Cove.	12,245	5,530	29	.....	.....	.....	12,245	5,530	29
	Bayfield.	11,265	10,035	68	.....	.....	.....	11,265	10,035	68
Annapolis Cape Breton	Arisaig.	12,871	9,505	79	.....	.....	.....	12,871	9,505	79
	Annapolis.	3,840	3,853	30	.....	.....	.....	3,840	3,853	30
	Lingan.	2,825	1,635	68	.....	.....	.....	2,825	1,635	68
	Sydney.	22,267	9,275	56	.....	.....	.....	22,267	9,275	56
	Little Glace Bay.	54,600	17,781	54	.....	.....	.....	54,600	17,781	54
	Port Caledonia.	46,450	16,936	02	.....	.....	.....	46,450	16,936	02
	Benacadie Pond.	17,413	8,242	21	.....	.....	.....	17,413	8,242	21
	Christmas Island.	20,860	5,993	90	.....	.....	.....	20,860	5,993	90
	Cow Bay.	19,045	3,364	98	.....	.....	.....	19,045	3,364	98
	Man a Dieu.	3,255	1,892	32	.....	.....	.....	3,255	1,892	32
Colchester Cumberland	Tatamagouche.	4,680	2,720	76	.....	.....	.....	4,680	2,720	76
	Parrsboro'.	65,490	20,373	07	.....	.....	.....	65,490	20,373	07
	Wallace.	42,535	12,804	68	.....	.....	.....	42,535	12,804	68
	Digby.	61,150	14,752	86	10,260	5,403	28	71,410	20,156	14
	Weymouth.	12,585	5,056	20	.....	.....	.....	12,585	5,056	20
Guysboro'	Guysboro'.	88	28	62	.....	.....	.....	88	28	62
	Larry's River.	5,400	1,413	53	.....	.....	.....	5,400	1,413	53
	Port Mulgrave.	26,230	6,546	70	6,035	3,178	25	32,265	9,724	95
	Sherbrooke.	3,532	1,749	78	.....	.....	.....	3,532	1,749	78
	Chezzecook.	1,260	496	49	.....	.....	.....	1,260	496	49
Halifax.	Halifax Ferry.	3,920	2,593	71	.....	.....	.....	3,920	2,593	71
	Herring Cove.	6,177	2,063	38	.....	.....	.....	6,177	2,063	38
	Ketch Harbour.	26,101	12,049	68	.....	.....	.....	26,101	12,049	68
	Richmond wharf.	4,227	1,690	53	.....	.....	.....	4,227	1,690	53
	Roches wharf.	792	182	53	.....	.....	.....	792	182	53
	Halifax Railway terminus.	1,750	620	28	.....	.....	.....	1,750	620	28
	Jeddore.	19,290	6,187	38	.....	.....	.....	19,290	6,187	38
	North-west Arm.	21,515	4,958	56	.....	.....	.....	21,515	4,958	56
Cunard's wharf.	Cunard's wharf.	7,350	2,970	39	.....	.....	.....	7,350	2,970	39
	Salmon River.	1,400	530	04	.....	.....	.....	1,400	530	04
		14,288	5,962	93	.....	.....	.....	14,288	5,962	93

Department of Public Works.

Spury Bay.....	10,665	3,075 72					10,665	3,075 72				
Eastern Passage	2,070	586 37					2,070	586 97				
Sambro.....	4,815	1,388 61					4,815	1,388 61				
Whycocomagh.....	19,760	3,491 31					19,760	3,491 31				
Campbell's Pond.....	4,940	872 83					4,940	872 83				
Port Hastings.....	270	190 37					270	190 37				
Cheticamp.....	170,740	52,863 40					170,740	52,863 40				
Malou.....	128,347	49,126 92					128,347	49,126 92				
Port Hood.....	4,353	1,258 92					4,353	1,258 92				
Lunenburg.....	70,510	22,194 57					70,510	22,194 57				
Malone Bay.....	21,844	5,958 65					21,844	5,958 65				
Vogler's Cove.....	11,610	5,075 53					11,610	5,075 53				
Acadia Coal Co. wharf.....	12,310	4,093 81					12,310	4,093 81				
Albion Mines.....	9,475	2,181 25					9,475	2,181 25				
East River.....	144,407	47,696 43					144,407	47,696 43				
Halifax Coal Co. wharf.....	1,650	359 90					1,650	359 90				
Pictou Public wharf.....	7,020	1,634 82					7,020	1,634 82				
do Market wharf.....	78,250	21,687 04					78,250	21,687 04				
do Railway wharf.....	32,164	9,959 34					32,164	9,959 34				
do Landing.....	7,345	2,880 01					7,345	2,880 01				
do Steam Ferry Co. slip.....	720	246 18					720	246 18				
Vale Colliery.....	1,395	682 15					1,395	682 15				
River John.....	85,173	22,243 98					85,173	22,243 98				
Granton.....	25,110	10,707 59					25,110	10,707 59				
New Glasgow.....	35,445	11,795 79					35,445	11,795 79				
Middle River.....	15,060	4,984 40					15,060	4,984 40				
C. Dwyer's wharf.....	2,250	672 72					2,250	672 72				
do berths for SS. "Campana".....	5,850	2,000 22					5,850	2,000 22				
Dwyer Co. wharf.....	360	123 09					360	123 09				
Liverpool.....	12,940	4,762 38					12,940	4,762 38				
Port Mouton.....												
D'Escausse.....	23,650	10,052 76					23,650	10,052 76				
St. Peter's Canal.....	90,830	27,435 95					90,830	27,435 95				
St. Peter's.....	7,150	2,407 41					7,150	2,407 41				
Grand Goulet.....	23,584	5,570 49					23,584	5,570 49				
River Bourgeois.....	18,920	4,468 87					18,920	4,468 87				
Marine Ship.....	320	56 53					320	56 53				
Poulement.....	10,080	2,566 14					10,080	2,566 14				
Fourchu Harbour.....	13,275	7,553 06					13,275	7,553 06				
Lockeport.....	34,048	10,591 41					34,048	10,591 41				
Barrington.....	24,580	10,085 07					24,580	10,085 07				
Yarmouth.....	160,952	56,788 01					160,952	56,788 01				
Hants.....	5,450	1,627 60					5,450	1,627 60				
Victoria.....	3,820	1,569 95					3,820	1,569 95				
Dredge "C. B." losses.....		762 98						762 98				
	1,932,546	642,294 22						642,294 22				

DREDGING—MARITIME PROVINCES—Continued.
EXPENDITURE FOR DREDGING in New Brunswick for the twenty-five Years ended 30th June, 1897.

County.	Locality.	Total for the twenty-four Years ended 30th June, 1896.				For the Year 1896-97.				Total Quantity.	Total Cost.		Total cost for each County.
		Quantity.	Cost.	\$ cts.	Cost for County.	Quantity.	Cost.	\$ cts.	Cost for County.		\$ cts.	\$ cts.	
		c. yds.	\$	cts.		c. yds.	\$	cts.		c. yds.	\$	cts.	
Gloucester.....	Bathurst.....	98,637	29,065	79	29,065 79					98,637	29,065	79	29,065 79
Kent.....	Richibucto.....	102,848	35,555	53		13,230	3,308	02	3,308 02	116,078	38,863	55	
	Cocagne.....	27,180	9,601	45						27,180	9,601	45	
	Buctouche.....	13,005	4,934	24						13,005	4,934	24	
	do Priest's Point.....	3,510	1,110	70						3,510	1,110	70	
	do Chapel Point.....	4,140	1,310	07						4,140	1,310	07	
King's.....	do Robertson's wharf.....	45	14	23	52,526 22					45	14	23	55,834 24
	Bellisle Point.....	60,170	8,156	76						60,170	8,156	76	
	Kennebecus River.....	116,270	20,081	83						116,270	20,081	83	
Northumberland.....	Moss Glen.....	10,200	1,924	47	30,163 06					10,200	1,924	47	30,163 06
	Horse Shoe, Miramichi.....	208,892	55,058	36						208,892	55,058	36	
	Outer Bar.....	29,935	7,965	31						29,935	7,965	31	
	Grand Dune.....	37,975	10,121	67						37,975	10,121	67	
	Gordan Flats.....	22,425	4,403	95	77,549 29					22,425	4,403	95	77,549 29
Queen's.....	Grand Lake.....	93,555	16,372	96						93,555	16,372	96	
	do McManus Cove.....	20,440	4,522	82						20,440	4,522	82	
	Jemseg.....	61,305	12,117	74		9,275	1,244	64		70,580	13,362	38	
	Waashadenook.....	48,975	6,340	83						48,975	6,340	83	
	Grimross, Mid ground.....	12,040	3,274	93						12,040	3,274	93	
	Gagetown Creek.....	6,965	1,894	52	44,523 86					6,965	1,894	52	
	Spoon Island.....					3,000	402	51	1,647 15	3,000	402	51	46,171 01
Restigouche.....	Dalhousie.....	22,301	6,543	08						22,301	6,543	08	
	Traverse.....	62,860	14,602	83	21,145 91	47,950	6,813	10	6,813 10	110,810	21,415	93	27,959 01
St. John.. (City and Co.)	I. C. Ry., Terminus.....	130,810	37,130	01						130,810	37,130	01	
	Navy Island.....	25,294	9,296	79						25,294	9,296	79	
	Marble Cove.....	29,925	4,374	40						29,925	4,374	40	
	Murray's Mills.....	23,880	3,441	65						23,880	3,441	65	
	Indian town wharf.....	1,615	192	83						1,615	192	83	

Department of Public Works.

Long wharf.....	7,137	2,680 24	.....	.....	.....	7,137	2,680 24
Millar & Woodman's.....	9,275	1,090 42	.....	.....	.....	9,275	1,090 42
Hayford, Stetson & Co's.....	8,015	942 29	.....	.....	.....	8,015	942 29
International wharf.....	450	52 90	.....	.....	.....	450	52 90
Adams wharf.....	7,513	3,247 29	.....	.....	.....	7,513	3,247 29
Anchor Line wharf.....	4,695	996 81	.....	.....	.....	4,695	996 81
Dominion Atlantic Ry. wharf.....	15,525	4,484 72	.....	.....	.....	15,525	4,484 72
St. John winter berth.....	.....	.....	.....	127,270	21,846 54	127,270	21,846 54
Purves Mill.....	.....	.....	.....	400	53 67	400	53 67
Sunbury.....	287,873	55,775 79	.....	.....	.....	287,873	55,775 79
Westmoreland.....	92,925	27,599 90	.....	.....	.....	92,925	27,599 90
York.....	54,320	12,010 54	.....	.....	.....	54,320	12,392 92
Fredericton.....	15,570	6,827 36	.....	.....	382 38	15,570	6,827 36
St. Mary's Ferry.....	30,395	4,379 52	.....	.....	.....	30,395	4,379 52
Gibson.....	1,600	435 22	.....	.....	.....	1,600	435 22
Nashuaak.....	8,200	1,547 12	.....	.....	.....	8,200	1,547 12
Fisher and Chestnut Shoals.....	3,250	938 82	.....	.....	.....	3,250	938 82
Canada Eastern Ry. wharf.....	.....	.....	.....	.....	.....	.....	.....
	1,830,940	432,448 75	432,448 75	203,975	34,050 86	2,034,915	406,499 61
					34,050 86		406,499 61

DREDGING—MARITIME PROVINCES—Continued.

EXPENDITURE FOR DREDGING in Prince Edward Island for the twenty-five years ended 30th June, 1897.

County.	Locality.	Total for the twenty-four Years ended 30th June, 1896.				For the Year 1896-97.				Total Quantity.	Total Cost.	Total cost for each County.
		Quantity.		Cost.		Quantity.		Cost.				
		c. yds.	\$ cts.	\$ cts.	\$ cts.	c. yds.	\$ cts.	\$ cts.	\$ cts.			
King's	Grand River	76,170	15,304 04					76,170	15,304 04			
	Montague River	132,480	22,819 11					132,480	22,819 11			
	Murray Harbour, south	99,453	17,638 73					99,453	17,638 73			
	Sturgeon	16,026	6,066 27					16,026	6,066 27			
	St. Mary's wharf	21,963	4,752 55					21,963	4,752 55			
	Georgetown Ry. wharf	1,002	408 32					1,002	408 32			
	Cardigan bridge.	35,955	8,619 36					35,955	8,619 36			
	Newport	3,240	917 82					3,240	917 82			
	Souris	3,825	1,083 53					3,825	1,083 53			
	Charlottetown Ry. wharf	54,618	15,003 50					54,618	15,003 50			
Queen's	do Pownal wharf	14,193	2,963 50					14,193	2,963 50			
	do Ferry.	4,045	670 61					4,045	670 61			
	do Steam Navigation Co.	7,668	4,904 51					7,668	4,904 51			
	do Connolly's wharf.	5,343	3,417 17					5,343	3,417 17			
	do Peake Bros. & Co.	12,195	5,362 46					12,195	5,362 46			
	do Queen St. slip	3,915	1,109 03					3,915	1,109 03			
	do Geo. Peake's wharf	5,805	1,644 42					5,805	1,644 42			
	do Poole's wharf	405	114 72					405	114 72			
	do McMillan's wharf											
	do Dominion Building											
	do Sewer											
	Webster's Corner, East River											
	Crapaud (Victoria)	89,782	27,493 03					89,782	27,493 03			
	Pownal Bay	33,610	6,536 20					33,610	6,536 20			
	Rocky Point	82,920	13,426 13					82,920	13,426 13			
	Vernon River	17,860	6,326 72					17,860	6,326 72			
	Wood Islands	2,780	548 00					2,780	548 00			
	Nine Mile Creek	31,650	6,286 46					31,650	6,286 46			
	Hickey's wharf	750	150 51					750	150 51			
	Carr's Point	12,165	2,441 28					12,165	2,441 28			
	Pinette	3,825	756 24					3,825	756 24			
Fort Augustus	3,195	631 68					3,195	631 68				
Southport Ferry	33,015	5,528 75					33,015	5,528 75				
											77,609 73	

Department of Public Works.

Red Point.....	7,161	3,879 60	7,161	3,879 60
North Rustico...	13,536	4,775 38	13,536	4,775 38
South do.....	11,649	4,109 67	11,649	4,109 67
Gauthier's Creek.....	17,847	8,305 50	17,847	8,305 50
Summerside.....	29,386	8,013 37	29,386	8,013 37
Hurd's Point pier.....	41,070	7,289 95	41,070	7,289 95
Tignish.....	11,387	13,005 45	11,387	13,005 45
Cascumpec.....	1,157	538 42	1,157	538 42
Cape Traverse.....	16,740	5,105 89	16,740	5,105 89
	959,796	237,947 52	237,947 52	237,947 52
		51,078	10,937 62	10,937 62
			1,010,874	248,885 14
Prince				137,322 33
				33,953 08
				248,885 14

EXPENDITURE FOR DREDGING IN QUEBEC FOR THE TWENTY-FIVE YEARS ended 30th June, 1897.

From Appropriation, Maritime Provinces.

County.	Locality.	Total for the twenty-four Years ended 30th June, 1896.		For the Year 1897.		Total Quantities.	Total Cost.	Total Cost for each County.
		Quantity.	Cost.	Quantity.	Cost.			
		c. yards.	\$ cts.	c. yards.	\$ cts.	c. yards.	\$ cts.	\$ cts.
Magdalen Islands, Co. Gaspé.....	House Harbour.....	6,800	2,392 92	.....	.....	6,800	2,392 92	.....
do do.....	Amherst Harbour.....	495	242 05	.....	.....	495	242 05	.....
Temiscouata.....	Rivière du Loup.....	2,587	825 47	.....	.....	2,587	825 47	.....
Rimouski.....	Rimouski.....	8,123	3,997 59	.....	.....	8,123	3,997 59	.....
Total.....	.....	18,005	7,458 03	.....	.....	18,005	7,458 03	7,458 03

STATEMENT showing Quantities of Material removed and Cost of Work done in each Province, for the twenty-five Years ended 30th June, 1897.

FISCAL YEAR.	NOVA SCOTIA.		PRINCE EDWARD ISLAND.		NEW BRUNSWICK.		QUEBEC.		Total Quantity.	Total Expenditure	Cost per cubic yard.
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.			
	c. yds.	\$ cts.	c. yds.	\$ cts.	c. yds.	\$ cts.	c. yds.	\$ cts.	c. yds.	\$ cts.	\$ cts.
1872-73.	23,260	8,422 70	.....	.....	38,060	13,240 50	.....	.....	61,320	21,663 20	0 35 328
1873-74.	18,600	6,545 61	.....	.....	57,725	14,395 57	.....	.....	83,125	23,334 10	0 28 071
1874-75.	24,416	13,238 83	18,655	9,892 89	78,223	17,325 05	6,800	2,392 92	121,294	40,456 77	0 33 354
1875-76.	91,974	21,885 90	58,283	10,891 80	79,035	17,040 52	.....	.....	230,192	49,818 22	0 21 642
1876-77.	127,785	34,846 74	74,460	12,758 27	97,690	23,161 90	.....	.....	299,985	70,766 91	0 23 594
1877-78.	106,857	29,607 94	82,860	12,011 18	81,070	23,323 92	.....	.....	270,787	64,943 04	0 23 983
1878-79.	116,307	28,267 50	46,490	9,164 07	132,555	27,400 22	.....	.....	295,352	64,831 88	0 21 951
1879-80.	127,684	34,765 84	36,390	12,674 98	63,540	16,581 79	765	374 08	228,379	64,396 69	0 28 197
1880-81.	87,118	23,061 64	46,335	9,298 53	44,315	12,385 85	2,317	693 44	180,085	45,439 46	0 25 232
1881-82.	89,566	33,363 71	47,325	9,356 57	79,640	18,626 87	.....	.....	216,531	61,347 15	0 28 331
1882-83.	143,616	42,996 93	68,535	11,080 37	48,565	13,422 70	.....	.....	260,716	67,500 00	0 25 890
1883-84.	157,560	49,050 58	79,750	13,355 05	47,658	17,103 33	.....	.....	284,368	79,509 01	0 27 959
1884-85.	76,104	25,250 73	55,075	8,668 01	128,997	24,400 35	8,123	3,997 59	268,359	62,376 68	0 23 242
1885-86.	56,700	21,482 05	17,137	10,349 66	68,505	14,874 63	.....	.....	142,432	46,706 34	0 32 792
1886-87.	53,400	25,621 19	6,137	6,214 74	69,440	11,452 86	.....	.....	128,977	43,288 79	0 33 56
1887-88.	84,175	29,847 60	3,775	5,899 90	50,152	9,252 50	.....	.....	138,102	45,000 00	0 32 58
1888-89.	56,910	32,697 00	24,240	15,502 95	63,633	16,598 08	.....	.....	144,783	64,798 03	0 27 29
1889-90.	59,783	22,821 55	31,422	11,085 39	86,068	20,544 93	.....	.....	177,273	54,451 87	0 30 71
1890-91.	61,698	24,396 57	19,004	8,843 92	96,588	20,375 06	.....	.....	177,290	53,605 55	0 30 23
1891-92.	81,993	27,376 08	31,382	12,788 34	75,023	20,592 85	.....	.....	188,308	60,757 27	0 32 249
1892-93.	40,834	18,125 58	66,585	15,112 83	108,035	23,742 26	.....	.....	215,454	56,930 67	0 26 44
1893-94.	58,581	28,664 99	61,536	12,269 24	77,505	21,564 27	.....	.....	198,622	62,498 50	0 31 46
1894-95.	105,463	32,202 70	48,060	10,428 90	59,715	13,630 11	.....	.....	213,238	56,261 71	0 26 38
1895-96.	36,428	15,828 89	36,960	10,299 93	98,965	21,352 63	.....	.....	171,693	47,481 45	0 27 65
1896-97.	84,735	22,080 46	51,078	10,937 62	203,975	34,080 86	.....	.....	339,788	67,068 94	0 19 73
	1,972,697	652,439 40	1,010,874	248,885 14	2,034,917	466,499 66	18,005	7,458 03	5,036,493	1,375,282 23	0 27 10

Department of Public Works.

STATEMENT showing Quantities of Material removed and Cost of Work done in each Province, by hand dredging, for the twenty-five Years ended 30th June, 1897.

FISCAL YEAR.	NOVA SCOTIA.		PRINCE EDWARD ISLAND.		NEW BRUNSWICK.		QUEBEC.		Total Quantity.	Total Expenditure	Cost per Cubic Yard.
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.			
	c. yds.	\$ cts.	c. yds.	\$ cts.	c. yds.	\$ cts.	c. yds.	\$ cts.	c. yds.	\$ cts.	\$ cts.
1878 79.	245	555 13					245	555 13	245	555 13	2 26 58
1879 80.	12,370	3,666 90					12,370	3,666 90	12,370	3,666 90	0 29 64
1880 81.	11,140	2,560 25					11,140	2,560 25	11,140	2,560 25	0 22 98
1881 82.	10,640	2,650 00					10,640	2,650 00	10,640	2,650 00	0 24 90
1882 83.	8,190	2,500 00					8,190	2,500 00	8,190	2,500 00	0 30 52
1883 84.	5,460	2,500 00					5,460	2,500 00	5,460	2,500 00	0 45 78
1884 97.											
	48,045	14,432 28							48,045	14,432 28	0 30 03

STATEMENT showing quantities of Material removed by, and Expenditure of each Dredge during the twenty-five years ended the 30th June, 1897.

Dredge.	Total quantities and cost for twenty-four Years ended 30th June, 1896.			Fiscal Year 1896-97.			Total for twenty-five Years ended 30th June, 1897.		
	Total Quantity.	Total Cost.	Cost per cubic yard.	Quantity.	Total Cost.	Cost per cubic yard.	Total Quantity.	Total Cost.	Cost per cubic yard.
	c. yds.	\$ cts.	\$ cts.	c. yds.	\$ cts.	\$ cts.	c. yds.	\$ cts.	\$ cts.
"St. Lawrence"	975,824	294,006 17	0 30 129	90,650	12,880 28	0 14 208	1,066,474	306,886 45	0 28 77
"Canada"	696,599	232,401 14	0 33 848	35,370	8,843 89	0 25 004	721,969	241,245 03	0 33 41
"New Dominion"	1,019,928	197,887 43	0 19 402	87,877	11,790 90	0 13 417	1,107,805	209,678 33	0 18 96
"Prince Edward"	953,886	234,592 56	0 24 593	51,078	10,937 62	0 21 414	1,004,964	245,530 18	0 24 43
"Cape Breton" (old)	534,938	139,074 33	0 25 99	.....	.....	.....	534,938	139,074 33	0 25 99
"Geo. McKenzie"	513,965	203,754 07	0 39 643	19,895	10,477 41	0 52 663	533,860	214,231 48	0 40 12
"Cape Breton" (new)	.....	.....	.....	54,918	12,138 84	0 22 103	54,918	12,138 84	0 22 10
Totals	4,685,140	1,301,715 70	0 27 784	339,788	67,068 94	0 19 738	5,024,928	1,368,784 64	0 27 03

STATEMENT showing quantities of Material removed by hand dredging and Expenditure incurred at each locality for twenty-five years ended 30th June, 1897.

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PROVINCE OF QUEBEC.

SHIP CANAL, RIVER ST. LAWRENCE, BETWEEN MONTREAL AND QUEBEC.

During the fiscal year ended 30th June, 1897, dredging operations were carried on, on the Ship Channel between Montreal and Quebec at the following places, four elevator dredges being employed on this work.

MONTREAL HARBOUR.

Dredge "No. 8," which was working in the Ship Channel opposite Isle Ronde on the 1st July, 1896, continued dredging in the harbour of Montreal until the close of navigation. On the 15th May, 1897, this dredge resumed work in this harbour and continued up to the end of the fiscal year. The materials removed were hard pan, stones and gravel; the total quantity dredged being 31,700 cubic yards and the cost $43 \frac{2}{100}$ cents per cubic yard.

POINTE AUX TREMBLES (en haut).

At the beginning of the fiscal year 1896-97, dredge "No. 11" was working in the Pointe aux Trembles channel, cleaning up and widening the curve at the upper end, and it was kept busy in this locality at the same kind of work up to the 11th November, the close of navigation. On the 19th May, 1897, the dredge resumed operations in the channel, working up to the close of the fiscal year. 119,577 cubic yards of stones and gravel and soft clay were removed altogether, at a cost of $12 \frac{95}{100}$ cents per cubic yard.

Dredge "No. 12" was also engaged at the Pointe aux Trembles channel, from the beginning of the fiscal year to the close of navigation in 1896, clearing up and widening the curve at the lower end.

The dredge resumed operations at the same place on the 20th May, 1897, working up to the 17th June, when she completed the work laid out for her, having removed 128,240 cubic yards of soft clay and stone, at a cost of $11 \frac{7}{100}$ cents per cubic yard.

This dredge was then sent to Contrecoeur, where work was commenced on the 18th June, and continued till the end of the fiscal year, viz., in widening the bell mouth at Isle St. Ours, Contrecoeur channel. The total quantity of material dredged is 11,200 cubic yards, viz., sand and stones; the cost being $10 \frac{17}{100}$ cents per cubic yard.

LOTBINIÈRE.

On the 1st July, 1896, the dredge "Laval" was dredging at Barre à Boucard, Lotbinière, and continued at this difficult work up to the 3rd August, when she completed the projected 400 foot channel. She was then placed on the south side of the channel to make it 100 feet wider, and continued at this work up to the close of navigation. On the 3rd June, 1897, this dredge resumed operations on the Lotbinière channel, widening the same, and carried on this work until the close of the fiscal year.

The total quantity of material removed is 39,490 cubic yards, viz., hard pan, stones and large boulders; the cost being $41 \frac{15}{100}$ cents per cubic yard.

DREDGING AT BELCÉIL, RIVER RICHELIEU.

The River Richelieu leaves Lake Champlain at its northern extremity, and, after a course of 80 miles, enters the River St. Lawrence at Lake St. Peter.

The dredge "St. Louis" was employed in the River Richelieu, near Belcél, in preparing the ground for the cribwork of the guide pier which is being built on the west bank of the river, and dredged between the 9th and the 25th of November, 1896.

Two thousand seven hundred and fourteen cubic yards of sand and boulders were displaced.

DREDGING SHIP CHANNEL, RIVER ST. LAWRENCE, between Montreal and Quebec. Abstract of work done, during the Fiscal Year ended 30th June, 1897.

Department of Public Works.

Vessels operated.	Locality of Dredging.	Time of Service.		Nominal working time 10 hours per day.		Dredging machinery in motion.		Quantity dredged in cubic yards, scow measurement.			Materials removed.	Quantity dredged in cubic yards in each locality.			
		Days.	Total days.	Hours.	Total hours.	Hours.	Total hours.	Earth, Gravel, &c.	Rock, Boulders, &c.	Total.		Lotbinière.	Montreal Harbour.	Pointe aux Trembles, en haut.	Contrecoeur.
Dredge Laval	Lotbinière.	134	134	1,340	1,340	1,061½	1,061½		39,490	39,490	Hard pan, stones and boulders	39,490			
Dredge No. 8.	Montreal harbo'r	154	154	1,540	1,540	1,268½	1,268½	31,700		31,700	Stones, gravel and hard pan		31,700		
133 Dredge No. 11.	Pte. aux Trembles, en haut.	149	149	1,490	1,490	1,271	1,271	119,577		119,577	Soft clay, gravel, stones and hard pan.			119,577	
Dredge No. 12	Pte. aux Trembles en haut.	137	137	1,370	1,370	1,144	1,144	128,240		128,240	Soft clay and stones.			128,240	
Dredge No. 12	Contrecoeur.	11	148	110	1,480	80½	1,224½	11,200		139,440	Sand and stones				11,200
	Totals.							290,717	39,490	330,207	Totals.	39,490	31,700	247,817	11,200

DREDGING SHIP CHANNEL, RIVER ST. LAWRENCE, between Montreal and Quebec—

Vessels.	Fuel.	Wages.	Board.	Stores and Materials.	Rebuilding and Repairs.	Expenditure on new Plant.	Proportion of general Maintenance expenses, inclusive of surveys, inspection, etc.	Total Expenditure for each vessel.	Total Expenditure for each service.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Dredge Laval...	1,370 30	3,068 80	864 59	847 22	1,113 17		2,216 85	9,480 93	
Dredge No. 8...	1,695 06	2,692 66	912 03	354 06	604 91		1,910 04	8,168 76	
do No. 11...	1,712 40	2,633 87	879 52	770 27	1,363 05		2,245 86	9,604 97	
do No. 12...	1,703 30	2,735 61	880 60	418 84	1,231 67		2,127 11	9,097 13	36,351 79
do do ..									
Tug Cartier....	630 25	1,494 19	480 78	173 31	67 08		868 42	3,714 03	
do St. Francis.	1,054 50	1,233 28	426 00	179 27	109 39		916 29	3,918 73	
do M.F. Parsons	840 55	1,136 32	413 59	113 87	481 69		911 27	3,997 29	
do C.J. Brydges	808 37	1,415 93	445 56	157 22	447 23		999 25	4,273 56	
do John Pratt.	1,040 35	1,728 07	719 23	540 57	277 02		1,313 87	5,619 11	21,422 72
Survey Str. St. James.	184 70	483 49	140 99	257 51	312 88		2,425 01	3,804 58	3,804 58
Stone Lifter No. 2.....	81 20	406 80	95 81	96 07	68 73		228 46	977 07	977 07
<i>New Dredge Plant.</i>									
Dredge Laurier.						12,776 87	3,899 23	16,676 10	
Tug St. Jean, Iberville.....						12,762 31	3,955 83	16,918 14	
New dumper scows....						8,184 02	2,497 60	10,681 62	44,275 86
Totals.	11,120 98	19,029 02	6,258 70	3,908 21	6,076 82	33,923 20	26,515 09	106,832 02	106,832 02

Department of Public Works.

CLASSIFICATION OF DISBURSEMENTS for Fiscal Year ended 30th June, 1897.

[illegible]

DREDGING AT BERTHIER (EN HAUT), BERTHIER CHANNEL.

The town of Berthierville (Berthier en haut), Berthier County, is situated on the north shore of River St. Lawrence, near the upper end of the Berthier Channel, about 45 miles below Montreal, and opposite Sorel. Population about 1,600.

The Berthier Channel is separated from the main or Ship Channel of the St. Lawrence, by the Sorel Islands. This northern channel is used, however, by steamers of the Richelieu and Ontario Navigation Company and bateaux engaged in local traffic, hence it has been found necessary, from time to time, to improve navigation on these waters by dredging at various points.

With a view of securing 9 feet depth at ordinary low water, from deep water, above Ile au Foin down to deep water at Rivière Chicôt, a complete hydrographic survey of the Berthier Channel was made from January to April, 1897.

As a result of the survey, it was found that further dredging would be required at several places, in order to secure the desired depth of 9 feet in a channel 100 feet wide.

Work was done during the fiscal year ended 30th June, 1897, by the "St. Pierre" from September 9th, to November 6th, 1896, and again continuously from May 22nd, to close of year, when the dredging operations were still in progress.

The total quantity of materials dredged, consisting of clay and sand, amounted to 31,295 cubic yards.

DREDGING AT BOUCHERVILLE.

Boucherville is an incorporated village, in Chambly County, on the south shore of the River St. Lawrence, 9 miles from the city of Montreal.

Between the 28th October, and the 10th November, 1896, the dredge "Canal No. 1" was engaged in removing a shoal in the channel leading to the village wharf. A cut 150 feet long, 80 feet wide was made to a depth of 10 feet, and 880 cubic yards of hard-pan, clay, and boulders were removed.

DREDGING AT CALUMET.

Calumet is a village in Argenteuil County, on the north side of the Ottawa River, 60 miles east of Ottawa City.

Between the 19th and the 28th of October, 1896, the dredge "St. Louis" was engaged in deepening the entrance to Calumet Bay from the Ottawa River, making one cut 475 feet long, 25 feet wide, and 10 feet in depth, and removing 1,965 cubic yards of sand.

DREDGING AT CHATEAUGUAY.

Chateauguay Basin, is at the mouth of the Chateauguay River in the County of Chateauguay, 14 miles south-west of Montreal.

The dredge "Little Giant" was engaged in dredging at that place between the 8th of September and the 5th of November, 1896. Operations were resumed on the 16th of June, and continued up to the close of the fiscal year, viz., up to the 30th of June, 1897.

Dredging was done on three shoals situated between the wharf and the outlet of the Chateauguay River, as well as at the wharf itself. The depth of water made was 7 feet, and the quantity of materials excavated was 11,515 cubic yards, viz., hard-pan, gravel, sand, clay and boulders.

DREDGING AT GRENVILLE.

Grenville is a village in Argenteuil County, on the River Ottawa, 56 miles from Montreal.

Department of Public Works.

Between the 18th September and the 1st October, 1896, the dredge "St. Louis" deepened the water in front of the main wharf at Grenville, making 3 cuts; one 225 feet long and two of 325 feet in length; all having a width of 25 feet and 10 feet in depth.

Two thousand four hundred cubic yards of clay and sand were excavated.

DREDGING AT LAPRAIRIE.

Laprairie is the chef-lieu of the county of the same name, on the south shore of the River St. Lawrence and is 7 miles above Montreal.

During the season of navigation, one of the Richelieu and Ontario Navigation Company's steamers plies between Laprairie and Montreal, making several trips daily.

On the 2nd of July, the dredge "Nithsdale" was continuing operations at that place and worked until the 3rd of November, 1896, deepening the approach from the main channel, River St. Lawrence to the wharf.

Two cuts respectively 3,240 and 1,650 feet long were made; each cut having a width of 25 feet and a depth of 8 feet, at low water.

Eighteen thousand seven hundred and four cubic yards of hard-pan, boulders, and clay and stone were removed.

DREDGING, LOUISE BASIN, QUEBEC.

The Montreal Harbour Commissioners dredge "No. 1" was engaged here from the 7th until the 12th of June, 1897, in removing an accumulation of sand out of a corner near the sluice gates; also an old coffer dam. 3,280 cubic yards of sand and clay and a quantity of old timber, were removed.

DREDGING AT PAPINEAUVILLE.

Papineauville, in Ottawa County, is on the north shore of the Ottawa River, 41 miles east of Ottawa.

On the 12th of August, the dredge "St. Louis" began working at Papineauville, P. Q., and continued until the 16th September, 1896.

The dredge was engaged in deepening the eastern entrance to Papineauville Bay to a depth of 10 feet. Five cuts respectively 300, 310, 320, 950 and 1,000 feet long, were made in the entrance channel, each cut being 25 feet wide. Two cuts respectively 60 and 105 feet in length, were also made in front of the village wharf, viz., to the same depth of 10 feet.

Five thousand two hundred and five cubic yards of clay and sand were displaced at Papineauville.

DREDGING AT POINTE AUX TREMBLES (en haut).

PoinTE aux Trembles (en haut), Hochelaga County, is on the island of Montreal, 10 miles below the city of Montreal.

Between the 29th September, and the 27th October, 1896, the dredge "Canal No. 1" made four cuts to 8 feet depth, in front of the public wharf, which are respectively 145, 155, 165 and 175 feet in length, and embrace a total width of 75 feet. A total quantity of 4,625 cubic yards of clay was removed.

DREDGING IN THE RIVER ST. FRANCIS.

The River St. Francis rises in Lake St. Francis, Wolfe County, and empties into the River St. Lawrence at Lake St. Peter.

Between the 20th May and the 30th June, 1897, the dredge "St. Louis" did the following work in this river :

In front of Tourville's wharf at Pierreville Mills, two cuts 1,050 feet long, and 50 feet wide, were made to a depth of 5 feet; moreover, on a shoal in the bend of the river below the mills, one cut 490 feet long and 25 feet wide, was finished, also to a depth of 5 feet, 5,205 cubic yards of clay and sand being removed altogether in the two places.

DREDGING AT SILLERY COVE.

Sillery Cove, Quebec County, is on the north side of the River St. Lawrence, 6 miles to the westward of Quebec City.

Dredging was carried on at this locality by the Montreal Harbour Commissioners dredge "No. 1," between the 10th of May and the 5th of June, 1897.

The work consisted in making several cuts along the edge of a shoal, to provide berths for ships loading timber.

Dredging was done to 25 feet in depth at low water, and 16,480 cubic yards of sand, clay, gravel and stones were removed.

DREDGING AT ST. JEAN DES CHAILLONS.

St. Jean des Chaillons, Lotbinière County, is on the south shore of the River St. Lawrence, 57 miles south-west of Quebec.

A small stone lifter was employed here from the 10th of September, until the 5th of November, 1896, in removing large boulders from the channel leading to the brickyard wharfs.

Three hundred and two cubic yards of boulders were taken out.

DREDGING AT ST. VALENTIN.

St. Valentin, St. John's County, is on the west side of the River Richelieu, 2 miles from Stottsville station on the Grand Trunk Railway.

Between the 3rd and the 30th of June, 1897, the dredge "Canal No. 1" was engaged here in preparing ground for the cribwork of a new wharf. Three cuts, each 110 feet long and having a total width of 55 feet, were made to a depth of 9 feet. Two cuts were also made on a shoal in the north channel of the River Richelieu, near St. Valentin, which are 275 feet long 55 feet wide in the aggregate, and 8 feet deep at low water. Altogether 4,480 cubic yards of clay and fine sand were removed.

PROVINCE OF ONTARIO.

DREDGING AT BELLE RIVER.

Belle River is a village on the south shore of Lake St. Clair, at the mouth of a river of the same name, in the county of North Essex; being situated 17 miles east of Windsor.

The dredge "Ontario," continuing its work from the previous fiscal year, was further employed here between the 2nd and the 12th July, 1896.

Dredging was done on a sand shoal outside the mouth of Belle River, in lake St. Clair, to a depth of 9 feet; one cut 160 feet long and 25 feet wide being made, and 3,483 cubic yards of clay and sand removed.

During the fiscal year 1895-96, 12,596 cubic yards of clay and sand were taken out by the dredge "Ontario," at this locality.

Department of Public Works.

DREDGING AT BELLEVILLE.

Belleville, the shire town of the county of Hastings, is situated on the Bay of Quinté, at the mouth of the River Moira, and is 43 miles west of Kingston.

Considerable improvement has been effected in the harbour and river, by the dredging operations which have been carried on here for several years past.

The dredge "Queen," continuing its operations of the previous fiscal year, was further engaged on the same, between the 2nd of July, and the 17th of August, 1896; the work done being as follows: Two cuts respectively, 190 and 338 feet long, were made to a depth of 9 feet as a channel leading to "Lazier's" wharf; two cuts on a shoal at the entrance to the harbour, respectively 500 and 350 feet long, to a depth of 11 feet; two cuts on the western side of Mill Island, respectively 160 and 125 feet long, to 10 feet in depth, and two cuts respectively 109 and 243 feet long, at the mouth of the River Moira, to a depth of 7 feet. All the above cuts are 25 feet wide and the total quantity of materials removed is 10,124 cubic yards consisting of boulders, gravel and clay and stone.

DREDGING AT BOWMANVILLE.

The harbour of Bowmanville, or Port Darlington, West Durham County, is on the north shore of Lake Ontario, 40 miles east of Toronto.

A sand shoal having formed between the piers, the dredge "Nipissing" was put to work on the 20th August, and continued dredging until the 5th October, 1896; making two cuts, respectively 1,250 and 900 feet long, and having a total width of 40 feet, and a depth of 12 feet from the mouth of the piers down into the harbour, and removing 16,950 cubic yards of sand.

DREDGING AT COBOURG.

Cobourg, Northumberland County, is situated on the north shore of Lake Ontario, 69 miles north east of Toronto.

The dredge "Nipissing" was placed at work in this harbour on the 31st May, 1897, and was still operating at the close of the fiscal year, 30th June, 1897.

Four adjoining cuts were made between the piers, and ending in the harbour, which are respectively, 630, 615, 515 and 455 feet in length, giving a total width of 100 feet, with a depth of 14 feet at low water.

Twelve thousand nine hundred and twenty-five cubic yards of hard-pan and sand, were taken out.

DREDGING AT FRENCHMAN'S BAY.

Frenchman's Bay, or Pickering Harbour, Ontario County, is on Lake Ontario, 21 miles east of Toronto.

The dredge "Nipissing" operated at this locality between the 7th of October, and the 5th of November, 1896; making one cut 920 feet long, 25 feet wide and one cut 520 feet long, 20 feet wide, between the piers, both cuts to a depth of 12 feet. A small shoal on the north side of the channel was also removed.

Eight thousand four hundred cubic yards of sand were taken out.

DREDGING AT HAMILTON.

Hamilton is situated at the extreme west end of Lake Ontario, on the south-west shore of Burlington Bay, 40 miles south-west from Toronto.

On the 14th August last instructions were issued to employ the dredge "Nish" belonging to Messrs. McNamee & Simpson, to continue the work of removing the bar in the harbour, at the foot of James Street. Active operations were commenced on the 24th August, and the work completed on the 26th September. The dredge

worked 300 hours and removed 12,560 cubic yards of material, at a cost of \$2,400. The inspector's wages were \$87.50, making a total expenditure of \$2,487.50 for the fiscal year ended 30th June, 1897.

DREDGING AT HAWKESBURY.

Hawkesbury is a village in Prescott County, on the Ottawa River, 62 miles east of Ottawa.

Between the 2nd and the 17th of October, 1896, the dredge "St. Louis" was engaged in making a cut 700 feet long, 25 feet wide and 8 feet deep, in the channel near the "Roller" wharf; removing 2,685 cubic yards of clay and sand.

DREDGING IN THE KAMINISTIQUEA RIVER.

This river empties into Thunder Bay, Lake Superior, to the westward of Port Arthur, in the electoral district of Algoma.

Large grain shipments are made from the mouth of this river to the east.

On the 2nd July, the elevator dredge No. 9, continuing its work from the previous year, was further engaged until the 6th of November, 1896, in deepening the river to 20 feet below zero of gauge or low water.

A channel 3,327 feet long, having a width varying from 290 to 160 feet, was made; dredging being carried on up to a point, 360 feet above the Canadian Pacific Railway Company's elevator "B."

A total quantity of 142,800 cubic yards of clay and sand was taken out.

During the year 1894-95, dredge No. 9 removed 162,950 cubic yards of material in connection with the above work, and in 1895-96, 237,750 cubic yards were excavated by this same dredge.

DREDGING AT MEAFORD.

Meaford is on the southern shore of the Georgian Bay, and in the county of Grey, 19 miles from Owen Sound.

Between the 1st and 30th of June, 1897, the dredge "Challenge" operated at this locality, doing the following dredging:—In the outer harbour, or entrance, two cuts respectively 308 and 656 feet in length were made, to a depth of 15 feet; and in the inner harbour, or basin, two cuts 145 feet long, 50 feet wide, were finished to a depth of 12 feet.

Nine thousand one hundred and eighty cubic yards of sand, clay, hard-pan and gravel were removed.

DREDGING AT MIDLAND.

Midland, Simcoe County, is one of the Georgian Bay terminal stations of the Grand Trunk Railway.

The dredge "Challenge" was employed in that harbour for two days, 28th and 29th September, 1896, and removed 300 cubic yards of hard-pan and boulders, from the inner portion of the harbour.

DREDGING AT NEWCASTLE.

Newcastle, West Durham County, is situated on the north shore of Lake Ontario, 47 miles east of Toronto.

Between the 20th August and the 25th September, 1896, the dredge "Queen" was engaged in removing a sand shoal which had formed between the piers. Two cuts, respectively 970 and 550 feet long, were made to a depth of 11½ feet, from the mouth of the piers for a distance of 550 feet between the piers, and to a depth of 9 feet for the remaining distance of 420 feet in the harbour.

Twelve thousand five hundred cubic yards of sand and mud were removed.

Department of Public Works.

DREDGING AT OWEN SOUND.

Owen Sound is situated in the township of Sydenham, County of North Grey, and at the mouth of the Sydenham River. The town is the terminus of the Canadian Pacific Railway, Toronto, Grey and Bruce division, and of that company's line of steamers on the Upper Lakes; also of a branch of the Grand Trunk Railway, Georgian Bay and Lake Erie division.

Between the 15th October and the 6th November, 1896, Messrs. Canan, Sadlier & Co.'s plant was engaged during 183½ hours, dredging the harbour to 19½ feet depth at low water, where most required; the quantity of material removed, chiefly sand, being 11,328 cubic yards. Work was resumed by the same plant on the 15th April, and continued until 21st May, 1897, when, by permission of the department, the plant engaged in dredging operations required by the Canadian Pacific Railway Company, and remained in the company's employ until the 9th June following. From this last date until the close of the fiscal year, 30th June, 1897, dredging for Government purposes was again actively carried on.

During the period, from 15th April to 21st May, 1897, and from 9th to 30th June, the contractor's dredge removed 24,248 cubic yards of material in 436 working hours.

The total quantity of dredging done during the fiscal year 1896-97, is therefore 35,576 cubic yards, nearly all sand; the total outlay being \$4,956, which gives a rate of 14 cents per cubic yard.

DREDGING AT PENETANGUISHENE.

Penetanguishene, County of East Simcoe, is an inlet of Georgian Bay, and on the North Simcoe branch of the Grand Trunk Railway.

Between the 2nd of July and the 28th of September, 1896, the dredge "Challenge" was employed at this locality, and did the following dredging:—

Two cuts respectively 450 and 500 feet long were made on a shoal opposite the "Reformatory," one cut 210 feet long at the town wharf, and two cuts, each 700 feet long, alongside the "Esplanade." Moreover, on a shoal opposite "Beck's Mill," nine cuts were made as follows:—One 256 feet, one 330 feet, two 600 feet, and five 366 feet long; all the cuts being 25 feet wide. The whole of the dredging was done to a depth of sixteen feet below zero or low water.

Twenty-nine thousand and forty cubic yards of sand, clay and mud were removed.

DREDGING AT POINT EDWARD.

Point Edward is about three miles north of Sarnia, on the east side of the St. Clair River, at the lower end of Lake Huron.

On the 14th August, 1896, instructions were issued to employ the dredge "Arnoldi" to remove that portion of the bar in front of the Grand Trunk Railway elevator which prevented large lake vessels from unloading their cargoes of grain at this place.

Work was commenced on the 14th August and completed on the 27th of the same month. The dredge worked 142½ hours with the object of securing a minimum depth of eighteen feet at low water, and removed 5,725 cubic yards of material, chiefly gravel, at a cost of \$1,140. The inspection and incidental expenses were \$60. Total expenditure for fiscal year ended 30th June, 1897, \$1,200.

DREDGING AT PORT ARTHUR.

Port Arthur, Algoma district, is a station on the main line of the Canadian Pacific Railway.

Dredging was done here by the elevator dredge "No. 9" between the 17th of May, and the 30th of June, 1897; work being still in progress after the close of the fiscal year 1896-97.

Operations were carried on over a rectangular area, extending from the entrance to the harbour between the west and middle breakwaters, down the channel and in front of Messrs. Walsh's, Clavet's, Mitchell's and Marks wharfs, nearly up to the Canadian Pacific Railway wharf; a depth of 19 feet below zero, or low water level being made.

The total length of the channel dredged is 2,300 feet; the width being 200 feet from the harbour entrance to the portion in front of the wharfs, and 400 feet opposite the said wharfs.

Eighty-three thousand two hundred and fifty cubic yards of clay and sand were removed at Port Arthur.

DREDGING AT PORT HOPE.

Port Hope, in the county of East Durham, is situated on Lake Ontario, 63 miles east of Toronto, and 102 miles above Kingston.

The harbour is an artificial one, formed by piers which have been built into the lake, and since their construction, dredging has frequently had to be done at the entrance to the harbour to provide sufficient depth of water for the vessels calling at this place.

The dredge "Nipissing" worked in Port Hope from 23rd of July, until the 18th of August, 1896, making 4 cuts between the piers at the entrance to the harbour. Three of these cuts are each 350 feet long, and one only 173 feet; all the cuts are 25 feet in width and 12 feet in depth.

A small sand bar was also removed in the eastern portion of the harbour.

The quantity of material excavated is 5,880 cubic yards, all sand.

DREDGING AT PORT STANLEY.

The harbour of Port Stanley is at the mouth of Kettle Creek, in the County of East Elgin, on the north shore of Lake Erie, 24 miles from London, and is formed by two piers extending into the lake, one on each side of the mouth of the creek.

The dredge "Ontario" was engaged at that place between the 22nd of May, and the 30th of June, 1897, in deepening the channel between the piers to a depth of 14 feet. A cut 1,635 feet long, 60 feet wide, was made from the mouth of the piers down into the harbour; two additional cuts 300 and 150 feet long, respectively, were made at the mouth of the piers in order to afford an easy approach to vessels entering this harbour.

Eleven thousand nine hundred and eighty cubic yards of sand and mud were removed at Port Stanley.

DREDGING AT PRESCOTT.

Prescott, Grenville County, is on the River St. Lawrence, 114 miles west of Montreal. The town of Ogdensburg, N.Y., is immediately opposite Prescott.

The dredge "Nipissing" was engaged at this place between the 2nd and the 17th of July, 1896, and did the following dredging:—

In front of "McCarthy's" wharf: one cut 115 feet long, 25 feet wide, to a depth of 13 feet.

In front of "Buckly's" wharfs: three cuts of 370, 200, and 60 feet in length, respectively, and of a uniform width of 25 feet, to a depth of 14 feet.

At "Wiser's" wharf: two cuts 115 and 30 feet long respectively, in front of the wharf; also a cut 90 feet long running from the above cuts to deep water, all the cuts being made 25 feet in width, and to a depth of 15 feet.

Two thousand four hundred and thirty cubic yards of hard-pan and clay were taken out at Prescott by the dredge "Nipissing."

Department of Public Works.

Eight thousand six hundred and ten cubic yards of clay and hard-pan were removed by the dredge "Queen," making a total of 11,040 cubic yards of material displaced by both dredges in this locality during the fiscal year 1896-97.

The dredge "Queen" was also employed in dredging in this locality, commencing on the 25th of May, and was still engaged there at the close of the fiscal year on the 30th June, 1897.

The following work was done by the latter dredge:—At the new elevator wharf, six cuts, each 100 feet long, and having a total width of 150 feet, were made on its eastern side to a depth of 12 feet, and on the western side of this wharf four cuts were finished, viz.: two, each 81 feet long, and two respectively 100 feet and 75 feet in length; all the cuts being 25 feet wide and having a depth of 12 feet. Dredging was also performed along the front of the elevator wharf, as well as in the channel leading to the same, in order to provide a uniform depth of 14 feet below zero, or low water level.

At the Canadian Pacific Railway Company's coal dock, 2 cuts, each 280 feet long, 50 feet wide, were made to a depth of 14 feet.

DREDGING RIVER THAMES.

The River Thames flows through a fertile country on the peninsula formed between Lakes Huron and Erie, and after following a south-westerly course of 160 miles, enters Lake St. Clair. It is navigable for boats from its mouth to Chatham.

Between the 17th July, and the 6th of November, 1896, the dredge "Ontario" was engaged in deepening the approach to the mouth of the river, by cutting through a sand bar in lake St. Clair; two cuts each 4,797 feet long, and 25 feet wide, were made in the entrance channel; also one cut 400 feet long, and 25 feet wide.

Dredging was also done on two shoals in the river itself, between its mouth and the town of Chatham; four cuts respectively 203, 742, 275 and 742 feet long and all 25 feet wide being made throughout to a depth of 12 feet, at the lowest stage of the water.

A total quantity of 40,240 cubic yards of sand and clay, was removed between the dates above mentioned.

In May, 1897, instructions were given to do some further dredging at the mouth of this river, and also to complete the removal of bars in the river between the lake end and Chatham. This work was put under way at once by the "Chatham Dredging Company," who completed it on the 30th June following; the dredge having worked 249½ hours and removed 16,753 yards material, besides wreckages, at a total expense of \$2,098.92, inclusive of inspection, etc.

Total quantity of dredging done during the fiscal year ended 30th June, 1897:—56,993 cubic yards.

Further dredging will be required at this place, from time to time, until the shorter and more direct line into deep water in the lake is adopted and the channel protected.

An agreement was made in May, 1897, with the Chatham Navigation Company to remove the snags, stumps and sunken logs from the river; for this service, when completed, they are to be paid \$100.

DREDGING AT SANDWICH.

Sandwich, capital of the county of Essex, is opposite the city of Detroit on the Detroit River.

Between the 1st and the 6th of May, 1897, the dredge "Ontario" made one cut 400 feet long, 25 feet wide, to a depth of 15 feet in the Detroit River, viz., in rear of the "Cuddy Mullen" Company's coal dock, removing 2,580 cubic yards of sand and gravel.

DREDGING IN THE SOUTH NATION RIVER.

The dredge "Dundas," belonging to the council of the County of Dundas, is operated on this river by a crew of five men, whose wages are paid by the Department of Public Works of Canada. This department also supplies fuel, oils, &c., to operate the dredge.

On the 2nd of July, 1896, this dredge was continuing its work on the South Nation River, which flows through Dundas County, and dredged until the 14th of November, 1896.

Work was again resumed on 27th May, 1897, and continued going down stream until the close of the fiscal year, 30th June, 1897, when a place called Medaugh's Rapids was reached.

A channel 9,280 feet long was made, of a width of 30 feet, and a depth of from $4\frac{1}{2}$ to 7 feet.

The materials removed consisted of hard-pan, clay and boulders; they were all deposited on the banks of the river.

Cost of year's dredging: \$2,104.59.

DREDGING AT WHITEBY.

Whitby, the chief town of the county of Ontario, is on the north shore of Lake Ontario, $29\frac{1}{2}$ miles east of Toronto.

The dredge "Queen" operated in this locality, beginning on the 28th of September, and finishing on the 31st October, 1896.

Two cuts, respectively 1075 and 650 feet long, and each 25 feet wide, were made from the entrance down into the harbour; a depth of 12 feet being secured.

Eleven thousand four hundred cubic yards of clay and sand were removed.

DREDGING--QUÉBEC AND ONTARIO.

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department during the year ended 30th June, 1897.

DREDGE "CHALLENGE."

Department of Public Works.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	388 55	395 00	388 00	195 08	30 00	30 00	30 00	34 71	.....	9 67	82 02	395 00	1,896 01
Coal.....	.....	12 00	18 00	27 00	.....	.....	.....	.....	.....	.....	.....	198 45	397 47
Wood.....	.....	125 00	247 65	.....	.....	.....	.....	.....	.....	.....	.....	23 62	306 27
Provisions.....	100 42	103 00	100 66	45 16	.....	.....	.....	.....	.....	.....	30 86	103 00	483 10
Stores.....	.....	.....	3 65	2 36	.....	.....	.....	.....	.....	.....	54 68	5 30	65 99
Equipment.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39 29	114 00	153 39
Repairs.....	3 05	.....	.....	.....	.....	.....	30 00	80 52	845 45	902 52	1,132 46	45 47	3,039 47
Pilotage.....	.....	.....	.....	50 00	.....	.....	.....	.....	.....	.....	.....	.....	50 00
Towage.....	.....	.....	.....	10 65	12 75	.....	.....	.....	17 97	.....	.....	.....	46 18
Contingencies.....	.....	0 76	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 05	.....
Totals.....	492 02	635 76	757 96	330 25	42 75	30 00	60 00	115 23	863 42	912 19	1,339 41	888 89	6,467 88
Working expenses.....	488 97	635 76	757 96	330 25	42 75	30 00	30 00	34 71	17 97	9 67	206 95	843 42	3,428 41
Repairs, ordinary.....	3 05	.....	.....	.....	.....	.....	30 00	80 52	120 50	.....	524 83	45 47	804 37
do extraordinary.....	.....	.....	.....	.....	.....	.....	.....	.....	724 95	902 52	607 63	.....	2,235 10
Totals.....	492 02	635 76	757 96	330 25	42 75	30 00	60 00	115 23	863 42	912 19	1,339 41	888 89	6,467 88

DREDGING—QUEBEC AND ONTARIO—Continued.

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department, &c.—Continued.

DREDGE "ONTARIO."

Items.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Grand Totals.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Wages.....	390	65	395	81	378	33	395	00	272	96	30	00	44	17	30	00	30	00	.....	.....	398	00	395	00	2,759	92
Coal.....	131	38	192	08	150	00	318	75	112	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	145	10	175	00	1,224	56
Wood.....	103	00	103	00	103	00	103	00	65	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118	66	103	00	698	99
Provisions.....	4	37	9	17	8	54	8	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	83	16	83	77	94
Stores.....	.....	.....	3	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	16	118	00	171	91
Equipment.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	174	16	70	65	1,277	89
Repairs.....	2	04	19	59	76	70	17	55	.....	.....	.....	.....	.....	.....	33	55	.....	.....	883	65	.....	.....	.....	.....	.....	.....
Pilotage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contingencies.....	7	45	.....	.....	.....	.....	.....	.....	57	71	.....	.....	.....	.....	.....	.....	1	50	.....	.....	7	66	.....	.....	74	32
Totals.....	638	89	723	40	716	57	842	50	508	25	30	00	44	17	63	55	31	50	883	65	924	57	878	48	6,285	53
Working expenses.....	636	85	703	81	639	87	824	95	508	25	30	00	44	17	30	00	31	50	.....	.....	750	41	807	83	5,007	64
Repairs, ordinary.....	2	04	19	59	76	70	17	55	.....	.....	.....	.....	.....	.....	33	55	.....	.....	524	06	174	16	70	65	918	30
do extraordinary.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	359	59	.....	.....	.....	.....	359	59
Totals.....	638	89	723	40	716	57	842	50	508	25	30	00	44	17	63	55	31	50	883	65	924	57	878	48	6,285	53

Department of Public Works.

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department, &c.—Continued.

DREDGE "NIPISSING."

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	375 00	389 58	375 00	375 00	179 50	30 00	30 00	30 00	30 00	30 00	203 19	405 00	2,249 08
Coal.....		219 47	154 88	392 80	131 55							125 56	1,227 45
Wood.....													
Provisions.....	107 50	102 03	103 00	103 00	48 88						23 22	101 00	588 63
Stores.....		2 47	1 18		2 40						36 00		42 05
Equipment.....	1 30								64 66	6 00	46 67	110 00	228 63
Repairs.....		2 30	52 95	39 85	2 11	30 58	248 47	139 49	0 75	9 75	823 49	258 03	1,607 77
Pilotage.....													
Towage.....													
Contingencies.....	2 25				24 60					36 00	11 83	17 05	91 73
Totals.....	486 05	715 85	687 01	910 65	389 04	60 58	278 47	169 49	95 41	81 75	1,144 40	1,016 64	6,035 34
Working expenses.....	486 05	713 55	634 06	870 80	386 93	30 00	30 00	30 00	94 66	72 00	310 91	758 61	4,417 37
Repairs, ordinary.....		2 30	52 95	39 85	2 11	30 58	248 47	118 80	0 75	9 75	145 21	160 60	464 79
do extraordinary.....											688 28	97 43	1,152 98
Totals.....	486 05	715 85	687 01	910 65	389 04	60 58	278 47	169 49	95 41	81 75	1,144 40	1,016 64	6,035 34

DREDGING—QUEBEC AND ONTARIO.—Continued

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department during the year ended 30th June, 1897.

DREDGE "QUEEN."

Items.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Grand Totals.
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
Wages	385	00	385	00	385	00	385	00	112	66	30	00	30	00	30	00	30	00	19	00	106	86	371	99	2,163 65
Coal	275	00	123	01	220	50	190	74	32	35													102	00	1,110 46
Wood																									
Provisions	103	00	103	00	103	00	103	00	22	00											95	15	102	14	631 29
Stores			2	93	15	15			4	87											35	00	1	57	59 52
Equipment			5	20																	81	96	109	68	196 84
Repairs	28	90	28	11	11	45			8	50	175	39	5	00	135	90	296	60	332	73	780	23	284	65	2,087 46
Pilotage									20	00															20 00
Towage																									
Contingencies									39	60											28	04			96 28
Totals	791	90	647	25	763	74	678	74	239	98	205	39	35	00	165	90	326	60	351	73	1,127	24	1,032	03	6,365 50
Working expenses	763	00	619	14	752	29	678	74	231	48	30	00	30	00	30	00	30	00	19	00	347	01	747	88	4,278 04
Repairs, ordinary	28	90	28	11	11	45			8	50			5	00	40	30	1	60	172	62	146	28	284	65	727 41
do extraordinary											175	39			95	60	295	00	160	11	633	95			1,360 05
Totals	791	90	647	25	763	74	678	74	239	98	205	39	35	00	165	90	326	60	351	73	1,127	24	1,032	03	6,365 50

Department of Public Works

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department, &c.—Continued.

DREDGE "No. 9."

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	645 45	649 55	643 15	659 00	319 60	58 45	50 75	50 00	50 00	27 00	279 72	753 56	4,159 23
Coal.....			1,322 62									2,066 19	3,415 81
Wood.....	197 00	197 00	197 00	197 00	92 10						126 37	209 00	1,215 47
Provisions.....		16 35	17 24		12 90	1 55						66 59	114 63
Stores.....						1 25							53 55
Equipment.....			52 30			2 35							
Repairs.....		67 83	21 57	18 82	14 98			117 80	176 12	400 37	615 94	79 53	1,515 31
Pilotage.....													
Towage.....									4 50				
Contingencies.....					90 25						12 65	56 60	163 40
Totals.....	842 45	930 73	2,253 88	874 82	529 83	63 60	50 75	167 80	230 62	427 37	1,034 08	3,230 87	10,637 40
Working expenses.....	842 45	862 90	2,232 31	856 00	514 85	61 25	50 75	50 00	54 50	27 00	488 74	3,151 34	9,192 09
Repairs, ordinary.....		67 83	21 57	18 82	14 98	2 35		117 80	176 12	400 37	545 91	79 53	1,445 31
do extraordinary.....													
Totals.....	842 45	930 73	2,253 88	874 82	529 83	63 60	50 75	167 80	230 62	427 37	1,034 08	3,230 87	10,637 40

DREDGING—QUEBEC AND ONTARIO—Continued.

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department during the year ended 30th June, 1897.

DREDGE "ST. LOUIS."

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
Wages	306 20	342 74	345 00	345 00	345 00	...	...	...	...	...	311 37	346 33	1,996 73
Coal	307 33	30 00	60 00	60 00	60 00	...	...	...	...	...	71 30	119 35	637 98
Wood .....	...	40 00	...	...	...	...	...	...	...	...	...	...	40 00
Provisions	85 91	92 50	92 50	92 50	90 00	...	...	...	...	...	...	148 66	509 57
Stores	5 00	2 69	...	1 30	7 68	...	...	...	...	...	...	...	16 67
Equipment	36 74	40 42	40 42	10 18	48 74	137 83	...	50 65	34 32	266 65	29 70	118 31	184 75
Repairs	2 36	...	...	...	8 00	...	...	...	...	...	250 39	386 09	1,267 63
Pilotage .....	...	...	...	...	...	...	...	...	...	...	...	...	8 00
Towage	1 50	11 25	...	186 35	20 84	38 25	...	...	...	...	4 50	...	202 69
Contingencies .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	745 13	559 60	559 60	695 33	580 26	176 08	...	50 65	34 32	266 65	707 26	1,118 74	4,934 02
Working expenses	742 77	519 18	519 18	685 15	531 52	38 25	...	...	...	...	416 87	732 65	3,666 39
Repairs, ordinary	2 36	40 42	40 42	10 18	48 74	137 83	...	50 65	34 32	35 60	140 39	81 09	443 75
do extraordinary .....	...	...	...	...	...	...	...	...	...	231 05	150 00	305 00	823 88
Totals	745 13	559 60	559 60	695 33	580 26	176 08	...	50 65	34 32	266 65	707 26	1,118 74	4,934 02

Department of Public Works.

CLASSIFICATION OF DISBURSEMENTS OF Dredges operated by the Public Works Department during the year ended 30th June, 1897.
DREDGE "CANAL No. 1."

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....			126 65	422 75	164 50						264 11	360 00	1,338 02
Coal.....			45 00	30 00							34 10	188 31	297 41
Wood.....												100 00	100 00
Provisions.....											13 43		13 43
Stores.....											62 70	9 91	72 61
Equipment.....									224 00	720 91	730 23	555 00	2,299 65
Repairs.....			69 52								10 00		10 00
Pilotage.....													
Towage.....													
Contingencies.....												4 00	4 00
Totals ..			241 18	452 75	164 50				224 00	720 91	1,114 57	1,217 22	4,135 13
Working expenses.....			171 65	452 75	164 50						384 34	662 22	1,835 47
Repairs, ordinary.....			69 52									79 00	148 52
do extraordinary.....									224 00	720 91	730 23	476 00	2,151 14
Totals.....			241 18	452 75	164 50				224 00	720 91	1,114 57	1,217 22	4,135 13

Department of Public Works.

CLASSIFICATION AND QUANTITIES OF Material removed by Dredges operated by the Public Works Department, during the year ended 30th June, 1897.

DREDGE "CHALLENGE."

Description of material dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard-pan.....			240									2,700	2,940
Boulders.....			60										60
Gravel.....			7,440									2,100	2,100
Clay.....	5,340	5,760										1,620	20,100
Clay and stone.....													
Sand, ordinary.....	3,720	960	840									2,700	8,280
do very fine.....													
Mud.....		4,980											4,980
Totals.....	9,060	11,700	8,580									9,180	38,520

DREDGE "ONTARIO."

Hard-pan.....													
Boulders.....													
Gravel.....	3,483	2,240	1,080	2,760	2,700						580		580
Clay.....											2,000		14,263
Clay and stone.....													
Sand, ordinary.....	4,860	7,820	11,340	7,440							2,000	9,460	42,920
do very fine.....													
Mud.....											520		520
Totals.....	8,343	10,060	12,420	10,200	2,700						5,100	9,460	58,283

DREDGING—QUEBEC AND ONTARIO—Continued.

CLASSIFICATION AND QUANTITIES of Material removed by Dredges operated by the Public Works Department during the year ended 30th June, 1897.

DREDGE "NIPISSING."

Description of material dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard-pan.....	1,230											1,350	2,580
Boulders.....													
Gravel.....													
Clay.....	1,200												1,200
Clay and stone.....		7,200											
Sand, ordinary.....	1,800		11,520	9,780	840						225	11,250	42,705
do very fine.....													
Mud.....													
Totals.....	4,320	7,200	11,520	9,780	840						225	12,600	46,485

DREDGE "QUEEN."

	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard-pan.....													4,010
Boulders.....	1,788	770									400	3,610	2,558
Gravel.....	1,690	1,898											3,578
Clay.....	1,836	1,008		3,232							1,400	3,200	10,776
Clay and stone.....	1,044												1,044
Sand, ordinary.....			7,840	7,616									15,456
do very fine.....		3,368	552										3,920
Mud.....			1,292										1,292
Totals.....	6,448	7,044	9,684	10,848							1,800	6,810	42,634

Department of Public Works.

CLASSIFICATION AND QUANTITIES of material removed by Dredges operated by the Public Works Department, during the year ended 30th June, 1897.

DREDGE "No. 9."

Description of material dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.
Hard-pan													
Boulders													
Gravel													
Clay	16,950	14,050	16,700	14,300	2,000						26,400	18,850	103,250
Clay and stone													
Sand—ordinary	19,500	22,400	16,600	17,650	2,650							38,000	116,800
Sand—very fine													
Mud													
Totals	36,450	36,450	33,300	31,950	4,650						26,400	56,850	223,050

DREDGE "ST. LOUIS."

Hard-pan													
Boulders					114								114
Gravel												540	4,380
Clay	840	1,445	1,065										
Clay and stone													
Sand—ordinary	2,400	2,830	3,585	3,585	2,600						380	3,795	15,680
Sand, very fine													
Mud													
Totals	3,330	4,275	4,650	4,650	2,714						870	4,835	20,174

Department of Public Works

DREDGING, QUEBEC AND ONTARIO, FISCAL YEAR 1896-97—Continued.

STATEMENT showing the material removed at the different localities, by dredges operated by the Department of Public Works, the total amount of expenditure on each dredge, and the average cost per cubic yard.

DREDGE "CHALLENGE."

Location.	Hard-pan.	Boulders.	Gravel.	Clay.	Clay and Stone.	Sand, ordinary.	Sand, fine.	Mud.	Total Cubic Yards.
	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.
Penetanguishene.....				18,540		5,520		4,980	29,040
Midland.....	240	60							300
Meaford.....	2,700		2,100	1,620		2,760			9,180
	2,940	60	2,100	20,160		8,280		4,980	38,520
Total amount of expenditure, \$6,467.88. Cost per cubic yard, 16.791 cents.									

DREDGE "ONTARIO."

Belle River.....				3,483					3,483
Thames River.....				8,780		31,460			40,240
Sandwich.....			580	2,000					2,580
Port Stanley.....						11,460		520	11,980
			580	14,263		42,920		520	58,283
Total amount of expenditure, \$6,285.53. Cost per cubic yard, 10.784 cents.									

DREDGE "NIPISSING."

Prescott.....	1,230			1,200					2,430
Port Hope.....						5,880			5,880
Bowmanville.....						16,950			16,950
Frenchman's Bay.....						8,400			8,400
Cobourg.....	1,350					11,475			12,825
	2,580			1,200		42,705			46,485
Total amount of expenditure, \$6,035.34. Cost per cubic yard, 12.984 cents.									

DREDGE "QUEEN."

Belleville.....		2,558	3,578	2,944	1,044				10,124
Newcastle.....						7,840	3,368	1,292	12,500
Whitby.....				3,232		8,168			11,400
Prescott.....	4,010			4,600					8,610
	4,010	2,558	3,578	10,776	1,044	16,008	3,368	1,292	42,634

Total amount of expenditure, \$6,365.50. Cost per cubic yard, 14.93 cts.

STATEMENT showing the material removed at the different localities, &c.—*Concluded.*

DREDGE "No. 9."

Location.	Hard-pan.	Boulders.	Gravel.	Clay.	Clay and stone.	Sand, ordinary.	Sand, fine.	Mud.	Total, Cubic Yards.
	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.	c.y.
Kaministiquia River..	78,000	.....	78,800	.....	.....	142,500
Port Arthur.....	45,000	.....	38,000	.....	.....	83,250
	109,250	.....	116,800	.....	...	226,050

Total amount of expenditure, \$10,637.40. Cost per cubic yard, 4'706 cts.

DREDGE "ST. LOUIS."

Papineauville. ....	.....	.....	.....	1,610	.....	3,595	.....	.....	5,205
Grenville.....	.....	.....	.....	675	.....	1,725	.....	.....	2,400
Hawkesbury..	.....	.....	.....	1,065	.....	1,620	.....	.....	2,685
Calumet .....	.....	.....	.....	.....	.....	1,965	.....	.....	1,965
River Richelieu.....	.....	114	.....	.....	.....	2,600	.....	.....	2,714
River St. Francis.....	.....	.....	.....	1,030	.....	4,175	.....	.....	5,205
	.....	114	.....	4,380	.....	15,680	.....	.....	20,174

Total amount of expenditure, \$4,934.02. Cost per cubic yard, 24'457 cts.

DREDGE "NITHSDALE."

Laprairie.....	14,725	1,024	2,955	18,704
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Total amount of expenditure, \$6,446.65. Cost per cubic yard, 34'466 cts.

DREDGE CANAL "No. 1."

Pointe aux Trembles..	.....	.....	.....	4,625	.....	.....	.....	.....	4,625
Boucherville.....	180	40	.....	660	.....	.....	.....	.....	880
St. Valentin.....	.....	.....	.....	3,025	.....	.....	1,455	.....	4,480
	180	40	.....	8,310	.....	.....	1,455	...	9,985

Total amount of expenditure, \$4,135.13. Cost per cubic yard, 41'413 cts.

PROVINCE OF MANITOBA.

DREDGING AT THE MOUTH OF THE RED RIVER, LAKE WINNIPEG.

The opening of a channel through the bar at the mouth of the Red River, Lake Winnipeg, in order to give uninterrupted navigation to lake boats and to accelerate the development of the industries connected with the lake, began in 1884, and the work of dredging has been carried on each succeeding year since then.

The Red River passes into three outlets about three miles from the lake shore, which are designated the west, centre and east channels. It is at the mouth of the east channel that the dredge "Winnipeg" has worked since 1893.

Department of Public Works.

Previous to 1893, dredging operations were prosecuted at the mouth of the west channel.

The transfer of operations from the west to the east channel was occasioned by the flood and heavy ice flow of 1893, which caused the one channel to fill in, while very effectually scouring out the other.

The work done in the west channel, however, cannot in any sense be considered as thrown away, for uninterrupted navigation was maintained there; while previous to 1893, the extent of the bar opposite the east channel (now used) would have required at least three seasons' work to give a passage through it.

Up to the present it has been found impossible to do more than keep the channel in sufficiently good shape to meet the requirements of the lake traffic; and there was no good opportunity of working on a definite scheme for straightening and improving the channel.

The dredging operations at the mouth of the river closed on the 5th September last (1896), and shortly after this date, the repairs required to the dredging plant were proceeded with.

In the spring of 1897, when the wharf was built at Selkirk, which is used in connection with the transshipment of coal, the dredge was taken to the mouth of the Red River, viz., on June 4th. After driving a row of piles and capping them, ready for use to fasten the coal barge thereto, and staking the channel in a permanent manner for the season, the dredge began work at the elbow of the channel on the 7th June.

The work done in June was very satisfactory, and the statements at pages 166 and 167, entitled "Classification of Disbursements," and "Material Removed" show as follows:—Total expenditure (1896-97) \$9,431.56. Material removed 62,256 c. yds. Average cost per cubic yard, 15½ cts.

In noting the cost per cubic yard, allowance should be made for the extra expense in maintaining a dredging plant here, as for well as the very short working season.

The trade has increased in lumber, ties, piles and cordwood since 1895-96; but the fish trade remains about the same.

There has been one new steamboat built. The steamboats, tugs, etc., represent a value of \$160,000.

DREDGING IN WEST SLOUGH, WEST SELKIRK

What is known as the West Slough, at West Selkirk, Man., is an arm of the Red River one mile and a half in length, and from fifty to three hundred feet wide, the head of the slough being well into the town site of West Selkirk.

It is the only secure place, as winter quarters, for dredging plant and lake craft, being protected from the ice flow in flood season, and in every way convenient for hauling out boats for repairs, etc., etc.

It is decidedly in the interest of navigation that the slough be kept navigable, and with that intention some dredging was done there in 1887, 1889, 1893 and in May, 1896.

The slough is now navigable at low water about three-fourths of its length from its mouth, and although it need not be dredged its entire length, which would not be warranted by the benefit to be derived from the work, the slough still should be further improved.

As the tow is rather long it will take one month to do the necessary dredging.

This work could be accomplished without interfering with the lake work by dredging in the slough before the dredge could be put to work at the lake, and after closing at the lake, at the end of the season.

DREDGING—MANITOBA.

CLASSIFICATION OF DISBURSEMENTS OF Dredge "Winnipeg" and tug "Sir Hector" during the year ended 30th June, 1897.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.....	625 00	625 00	620 00	515 50	279 00	80 00	80 00	80 00	246 75	416 32	578 83	625 00	4,771 40
Fuel.....	674 69	671 67									673 35		2,019 71
Wood.....											146 24	160 77	764 19
Provisions.....	175 45	167 50	114 23										
Stores.....													
Equipment.....													
Repairs.....	50 88	36 67	153 44	444 66	72 55	70 00			58 74	222 94	340 65	123 37	1,573 90
Pilotage.....													
Towage.....	41 90	56 70	26 26	61 40						59 97	22 98	33 15	302 36
Contingencies.....													
Totals.....	1,567 92	1,557 54	913 93	1,021 56	351 55	150 00	80 00	80 00	305 49	699 23	1,762 05	942 29	9,431 56
Working expenses.....	1,517 04	1,520 87	760 49	576 90	279 00	80 00	80 00	80 00	246 75	476 29	1,421 40	818 92	7,857 66
Repairs, ordinary.....	50 88	36 67	153 44							222 94	340 65	123 37	927 95
" extraordinary.....				444 66	72 55	70 00			58 74				645 95
Totals.....	1,567 92	1,557 54	913 93	1,021 56	351 55	150 00	80 00	80 00	305 49	699 23	1,762 05	942 29	9,431 56

Department of Public Works.

DREDGING—MANITOBA, FISCAL YEAR, 1896-97—*Continued.*

STATEMENT showing the material removed at different localities by dredges operated by the Public Works Department, the total annual expenditure on each Dredge, and the average cost per cubic yard, for the fiscal year 1896-97.

DREDGE "WINNIPEG" AND TUG "SIR HECTOR."

Localities.	Hard-pan.	Boulders.	Gravel.	Clay.	Clay and Stone.	Sand, ordinary.	Sand, fine.	Sand, Clay and Mud.	Totals.
Lake Winnipeg, dredging channel at mouth of Red River.	62,256	62,256
Totals.	62,256

Total expenditure during fiscal year 1896-97..... \$943 56
Average cost per cubic yard 15 $\frac{1}{2}$ cts.

PROVINCE OF BRITISH COLUMBIA.

DREDGING, NANAIMO HARBOUR.

The harbour of Nanaimo, on the east coast of Vancouver Island and Straits of Georgia, is a very important one, on account of the extensive collieries worked in its vicinity: coal is shipped from here in large quantities to all points on the Pacific coast.

This harbour may be considered to be land locked. The entrance opening towards the east, is protected from heavy seas and winds from that direction by Sharp Point on Vancouver Island and Gabriola Island. To the north, Newcastle and Protection Islands guard it from seas caused by north and north-east gales, the direction of the longest reaches.

From the north end of the harbour a narrow passage between Vancouver and Newcastle Islands, leads to Departure Bay, $4\frac{1}{2}$ miles distant, where there are several colliery wharfs, but it is only navigable by small craft. The entrance to Departure Bay for ships is by the north end of Newcastle Island.

The Nanaimo River empties into the harbour from the south over extensive mud flats lying between the New Vancouver Coal Company's Wharfs and Sharp Point. These mud flats would no doubt encroach to a much greater extent than at present upon the harbour, were it not for the scouring effect of the ebb and flow of the tide, which with varying velocity races along their outer edge.

The south channel or passage is the entrance of the harbour leading to the loading docks of the New Vancouver Coal Mining and Land Company, Limited, the largest producers and exporters of coal in the Pacific province. The workings of this company extend in all directions at depths of from 800 to 1,000 feet under Nanaimo harbour towards Protection Island, and under the Mud Flats towards Sharp Point. The mines from the new shaft sunk lately at Gallows Point, Protection Island, are advancing to meet the workings from the Esplanade shaft situated south of the company's wharfs. The annual output of coal of this company, for foreign as well as domestic use, is placed at 500,000 tons, the market value of which approximates \$2,000,000.

The south channel or passage has been much contracted since 1862 by silt carried down into it by freshets on the Nanaimo and Chase Rivers. Sailing vessels

in ballast arriving to load at the company's wharfs enter by the north channel and anchor to the north and west of the Middle Bank to wait their turn to unload at the ballast wharf and then load at the coal shoots. When loaded they are towed to sea by the south channel.

If there happens to be no room at the shoots, sailing vessels have to make way for steamships arriving for coal, by hauling off to the ground lying abreast of the wharves between the site of Nichol Rock and the spar buoy at the southern extremity of the Middle Bank, where they are exposed to dangerous winds blowing from across the Mud Flats and from the opposite direction down the passage leading to Departure Bay.

A great number of the vessels, both steam and sail which enter the harbour of Nanaimo are of a large tonnage, drawing from 20 to 30 feet when loaded. These vessels incur great risk of grounding, especially a sailing ship in tow of a tug, when leaving the company's wharfs and also because of the shoal water lying immediately to the east of the wharfs. Coasting steamers of light draught on arriving at and departing from the city wharfs find no little difficulty and danger in "Beacon" and "Carpenter" Rocks, which lie north of the wharfs about 700 feet from the shore.

The works which should be undertaken in addition to what has already been effected in connection with the lowering of the "Nichol Rock" to 16 feet depth mean low water, spring tides, at a cost of about \$44,000, are:—

1st.—The improvements required to afford safe navigation to deep draught sea going vessels calling at the New Vancouver Coal Company's wharfs.

2nd.—Such additional dredging as may be found necessary to ensure the safety of coasting craft calling at the city wharfs.

As before stated, vessels arriving for coal in ballast enter the harbour by the South Channel, come to anchor and gradually work their way up to the coal shoots. This can be done by the exercise of ordinary care without much danger of grounding or striking, now that the depth over "Nichol Rock" is 16 feet at mean low water spring tides. Of course Middle Bank is a possible danger, but its removal is out of the question at the present time, owing to its great extent.

The improvements which should first be carried out are therefore limited to those found to be necessary in the immediate vicinity of the wharfs, and thence seawards by the south passage towards the entrance to the harbour. Now it is found that on account of the close proximity of the rock to the surface of the bottom along the front of the wharfs—it crops up at a depth of 26 feet below mean low water springs—the depth of 30 feet cannot be obtained in that locality except at great cost. The improvements to be proceeded with should therefore be confined for the present to securing by dredging the minimum depth of 26 feet along the wharf front and the greater depth of 28 to 30 feet at mean low water spring tides, over the area of the south channel lying east of the wharfs.

During the fiscal year ended 30th June, 1897, the dredge "Mud Lark" was engaged from the 14th January, 1897, to the close of the year, dredging to 30 feet depth at low water ordinary springs in the South Channel between the New Vancouver Coal Company's wharfs and the entrance to the harbour. Although the "Mud Lark" with attending tug "Princess" and scows left Vancouver for Nanaimo on the 30th December, 1896, it was found impossible to commence dredging operations previous to the 14th of the following month.

On arrival at Nanaimo, the crew had to spend a considerable time in getting the dredging plant in order for working. For, before leaving Vancouver to cross the Strait of Georgia for Nanaimo, it was considered advisable, as a precautionary measure, to dismantle the dipper arm of the dredge, inclusive of running parts, as well as her timber spud anchors, and to lash the whole securely on to the scows.

Moreover, the severe racking the spuds underwent while dredging was carried on at Vancouver, rendered somewhat extensive repairs to the low or side spuds necessary, as well as the re-placing of the old stern spud by a new one partly got ready for the purpose at Vancouver, an operation which entailed a considerable amount of dressing and fitting, for the side spuds are timbers 2 feet square in section and 65 feet long, and the stern spud is 14 inches by 19 inches by 75 feet in length.

Department of Public Works.

The total number of working hours spent at Nanaimo, inclusive of repairing, moving, coaling and watering time, &c., is 1,570, of which 836 $\frac{3}{4}$ hours were spent on dredging operations proper. During this time 418 $\frac{3}{4}$ scow loads of material, aggregating 56,200 cubic yards were dredged.

The details of the running expenditure incurred in connection with this work are as follows :

Wages.....	\$ 3,872 88
Coal.....	883 38
Water.....	35 00
Provisions.....	748 93
Stores.....	118 03
Equipment.....	1,692 54
Towage	150 00
Stationery, printing and contingencies.....	119 45
	\$ 7,620 21

DREDGING, VANCOUVER HARBOUR.

The city of Vancouver, New Westminster District, is built on the southern side of Burrard Inlet, 15 miles north of the mouth of the Fraser River. The principal part of the city stands on a peninsula bounded on the north by the waters of Burrard Inlet, on the south by a small indentation of the sea shore called False Creek, and on the west by English Bay.

Burrard Inlet is always safely navigable for the deepest draught vessels and constitutes a fine harbour.

The passage at the narrows or mouth of the inlet, is about half a mile wide : opposite the city front, however, the inlet is more than 2 miles wide, with a depth varying from 6 to 20 fathoms, and it extends about 20 miles further inland. On the west and south sides of the harbour, English Bay and False Creek also afford accommodation for shipping.

On the 29th November, 1896, the dredge "Mud Lark" with attending plant, which ceased operating in Victoria Harbour on the 21st of the same month, anchored at the west end of the Canadian Pacific Railway Company's Wharf in Vancouver Harbour. On the 3rd December following, everything was in readiness to commence dredging operations ; but these could not be proceeded with owing to an Australian liner and an Empress steamer lying along the front of the said wharf.

Advantage was taken of the delay thus caused, to lengthen the dipper arm by six feet in order to prevent the abrasion and cutting of the wire rope which, owing to the great depth to be made, was liable to occur during the lowering of the dipper to the toe of the slope of the material to be removed.

On the 8th December the wharf berths were clear ; but it was only on the 12th that dredging could be commenced ; the lengthening of the dipper arm having taken longer than anticipated. Dredging operations were carried on up to 23rd December, when the dismantling of the plant preparatory to removing to Nanaimo Harbour was commenced.

In the nine days during which the dredge was kept steadily at work, a berth 36 feet deep at low water, from the knuckle or bend at the centre of the railway wharf to the line of 30 feet depth beyond its eastern end, was made, and the berth along the western portion of the wharf was improved.

Eleven and two-thirds scow loads, aggregating 1,573 cubic yards of mud, ashes, tins and rubbish of every kind were removed in front of the eastern portion of the wharf over a length of about 500 feet and at its western end 7 scow loads, containing 945 cubic yards of mud and rock were dredged ; making a total of 2,520 cubic yards of dredging done in nine days. Total cost of work \$1,866.26.

DREDGING, VICTORIA HARBOUR.

The city of Victoria is situated at the south-eastern corner of Vancouver Island. The harbour, consisting of the inner and middle basins and the outer harbour, opens out on the Straits of Juan de Fuca. The inner and middle basins afford but limited accommodation, and the entrance is narrow and tortuous. The outer harbour, artificially improved and added to at the expense of Messrs. R. P. Rithet & Co., offers easy approach and accommodation for vessels of the deepest draught at low water.

After receiving a thorough overhauling, of which it stood much in need, the dredge "Mud Lark" with attending tug and scows, was placed at work in Victoria Harbour on the 14th October, 1896, with the object of deepening to 21 feet at low water, or as deep as the bed rock would allow of, along the wharf front in the inner harbour between the custom house and the railway bridge. This work was carried on continuously up to the 21st November following, excepting occasional stoppages caused by stormy weather, breakages, &c. During this period of 37 days, 83½ scow loads, aggregating 11,295 cubic yards of dredged material, viz., soft mud and stiff clay, were removed. Total cost of work, \$3,462.20.

On the 21st November, 1896, preparations were made for moving the above plant to Vancouver Harbour.

DREDGING—BRITISH COLUMBIA.

CLASSIFICATION of Disbursements of Dredges operated by the Public Works Department during the year ended 30th June, 1897.

DREDGE "MUD LARK."

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.	469 52	435 15	592 33	640 00	611 66	679 00	640 00	636 78	637 10	640 00	1,280 00	7,261 54
Coal.	337 04	.....	320 00	.....	57 40	223 99	96 60	194 25	311 14	1,540 42
Water.	17 44	.....	.....	.....	17 50	.....	26 69	61 63
Provisions.	179 62	77 49	249 58	.....	61 40	201 81	135 23	142 38	237 36	1,284 87
Stores.	40 94	31 59	123 62	3 25	.....	29 90	31 05	31 05	35 34	295 78
Equipment.	86 08	118 65	825 81	27 62	79 31	79 61	157 25	232 15	387 50	1,993 98
Repairs.	78 00	1,216 87	117 00	287 06	.....	150 00	.....	.....	.....	43 40	1,742 33
Towage.	290 00	13 20	1 00	9 60	1 25	.....	2 50	440 00
Contingencies.	27 55
Totals.	469 52	513 15	2,452 88	984 73	2,725 17	723 07	989 11	1,181 78	1,044 93	1,239 83	2,323 93	14,648 10
Working expenses.	469 52	435 15	1,236 01	867 73	2,438 11	723 07	989 11	1,181 78	1,044 93	1,239 83	2,280 53	12,905 77
Repairs, ordinary.	78 00	384 73	.....	.....	.....	.....	.....	.....	.....	43 40	506 13
do extraordinary.	832 14	117 00	287 06	.....	.....	.....	.....	.....	.....	1,236 20
Totals.	469 52	513 15	2,452 88	984 73	2,725 17	723 07	989 11	1,181 78	1,044 93	1,239 83	2,323 93	14,648 10

DREDGING—BRITISH COLUMBIA—Continued.

CLASSIFICATION OF DISBURSEMENTS of Dredges operated by the Public Works Department during the Year—Continued.

SNAG BOAT "SAMSON."

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Grand Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Wages.				663 39	540 00	540 00	540 00	540 00	540 00	540 00	540 00	1,077 42	5,560 81
Coal.		40 00		250 00	115 00	115 00					115 00	257 50	737 50
Wood.				16 25	32 50	30 00	30 00	22 50	30 00	30 00	38 00	66 00	295 25
Water.													30 00
Provisions.				106 61	54 64	149 29	94 40	109 32	89 89	101 21	54 20	266 34	1,025 90
Stores.				53 56	5 60	16 50			5 60	9 20		99 93	190 39
Equipment.				13 19			12 90	23 34	21 45	36 09	56 69	19 55	183 71
Towage.				17 00								30 00	47 00
Contingencies.				8 15	4 25	5 08	5 75	3 25	3 50	4 75	4 00	9 50	48 23
Totals.		40 00		1,128 15	636 99	855 87	683 05	694 41	690 94	721 25	807 89	1,865 24	8,118 79
Working expenses.				1,128 15	636 99	855 87	683 05	694 41	690 94	721 25	807 89	1,856 24	8,118 79
Repairs, ordinary.		40 00		214 32								30 10	253 42
do extraordinary.				713 83			69 00	133 00					1,974 08
Totals.		40 00		2,056 30	636 99	855 87	752 05	831 41	690 94	721 25	807 89	1,895 34	10,346 29

DREDGE "MUSKRAT."

(Charged to special Appropriation—Columbia River, above Golden.)

Wages.				135 00	130 00	312 00					130 50	634 16	1,321 66
Provisions.					131 45	66 70					116 90	116 06	431 11
Stores.												67 35	67 35
Equipment.					10 70	13 27	30 00				44 76	853 15	956 03
Contingencies.						123 25	3 40			30 00		53 28	214 93
Totals.				135 00	262 15	515 22	33 40			30 00	282 16	1,724 00	2,991 08
Working expenses.				135 00	262 15	515 22	33 40			30 00	282 16	1,724 00	2,991 08

Department of Public Works.

DREDGING—BRITISH COLUMBIA.

STATEMENT showing the material removed at different localities, the total annual expenditure on each dredge and attending tug; also the average cost per cubic yard, for the fiscal year 1896-97.

DREDGE "MUD LARK."

Localities.	Hard-pan.	Boulders.	Gravel.	Clay.	Stone and clay.	Mud, ashes, tins, and other refuse.	Sand and clay.	Mud.	Totals.
	Cubic yards.	Cubic yards.	Cubic yards.	Cubic yards.	Cubic yards.	Cubic yards.	Cubic yards.	Cubic yards.	Cubic yards.
Nanaimo.....	56,200	.....	56,200
Vancouver.....	500	1,573	.....	400	2,518
Victoria.....	11,295	.....	.....	.....	.....	11,295
Totals.....	11,295	500	1,573	56,200	400	70,013

Total expenditure during Fiscal Year 1896-97 \$14,648.10
Average cost per cubic yard..... 21 cents.

DREDGING PLANT.

The following is a list of the dredging plant owned and operated by the Department in various parts of the Dominion.

MARITIME PROVINCES.

The propeller hopper dredge "St. Lawrence."
" " "Canada."
The dipper dredge "New Dominion" and 4 scows.
" " "Prince Edward" " 3 "
" " "Geo. McKenzie" " 4 "
" " "Cape Breton" and 2 steel barges.
One stone lifter including boiler, engine and large grips.

QUEBEC AND ONTARIO.

The elevator dredge "No. 9" 2 scows and tug "Delisle."
dipper " "Queen" 2 " "Ottawa."
" " "Nipissing" 2 " "St. Paul."
" " "Ontario" 2 " "Sir John."
" " "St. Louis" 2 " "Sensation."
" " "Challenge" 2 " "Trudeau."
Stone lifter (Twin)

MANITOBA.

The dipper dredge "Winnipeg;" tug "Sir Hector," 2 scows and coal barge.

BRITISH COLUMBIA.

The snag boat "Samson."

The dipper dredge "Mud Lark," 3 scows and tug "Princess."

The self propelling stern wheel clam shell dredge "Muskrat" and two scows.

SHIP CHANNEL, RIVER ST. LAWRENCE—BETWEEN MONTREAL AND QUEBEC.

Five elevator dredges "No. 8," "No. 11," "No. 12," the "Laval" and the "Laurier." Tugs "John Pratt," "St. James," "St. Francis," "C. J. Brydges," "M. F. Parsons," "Cartier," 2 stone lifters, 2 coal barges, 12 dump scows of 80 yards capacity, 2 scows of 150 yards capacity, 1 sounding scow, 2 coal scows and 2 winch scows.

NEW DREDGING PLANT.

One elevator dredge, the "Laurier"—sister dredge to the "Laval"—for the St. Lawrence Ship Channel.

One steel tug the "St. Jean d'Iberville" as tender to new dredge "Laurier."

One steel dipper dredge, the "Cape Breton," for the Maritime Provinces.

Two steel hopper barges, for dredge "Cape Breton."

Two 75 yard dump scows, for dredge "Nipissing."

The above vessels were completed during the fiscal year, 1896-97.

DREDGE VESSELS, REPAIRS.

The following amounts were expended in 1896-97 on repairs to the dredges, inclusive of attending tugs, etc., which are owned and operated by the Public Works Department throughout the Dominion.

MARITIME PROVINCES.

"St. Lawrence".....	\$ 2,210 96
"Canada".....	1,878 12
"New Dominion".....	606 11
"Prince Edward".....	1,559 20
"Geo. McKenzie".....	381 22
"Cape Breton".....	1,361 54

QUEBEC AND ONTARIO.

"Challenge".....	3,007 00
"Ontario".....	1,050 88
"Nipissing".....	1,646 11
"Queen".....	1,771 28
"St. Louis".....	1,162 27
"Canals No. 1".....	2,299 66
"Nithsdale".....	47 30
"Stone Lifter" (Twin).....	21 07

MANITOBA.

"Winnipeg".....	1,573 90
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Department of Public Works.

BRITISH COLUMBIA.

"Mud Lark"	\$ 1,698 93
"Samson"	2,227 50

The expenditure incurred for repairs and renewals to plant engaged on Ship Channel improvements, River St. Lawrence between Montreal and Quebec, may be stated in detail as follows:—

Dredge "Laval"	\$ 1,113 17
" "No. 8"	604 91
" "No. 11"	1,363 05
" "No. 12"	1,231 67
Tug "Cartier"	67 08
" "St. Francis"	109 39
" "M. F. Parsons"	481 69
" "C. J. Brydges"	447 23
" "John Pratt"	277 02
Survey Str. "St. James"	312 88
Stone Lifter "No. 2."	68 73

GRAVING DOCKS.

The Dominion Government owns and maintains three graving docks, viz., the Lorne graving dock at Lévis, in the province of Quebec; the Kingston graving dock at Kingston, in the province of Ontario; and the Esquimalt graving dock at Esquimalt, near the city of Victoria, in British Columbia.

LÉVIS GRAVING DOCK.

The Lévis graving dock is situated at St. Joseph de Lévis, on the southern shore of the St. Lawrence, about 2 miles east of Quebec. The dock proper is built of heavy cut blocks of Terrebonne limestone laid in Portland cement mortar; it is lighted at night with 12 arc lamps so that vessels may be docked at any time and work carried on without interruption.

The general plan of the dock is a rectangular figure, 454 feet in length by 100 feet in breadth, with a circular head of 31 feet radius, and a square offset of 19 feet by 454 feet on each side covering the altar steps, together with the timber slides and stairways which are placed in pairs side by side at either end. The width of the inner invert between the main body of the dock and the caisson berth is eight feet; making the total length of the dock inside the first meeting place of the caisson 484 feet.

The wing wall on the eastern side of the entrance, extends 150 feet from the caisson into the river, while that on the western side extends 270 feet in the same direction.

The depth of water on the sill is $26\frac{1}{2}$ feet at high water spring tides, and $20\frac{1}{2}$ feet at high water neap tides, while the width at the entrance is 62 feet.

The dock is closed by a wrought iron caisson gate, travelling on rollers, worked by auxiliary high pressure steam engines of 34 horse power.

These engines also work a small pump with a capacity of 900 gallons per minute, which is worked to clear the drainage well, when the dock is in use.

The main pumps, two in number, are of the ordinary style of lift pumps, four feet in diameter with a five foot stroke and discharge 14,000 gallons per minute. They are worked by a pair of jet condensing engines, with cylinders of $27\frac{1}{2}$ inches in diameter and three feet stroke, and their horse power is 400.

Steam is supplied by three tubular boilers, 14 feet in length and 6 feet in diameter.

On the west side of the dock a boiler and engine house, 136 feet by 37 feet, has been erected of brick; also a building 40 feet by 80 feet for office and general storage purposes, etc., and a wooden building for storing oil 18 feet by 18 feet. The dock property is 480 feet wide by about 1,000 feet in length and covers an area of about 487,000 square feet or $11\frac{1}{2}$ acres, which is inclosed by a wooden fence.

During the fiscal year ended 30th June, 1897, this dock was kept in good working condition with the ordinary care and repairs to pumping machinery and caisson. 40 new 3-inch x 12-inch pine staging planks, 15 feet long, were purchased for renewing old ones; the head and sides of the dock were levelled back of the coping and a drain put in to take away surface rain water and melted snow. In June last (1897) 130 horizontal timber shores were purchased to renew old ones used during the past ten years and which were considered unsafe.

The total expenditure incurred during the fiscal year 1896-97 for working expenses amounts to \$7,718.88, which may be subdivided as follows:—

Staff.....	\$4,507 68
Labourers.....	513 39
Coal supply.....	937 75
Shores and planks	1,385 51
Oil, waste, etc., and small repairs.....	302 32
Contingencies	72 23
	<hr/>
	<u>\$7,718 88</u>

KINGSTON GRAVING DOCK.

This dock is situated near the centre of Kingston harbour at the foot of Union Street. It is built of limestone laid in cement mortar, has good yard accommodation and can take in any vessel that passes through the Welland Canal; the depth of water on the sill is $14\frac{1}{2}$ feet at low water and $16\frac{1}{2}$ feet at high water.

The following is a summary description of the dock, caisson gate, boilers, engines, etc.:—

The length of the dock from the foot of the stairway, at its head over the keel blocks, and up to the inner invert is 280 feet. This invert is 10 feet wide, hence from the inner side of the caisson to the foot of the stairs the distance is 290 feet. By placing the caisson gate out on the apron, with its inner meeting face hard up against the outer invert, the last mentioned length is increased by 23 feet, viz.: to 313 feet. The length at coping level from the outer end or lake face of the wing walls of the dock, to the top of the stairway at its head is 370 feet. The width of the dock between walls is: at floor level, 47 feet, and at coping level, 79 feet; its depth, top of coping to floor, is $26\frac{1}{2}$ feet and to intrados of inverts, in centre, 22 feet, and at their sides $20\frac{1}{2}$ feet, the radius of the inverts being 193 feet. The rudder well commences at 10 feet from the face of the inner invert and is $2\frac{1}{2}$ feet wide, 24 feet long and 12 feet deep. Keel blocks are placed at 5 feet centres from end to end of the dock; there are also 32 bilge blocks at 10 feet centres on the floor of the dock.

The caisson is 59 feet in length on long face, 57 feet on short face, 13 feet wide by 22 deep. It is operated by a worm-gear arrangement, in connection with the auxiliary engines hereinafter alluded to.

The large steam boilers (battery of 4) are all connected and are provided with controlling valves, so that one or more of them may be used at the same time. The length of the shell is 14 feet, each boiler has $84-3\frac{1}{2}$ -inch flues of the same length as the shell; diameter 5 feet 6 inches, thickness of plates $\frac{3}{8}$ inch. Pressure of steam carried, 100 pounds to square inch.

The small auxiliary boiler is of the drop flue type. The shell, which is 9 by 4 feet, plates $\frac{3}{8}$ inch thick, has 250 drop flues $1\frac{1}{2}$ by 18 inches, with circulating tubes. This boiler saves from 50 to 75 per cent of the fuel required to keep up steam in

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one of the large boilers for general purposes, when the main pumps are not being operated.

The main engines, two in number, are of the vertical high pressure type; the cylinder being 18 by 18 inches. These engines operate the two main pumps.

The main pumps are of the centrifugal type, having each a 20 inch diameter discharge, and jointly capable of discharging 30,000 gallons per minute, against a head of 33 feet.

The auxiliary engines are of the vertical high pressure type. The two cylinders are each 12 inches by 12 inches. These engines operate the auxiliary pump and the caisson.

The fire pump was made by Knowles Co., of Boston; its steam cylinder is 15 inches by 21 inches and the water cylinder 10 inches by 21 inches. This pump can also be used to do the duty of the auxiliary centrifugal pump, should the latter be disabled.

The pony engine and pump has two steam cylinders, each 6 inches by 7 inches; its water cylinder is 4 inches by 7 inches. This pump is used for feeding the water supply to the boilers and for sprinkling purposes, and is capable of supplying 3,000 gallons per minute against a head of 32 feet.

A large steam derrick is used for lifting purposes in connection with docking operations and repairs.

Besides the machinery building, which is of stone, and measures 84 by 36 feet, exclusive of chimney 15 feet by 15 feet at the base, a wooden metal cased shed, 30 feet by 40 feet, has been erected to the southward of the said building for the storage of coal. The whole dock property is inclosed by a wooden fence of the best description, 868 feet long, with gates on Gore and Union streets.

During the fiscal year ended 30th June, 1897, this dock was maintained in good working condition, the ordinary care being bestowed on the pumping machinery, caisson, derrick, etc. No new work was undertaken.

A sum of \$73.22 was expended for repairs to boilers and engines. A room has also been partitioned off in the coal shed for storing air pumps, etc., etc., at a total cost of \$33.35.

Total outlay for working expenses in 1896-97, \$4,657.10.

ESQUIMALT GRAVING DOCK.

This dock is built in a small cove in Esquimalt harbour; it was commenced by the Provincial Government of British Columbia; but the work was taken over by the Dominion Government while being proceeded with, and the dock completed and opened in July, 1887.

The principal dimensions of the dock and caisson gate may be stated as follows:—

	Feet.	Inches.
Length of dock over keel blocks.....	430	...
Width of inner invert.....	20	...
do caisson chamber.....	15	10
do outer invert.....	15	...
Total length of dock.....	480	10
Width of dock at coping level... ..	90	...
do do entrance.....	65	...
do floor of dock.....	41	1
Radius of inverts.....	16	6
Total depth of dock above inverts.....	33	6
Height of inverts above floor of dock.....	3	...
do keel blocks.....	2	10
Length of do.....	4	...
do caisson (inside facing).....	67	...
do do (outside facing, reversible).....	15	8

At low water the depth on the invert is 24 feet 6 inches, and at ordinary high water, 26 feet 6 inches.

The following is a summary description of engines, boilers, pumps, electrical and diving apparatus, hoisting and hauling machinery, buoys, lathes and other machine tools and appliances, and supplies required for repairing, fire fighting and other purposes, which are available for use at this docking station:—

- Two condensing engines, cylinders, 27 inches diameter, 36-inch stroke.
- Two lifting pumps, cylinders, 48 inches diameter, 60-inch stroke.
- Three Cornish boilers, $6\frac{1}{2}$ feet diameter and 14 feet in length.
- One high pressure auxiliary engine, cylinder, 16 inches diameter, 20-inch stroke.
- 1 centrifugal drainage pump, 14 inches suction, 12 inches discharge.
- 1 return tubular boiler, 5 feet 3 inches diameter and $14\frac{1}{2}$ feet in length.
- 1 hauling engine for caisson, cylinder 12 inches diameter, 14 inches stroke.
- 1 centrifugal drainage pump, 6 inch suction, 5 inch discharge.
- 1 Edison No. 4 dynamo, 1,600 C. P., 16 lamps around dock.
- 1 engine for dynamo, 8 inches diameter by 12 inches stroke.
- 1 iron movable stop-gate for caisson chamber.
- 25 iron bollards around dock.
- 1 wooden crane, 10 tons capacity.
- 8 hand capstans.
- 6 hydrants.
- 3 hose-reels and 200 feet of canvas hose.
- 1 diving apparatus, complete.
- 1 lathe, 6 feet bed.
- 1 drilling machine.
- 1 set of taps and dies, complete.
- 1 steam box for bending planks.
- 2 iron warping buoys.
- 2 dolphins to mark channel at entrance of dock.

During the fiscal year ended 30th June, 1897, thirteen vessels were docked, aggregating 27,914 tons. The time occupied in docking these vessels was 103 days and the dockage dues collected amounted to \$7,514.80.

In addition to attending to their duties when vessels were docked, the staff at the Esquimalt Dock were kept steadily employed in connection with the following works of maintenance and repair, etc., viz.:—

Putting caisson on outside berth, cleaning pumps, etc., pump wells, caisson chamber and outer invert; scraping meeting faces and cleaning and painting valves.

Building coffer dam and cutting groove in pier head for tide gauge float to travel in. Making wooden boxes across caisson chamber and in groove on pier head for tide gauge purposes.

Making set of new earth boxes for latrines and new stone beds for planing machine and also bolts in stone beds, etc.

Making new pier head ladders, strengthening trestles and roof of machine shop to render them fit to carry pulleys of planing machine and lathe.

Casting 550 lbs. of old metal, for use in making leading blocks, sheaves, rowlocks and tide gauge fittings.

Painting side ladders and timber slides of dock and fitting new distance pipes to discharge pipe of centrifugal pumps.

Making four complete tide gauges, inclusive of all small screws and other fittings required in connection with the same.

Chipping the upper compartment of the caisson and painting the same. Casting 70 lbs. brass for new sheaves required for steamer Princess and finishing said sheaves.

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Putting caisson in chamber and coating it with Rathjen's anti-corrosive composition.

Making new sets of lathe, planing and drilling tools. Repairing pumps, fire hose and divers helmets.

Making tube expanders for boilers and casting and finishing brass gong for dredge "Mudlark."

Chipping and painting stop gate.

Taking up warping buoys and painting same with anticorrosive composition. Filling hollow beds (entablature) of large engines with cement, wedging up with iron and putting in new holding down bolts to reduce the jarring of the engines.

Repairing differential pulley blocks and casting new sprocket-wheel, sheaves for keel block rams, leading blocks and pulleys.

Casting new oil cups and fitting to large engines and making new stud bolts for steam chest of small engine.

Collecting 600 feet lin. of 12 inch drift logs, outside of harbour, for use as shores.

Re-tubing, with the assistance of one boiler maker, the three large boilers and sealing their shells and painting the same.

Casting 300 lbs. of brass and babbitt and magnolia metals and fitting to bearings of pump and engine shafts.

Making one new gangway brow, inclusive of all forged iron work required for same. Making new sash and frame for skylight in roof of work shop, and patterns for all castings.

Chipping sea side as well as dock side of caisson and painting same.

Casting hubs for tide gauge wheels; making a new set of stub bolts for man hole doors of boilers and overhauling safety valves.

Overhauling large engines, dressing brasses, flushing out gutters and urinals and digging up thistles and destroying same.

It will be seen from the above that a considerable quantity of work has been done during the fiscal year 1896-97, and it is necessary that such works of repair, renewal and improvement be carried on continuously if an establishment such as the Esquimalt Graving Dock is to be maintained in good order. The boilers are now in excellent condition and steam can be raised quicker than in any previous year and with less fuel.

With the exception of the brick lining of the furnace of the small boiler, which should be renewed, as also some 60 feet of zinc gutters and a small portion of the equipment, such as the diving dress and the fire hose, the whole dock establishment is now in better working condition than it was when taken over from the contractors, about 10 years ago.

The total expenditure incurred during the fiscal year 1896-97 for working expenses—staff and maintenance inclusive of ordinary repairs and supplies—amounts to \$10,770.28, which may be subdivided as follows:—

Wages.....	\$ 8,591 42
Coal.....	621 07
Water.....	327 00
Stores.....	192 79
Equipment.....	932 75
Contingencies.....	105 25
Total.....	\$ 10,770 28

SLIDES AND BOOMS.

The Dominion Government owns and operates slide and boom works built to facilitate the passage of square timber, round logs, flatted and dimension timber, etc., on the River Ottawa and tributaries, on the lower 40 miles or so of the St. Maurice and in the Trent and Newcastle District between Fenelon Falls and Heeley's Falls.

In the subjoined reports, the superintending engineers of these river works, Messrs. G. P. Brophy, F. X. Thos. Berlinguet and R. B. Rogers, give particulars relative to the works of construction, re-construction, improvement and repair carried out under their supervision on Government slides, booms, piers, dams, streams, buildings, etc., during the fiscal year ended 30th June, 1897; the expenditures incurred for staff, maintenance, improvements, etc.; the quantities of the various descriptions of timber that pass through their works, the revenue accrued from tolls levied on the said timber, and other information of general interest and utility to lumbermen and the public at large.

REPORT ON THE OTTAWA RIVER WORKS. BY G. P. BROPHY,
SUPERINTENDING ENGINEER.

OTTAWA, 25th September, 1897.

LOUIS COSTE, Esq., Chief Engineer,
Department of Public Works,
Ottawa.

SIR,—As requested by you in your communication, No. 2506 of 10th July last, I have the honour to submit the following report relating to works under my charge on the Ottawa River and certain of its tributaries, for the fiscal year ended 30th June, 1897.

During the autumn months of 1896, the lumbermen's drives were continued until the logs and other descriptions of material reached the mills for manufacture or their destinations for export, and rather a low pitch of water prevailed.

At the season of low water the foundations of the works were examined and the necessary repairs commenced, which may be described as follows.—

REPAIRS AT STATIONS ON THE OTTAWA RIVER (MAIN STREAM).

Carillon Station.—Some of the guide boom support piers had portions of their timbers renewed, while the plank covering of the slide and booms was repaired.

Hull or North Chaudière Station.—After the water had been let out of the Eddy pond and slide channel, the foundations of the works were examined and necessary repairs executed; the foundation timbers of the bulkhead and side piers strengthened, loose planks securely fastened and projecting spike-heads counter sunk below the surface of the flooring. A pier 20 ft. x 9 ft. x 7 ft. was built as a support to guide boom at upper entrance; a sheeting of 3 inch plank applied to the portion of the slide under the Hull bridge: stop-log hoisting apparatus had new frames provided; platforms and railing repaired and boom fastenings and timbers generally adjusted.

Ottawa or South Chaudière Station.—New stop-logs provided for second bulkhead; side pier on south side of second slide levelled up; new stringers put in; top of pier replanked; worn out planking in bottom of slide replaced; projecting spikes driven home; boats painted; scow prepared for service; ice cut and stone filling placed between sills in bottom of slide.

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Bridges at Ottawa and Hull and Roadway or Causeway between these cities.—The parapet wall on the easterly side of the causeway was taken down to admit of laying iron beams to carry the pavement used in widening the thoroughfare; a temporary walk laid for the accommodation of pedestrians while the work was in progress; the roadway scraped and cleaned; a coating of road metal laid and afterwards the granite block paving extended towards the Hull bridge. Advantage was taken of the unwatering of the Eddy ponds to repair the foundations of the three piers supporting the Hull Slide bridge and to renew boom tenders that had been damaged; while in the superstructure, new planking on the roadway and footpath took the place of worn out material.

At the Union Bridge it was found necessary to overhaul the planking and make good defects caused by the heavy traffic.

The Chaudière line of bridges over slide and hydraulic channels had the floor beams levelled up to grade and strengthened by the insertion of new timbers, planking repaired, and a guard rail constructed on both sides of the easterly passage of the truss near the southerly end of the bridge, for the purpose of preventing injury being done to the iron work by passing vehicles.

Sappers Bridge.—The portion of the roadway over the stone arches and solid approach, received a coating of road metal, and a supply of scoria blocks, sand, cement, concrete-stone and 3-inch plank was procured preparatory to the laying of a permanent pavement.

Maria Street Bridge.—The railing was repaired and the westerly portion of the roadway recovered with 3-inch plank. The westerly approach to this bridge was graded up and a covering of road metal laid, which brought it to a corresponding level with the planking.

Chats Station.—The glance pier and boom on the south side of the canal leading to the slide which had been considerably damaged by passing timber were repaired and strengthened, and the crabs on bulkheads, for raising stop-logs, were repaired in their fastenings and provided with four new handles.

Portage du Fort Slide.—This slide required some small repairs which were attended to by the officer in charge during the running season.

Mountain Station.—At this place it was found necessary to renew 40 sills in the bottom of the slide; the flooring plank was raised, to admit of this work being carried out, and such of the material as was found serviceable relaid. The side pier on the north side, at the outlet of the slide, having been damaged by ice shoves last spring, was repaired and put in working order.

Calumet Station.—At this place the slide planking and aprons were repaired, boom fastenings adjusted and the hoisting apparatus improved.

Joachim's Station.—The booms here were strengthened by placing additional timbers and chains; the plank covering of boom at head of lower slide renewed; corners and sides of boom support piers leading to slide faced with plank; covering of dams repaired; additional stone-filling provided for piers, stop-logs furnished for regulation of flow of water; bottom planking of slide, where torn out, renewed; decayed timbers removed from the tops of the guide piers for which new pieces were substituted and a new boom made and stretched above the entrance to the second slide.

Rocher Capitaine.—Before the running of timber commenced and also during the season of navigation, the officer in charge attended to some small necessary repairs such as replacing broken planks and driving in of spikes.

REPAIRS ON TRIBUTARIES OF THE OTTAWA.

Gatineau River.—As usual on this stream, there were large deposits of sand, bark and other debris obstructing portions of the canal, the creek or outlet from the pond and other channels leading to the rafting grounds and sorting places near the mouth; these, at low water season, produced shoals which had to be excavated and removed; the flooring of bridge over the new canal was repaired and a supply of timber procured for renewal of decayed pier structures; a partial reconstruction of

gaps; also an extension of guide boom, re-arrangement of pocket booms, strengthening of stiff boom or platform at lower gap together with certain minor repairs of camp house, fences and boats were executed at intervals by the staff of the river works.

Madawaska River.—Measurements were made at some of the stations in anticipation of repairs that will have to be done in the course of the next fiscal year.

Coulouge River.—In the spring of 1896, a section of the main dam near the head of the slide was swept away; when the water had fallen, a temporary pier was placed in the gap for the purpose of furnishing water to the slide, and during the months of August and September this pier was removed; a coffer-dam built with considerable difficulty and a permanent closure of the gap effected in swift water due to the draught occasioned by the high falls, a short distance below this point. The section of dam re-built was 70 feet long, 5 feet high and 15 feet face. The remaining portion of the dam was sheeted with 4-inch plank for a distance of 50 feet, the piers supporting the guide boom above the slide entrance, Nos. 1 and 3, were torn down to the water's edge, the ballast having first been removed and after the placing of new side and tie timbers and an oak mooring post in each pier, the stone filling was returned to its place. Decayed timbers in three other piers, 5, 6 and 7, were renewed and an oak post set in No. 5. Plank fenders were spiked on the corners of all the piers and portions of the facing plank were renewed. Two new oak snubbing posts were planted in the river bank to securely hold the upper end of the main guide boom.

A section of the slide, having its foundation on a rocky shelf backed up by a bold reef on the inner side, showed a tendency to slip out towards the chasm; to check this, a stone filled crib was built against the foundation as a buttress support. The slide planking, posts and braces were repaired, where worn out and decayed, and a quantity of elm plank provided, for a partial renewal of the sides and bottom after the running season.

Black River.—One of the side piers at the foot of the slide was carried away by the spring floods and has to be re-built. Owing to the steep pitch off at the slide outlet, the bottom and side sheeting is subject to great tear and wear; for a distance of 110 feet 4-inch maple plank had to be laid in the bottom, and, from time to time during the season, the timbers of the slide side piers and guide booms had to undergo necessary repairs. As a precautionary measure, a quantity of timber and other materials was procured for the renewal of the part of the slide, where the original structure, when private property, was built on a bed of slabs with an unstable foundation and is now in a state of decay: this defect will be remedied after the timber and logs of the present year's drives have passed the station.

Petewawa River.—At the first, second and third chutes on this stream, the planking of the slides was repaired and some blasting out of boulders done in the Bois Dur Channel. For later repairs at these stations, a quantity of flatted timber has been provided which will be worked into the foundation, side piers and dams, as a means of strengthening these structures.

Crooked Chute.—The slide and main governing dam were repaired. Flat bars of iron 6 in. x $\frac{1}{2}$ in. were bored, fitted and fastened on the bottom and sides of slide to prevent logs and timber wearing through the plank; the slide planking was patched in places where required; the timbers of the guide boom at the head re-arranged with the view of strengthening it; the main dam stanchioned with stone and brush and the boom support piers repaired and re-filled with stone where some of the ballast had been carried away. Further repairs will be required at this station, before the opening of next year's business; but the bulk of the timber is on hand for carrying out this work.

Cedar Lake.—The piers of retaining dam were stanchioned and the sides of piers forming slide were covered anew with 5-inch plank. The dams, lining either side of the sluice-ways, were generally overhauled and repaired where damaged, and some of the most dangerous rocks, forming obstructions to the descent of timber and logs, all along the river, as far down as Lake Traverse, were blasted out and removed.

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Dumoine River.—At the head of the long slide above High Falls, a new double guide boom, 275 feet long, was constructed and its support piers and decayed timbers removed from the upper courses which were replaced by new material; a gap pier above the slide was re-built and the main governing dam was raised two feet and the leakage stopped as much as possible by placing gravel, etc., in front. The slide, which is a very long one, was repaired in its regulating bulkhead, side piers, bents, posts, sills and planking; and at places where a subsidence of the structure had taken place, timbers for blocking up were used for the purpose of restoring the grades.

Last spring, the waters of the Ottawa and tributaries rose to a fair average pitch, and during the portion of the year covered by this report, a good height of water was maintained on most of the streams, for the driving purposes of the raftsmen. The works, on some of the streams, were subjected to a very considerable strain, and were more or less damaged by ice shoves, the action of high water and the pressure of timber and logs; but over the whole system of improvements, it may be said that the damage sustained was not above the average of former years.

The following statement, which is based on a return furnished by the collector of public works revenue, shows the quantities of the various descriptions of timber that passed the government works, above referred to, together with the amount accrued as tolls, for the fiscal year 1896-97.

Square timber.....	14,072 pieces.
Saw logs.....	4,329,253 "
Boom and dimension timber.....	86,647 "
Railroad ties.....	153,163 "
Fence posts.....	63,755 "
Cedars	23,291 "
Total.....	4,670,181 "

Also 13,842 cords pulp wood and 331 cords shingle wood.

The revenue accrued on the above was \$51,553.04.

In respectfully submitting the above,

I have the honour to be, Sir,

Your obedient servant,

GEO. P. BROPHY,

Supt. Engr. O. R. Works.

REPORT ON THE ST. MAURICE RIVER WORKS.

(By F. X. THOS. BERLINGUET, SUPERINTENDING ENGINEER.)

THREE RIVERS, 28th October, 1897.

LOUIS COSTE, Esq.,
Chief Engineer,
Dept. Public Works, Ottawa.

SIR,—I have the honour to submit the following report on the works under my charge, on the St. Maurice River, for the fiscal year ended 30th June last.

Before entering into details, a few general remarks in relation to the River St. Maurice and its works may not be out of place.

The St. Maurice, as is well known, is a river of great magnitude. Its extent has never yet been correctly ascertained, but it is generally supposed to drain a territory of more than 20,000 square miles. Its course is generally through a very mountainous country, and such is the rapidity of its current, and the roughness of

its numerous falls and rapids, that no works, except those of the most solid and permanent description, can be made to stand.

In fact, at certain seasons of the year, the river is considered unmanageable. The St. Maurice differs in this respect from the Ottawa and most other rivers where timber is made; here but few places are to be found where timber can be retained or boomed.

The St. Maurice works were commenced in December, 1851, and additions thereto, to a limited extent, have been made nearly every year since.

The trade of the St. Maurice River, though it languished for a number of years, has now taken a start that promises to be permanent. This is because of the great demand for pulpwood, and the gigantic hydraulic works and factories built at Grand' Mere Falls, in connection with the new pulp wood industry, also of the construction of the Great Northern Railroad, which will facilitate communication in the St. Maurice country.

The government works now in use are built on the first forty miles of the river above its outlet. They are divided into four sections, which are known as follows: Three Rivers, Shawenegan, Grand'Mère and Grandes Piles stations. Each station is under the charge of a boom master; the boom masters at Shawenegan and Three Rivers have each an assistant.

Three Rivers, the first station, comprises the works on the first fourteen miles from the outlet of the St. Maurice. Shawenegan, the works between the Gabelle and the Hêtres rapids, a distance of twelve miles. Grand'Mère station, the works between the Hêtres and the Little Piles, a distance of eight miles, and Grandes Piles station, the stretch extending from the Little Piles up to Ile aux Fraises, a distance of six miles.

Over 60,000 feet of booms are distributed among these four stations, to guide and retain logs, with over 77,000 feet of chains.

The river commenced to rise on the 9th of April, 1896, and reached its maximum height on the 25th of May, when it stood 24 feet 4 tenths above low water, being 4 feet 7 tenths higher than it was when at its maximum elevation in 1875, which was its greatest height recorded since the great flood of 1879.

After the 12th May the water commenced to recede and reached its lowest level on the 29th September, falling to 2 feet 2 tenths on the gauge at Grandes Piles which level is 0.6 feet higher than that of the lowest water of 1895.

The zero of the Grandes Piles gauge, corresponds to 298.39 feet above the zero of the Three Rivers gauge connected with the St. Lawrence geodetic levelling.

The mean fluctuation of the water level for each month during the working season, for the last five years, has been as shown in the following table of elevations of mean low water, in feet and tenths above zero of Grandes Piles gauge, for each month of the working season, August 1892 to November 1896.

Year	April	May	June	July	Aug.	Sept.	Oct.	Nov.
1892	.....	.....	.....	.....	7.5	3.8	4.7	5.1
1893	3.9	12.7	10.4	6.1	4.6	5.0	4.1	3.6
1894	8.5	13.2	8.8	7.6	5.3	4.2	7.5	8.1
1895	.....	14.0	9.2	5.9	6.3	5.1	4.1	4.4
1896	9.7	13.3	7.7	6.4	3.4	2.6	3.3	8.5

During the working season, for the descent of logs in 1896, viz.: from the 20th April to 24th October, the water level rose during 42 days, and receded during 99 days and was at a stand-still during 17 days.

Out of these 158 days, we had but 74 days during which the river afforded a itch of water suitable for floating logs.

Department of Public Works.

As can be seen by the above statement, the water level in August, September and October, 1896, was the lowest recorded since 1892. This duration of low water for so long a period rendered the rolling of the logs very expensive for the lumber merchants.

The usual rise of from five to six feet above low water, which generally occurs during the month of August, was greatly missed this year.

The tail drive arrived at Three Rivers on the 23rd October, 1896, four days later than in 1895.

The last logs for Three Rivers were sluiced from the government booms at the railway bridge, on the 24th October, 1896.

The following statement, furnished by the Collector of Slide and Boom Dues in your department, shows the quantities of the various descriptions of timber that passed the government works, during the season 1896, together with the amount of revenue accrued as tolls, for the fiscal year covered by this report:—

STATEMENT of the number of pieces of saw logs, etc., that passed through the government slide and works on the St. Maurice river during the fiscal year ended 30th June 18 7.

	PIECES.
Saw logs.....	880,555
Logs for pulp wood.....	351,593
Cedars.....	1,527
Railway ties.....	804
Total.....	1,240,459

The revenue accrued on the above was \$22,090.50.

After the working season, the slides, piers and booms were examined and, in the fall and during the winter, the necessary works of repair and re-construction were executed, which may be described as follows:—

GRANDES PILES STATION.

The work performed at this station consists of the following, viz.:—Repairs were made to piers Nos. 1, 2, 3, 4, 5, 6, 7, 8, 11 and 12. New sheathing was put around them where required, and some were raised to the proper height. Mooring posts were renewed where found necessary, and all others put in thorough order for the following year. Also, 2,051 feet of single booms renewed at Les Plaines, below Grandes Piles falls.

GRAND'MERE STATION.

Slight repairs were made to the main boom. Some 900 feet of single booms has also been provided to prevent the logs from going into the eddy below Grand' Mere Falls. The works at this station are in good condition, and every facility is provided for the running of logs.

SHAWENEGAN STATION.

The work performed at this station consists in construction of three anchor piers Nos. 84, 82, 83, and the re-construction of the dam built in 1852 at the head of the main fall, which was carried away during the high freshet of 1896, two feet higher than the old one, so as to give more water to the slide.

The bottom and sides of the slide were partially renewed by replacing the worn out timber and planking with new material, also apron faced with hardwood.

Moreover 900 feet of five and three ply booms were built and 1,000 feet of booms repaired.

Mooring posts were renewed on all the piers, where found necessary.

THREE RIVERS STATION.

The small dam at La Labelle was rebuilt, also pier No. 19 at the railway bridge, and anchor piers, 1, 2, 3, 4, 6, 8, 10 and 12, at Pointe a Lambert.

Piers Nos. 10, 12, 27, 30 and 31 were partially taken down and the damaged timbers were removed and replaced by new ones. Plank fenders were spiked on the exposed sides of the piers, some new snubbing posts put up, and the stone filling brought up to level, also 550 feet of three and five ply booms constructed.

Mooring posts were renewed where found necessary.

The following expenditures have been incurred for staff, maintenance, repairs and improvements during the fiscal year ended 30th June, 1897, viz.:—

Staff and maintenance..... \$8,647 72

Repairs and improvements:—

Grandes Piles Station.....	1,348 64
Grand'Mère do	45 80
Shawenegan do	3,623 57
Three Rivers do	4,898 00

Total for 1896-97.....\$18,563 93

If we establish a comparison between the expenses and the revenue of this year and those of the past seven years, the result will be as per following:—

STATEMENT showing the number of logs, the gross revenue, the expenditure for staff, management, repairs and construction; also the net revenue on the St. Maurice works during the ten years from 1st July, 1887 to 30th June, 1897.

Year.	Number of Logs.	Gross Revenue.	Staff and Management	Repairs and Improvements.	Total Staff and Repairs.	Net Revenue.	Deficit.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1887-88.....	213,740	4,246 17	16,943 92	18,242 52	35,186 44	.....	30,940 37
1888-89.....	328,103	7,323 27	21,290 72	5,517 33	26,808 05	.....	19,434 98
1889-90.....	197,365	4,242 18	13,957 09	4,753 76	18,710 85	.....	14,468 67
1890-91.....	203,099	3,953 87	17,155 67	6,638 78	23,794 45	.....	19,840 58
1891-92.....	282,738	4,520 50	15,658 83	4,332 75	19,991 55	.....	15,471 08
1892-93.....	569,703	11,114 90	9,259 86	831 13	10,090 99	1,023 91	.....
1893-94.....	755,657	14,544 55	7,565 65	2,545 09	10,110 77	1,433 78	.....
1894-95.....	779,892	14,306 53	6,512 83	4,001 34	10,514 17	3,792 36	.....
1895-96.....	1,163,610	21,358 74	8,114 01	5,645 38	13,759 39	7,599 36	.....
1896-97.....	1,240,459	22,090 50	8,647 72	9,816 21	18,563 93	3,426 57	.....

No serious damage has been done to any of the works. The usual wear and decay has, however, been considerable, and many repairs will be required in 1897-98.

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

F. X. THOS. BERLINGUET,
Superintending Engineer.

Department of Public Works.

REPORT ON THE TRENT AND NEWCASTLE DISTRICT WORKS.

(By R. B. ROGERS, SUPERINTENDENT ENGINEER.)

PETERBOROUGH, 27th Sept., 1897.

LOUIS COSTE, Esq.,
Chief Engineer,
Department of Public Works,
Ottawa.

SIR,—I have the honour to submit the annual report on the works under my charge for the fiscal year ended 30th June, 1897.

The works under my supervision in this district are constructed for the benefit of navigation on the direct route of the Trent Canal, and for the facilitation of the descent of timber and the improvement of navigation on the adjoining rivers.

The former are under the control of the Department of Railways and Canals, the latter are under the control of the Department of Public Works.

The works are situated along the River Trent between Trenton on the Bay of Quinté, and Balsam Lake (a point about 15 miles from Lake Simcoe) a distance of about 170 miles.

There is a very large watershed reaching as far as the head water of the Mada-waska on the north-east, and those of the Muskoka on the north and west, comprising an area of over 2,000 square miles of watershed. The regulation of the water of this large watershed is becoming every year a more important matter to the increasing number of industries along the route.

The water during the spring was higher than the average, and remained up for a much longer period than usual. It did no more than the usual amount of damage to the work.

Owing to the low state of the market, the quantity of timber which passed down was much smaller than usual. The quantity during the present year promises to be greater than for some years.

The regulation regarding the bringing of logs down in smaller bags has been fairly well carried out, and has proved a more economical method than bringing them down in large bags.

The works are now in a fairly good condition, and no large expenditure for repairs is at present necessary.

The following repairs were executed at the different stations:—

HASTINGS.

The floor of the slide was re-planked and the glance booms were repaired.

PETERBOROUGH.

New corbels were placed under the stringers of the gallows frame, and the sheeting of the throat of the slide was renewed. The retaining boom in the Little Lake, which was broken by the ice, was repaired.

KATCHAWANNOE LAKE.

The boom which was broken by the ice in the spring was repaired, and the anchors which were drawn out of line, were placed in their proper position.

BUCKHORN.

Both piers of the slide are in a decayed condition, and there is a great leakage under the sill of the slide. The piers will have to be almost wholly re-built. The work of repairing the slide was being proceeded with, but was not completed at the end of the fiscal year.

FENELON FALLS.

Part of the floor of the slide was re-planked, and four new stop-logs were procured for the slide.

KEENE RIVER.

The entrance to Keene River has been much improved by dredging, at an expense of \$747.31, this amount being taken from parliamentary appropriation for dredging in Quebec and Ontario. This dredging was done by means of a heavy drag hung out over the end of a barge which was towed by a steamboat.

A statement showing the number of pieces of timber which passed through these works is hereto attached.

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

RICH. B. ROGERS,
Superintending Engineer.

STATEMENT showing the number of pieces of timber, &c., which passed over the different slides on the River Trent and Newcastle District Works during the fiscal year ended 30th June, 1897.

Stations.	Pine Saw-logs.	Other Saw-logs.	Boom Timber.	Railroad Ties.	Fence Posts.	Long Cedars.	Telegraph Poles.
Fenelon Falls.....	10,290	4,740	4	26,700	4,800		
Buckhorn.....	3,000	16,300		20,000			
Burleigh.....							
Young's Point.....	80,000		750	22,000			3,000
Lakefield.	14,594	12,960	1,162	47,185	30,300	353	
Peterboro'.....	5,000		1,000	476		353	
Hastings.....							
Heeley's Falls.....	6,215	6,750	70	38,100	3,400		
Chisholms.....	83,381		1,790				

RICHARD B. ROGERS,
Superintending Engineer.

Department of Public Works.

BRIDGES.

It may be stated that, in the older provinces of the Dominion, the Federal Government has confined itself, as a rule, to making provision towards the construction and maintenance of important interprovincial road bridges, and bridges required across waterways, under its exclusive control. In the very sparsely settled districts of the North-west Territories, however, the Government of Canada has also undertaken to provide for the erection and maintenance of ordinary road bridges over large streams that are urgently needed to afford uninterrupted communication through trails and highways of national importance, which, neither the municipalities to be more immediately benefited by the structures, nor yet the territorial authorities most directly concerned, could be expected to erect and maintain at their sole expense.

During the fiscal year ended 30th June, 1897, the iron swing bridge at Burlington channel, leading from Lake Ontario to Hamilton harbour, was completed, inclusive of electrical apparatus for working the swing span.

Works of repair and improvement were carried out as usual on the various bridges in the city of Ottawa, inclusive of approaches, the maintenance of which devolves on the Federal Government, viz., the bridges over slides at the Chaudière Falls, together with roadways in connection with same; Union Bridge over the Ottawa, and Dufferin Bridge, Sappers Bridge and Maria Street Bridge, across the Rideau Canal. A detailed account of these renewals, repairs, &c., is contained in the report of the Superintending Engineer, Ottawa River Works, given in *extenso* under the heading of slides and booms.

Repairs were also made to the following road bridges in the North-west Territories, viz., the Battle River Bridge at Battleford; the Belly River Bridge at Lethbridge; the Langevin Bridge at Calgary, and the Old Man's River Bridge at Macleod.

BURLINGTON BRIDGE.

In 1895-96, the Dominion Government determined to proceed vigorously with the construction of an iron swing bridge across the Burlington Channel, with a view of providing, without further delay, for the accommodation of the public, such improved expeditious and convenient means of communication from shore to shore, as the large increase in the traffic at this point demanded, in place of the antiquated mode of conveying vehicles and passengers, alike from one side of the channel to the opposite side on a ferry scow or punt.

On the 22nd August, a contract was let to Mr. Geo. F. Webb, of Hamilton, to build the masonry, including foundations for the pivot pier and abutments for the bulk sum of \$15,799 and on the 28th January, 1896, another contract to the Dominion Bridge Company of Montreal for supplying and erecting the iron superstructure, etc., for the sum of \$15,290.

All the works comprised in these contracts have been satisfactorily completed. On the 11th of November, 1896, a final estimate was given in favour of Mr. Webb, and on the 16th of the same month, another in favour of the Dominion Bridge Company; the sums recommended for payment in each case being the full amount of the contract.

On the 1st July, 1896, Mr. Webb had been paid \$14,000 on account of his contract and the Dominion Bridge Company, \$3,600, on account of their work, so that the total outlay required in 1896-97 to complete payments for contract works completed was \$13,489, which amount was paid the contractors. A further sum of \$1,500 was paid to the Dominion Bridge Company for supplying and installing, as per special agreement, an electrical apparatus for operating the swing span and a sum of \$400 was expended for plans and inspection of superstructure, &c. The motive power of the bridge is supplied by the Hamilton Radial Electric Railway Company.

BATTLE RIVER BRIDGE, BATTLEFORD.

The Battle River bridge spans the Battle River at Battleford, N.W.T., in the District of Saskatchewan.

Battleford is situated at the junction of the North Saskatchewan and Battle River.

The bridge was constructed in 1890, by day's labour, after the contract let to Messrs. Heney and Kennedy, was taken out of their hands.

The bridge consists of one span of 150 feet, Howe truss; two spans of 70 feet each; a trestle approach at north end, and two abutments.

During the fiscal year ended 30th June, 1897, a sum of \$371.46 was applied in drawing into their proper places some of the lower timbers of the north pier which had spread a little, and in replacing loose planks in the flooring which were more or less decayed.

BELLY RIVER BRIDGE, LETHBRIDGE.

The Belly River Bridge spans the Belly River at Lethbridge, South Alberta.

Lethbridge is practically a mining town, being situated at the location of the Alberta coal mine, commonly known as the "Galt" mine. It is a division station of the mounted police, and is connected by a branch line 109 miles in length, with the Canadian Pacific Railway at Dunmore, and is also connected by railway with Great Falls, Montana.

The bridge was constructed in 1890. It is a Howe truss, and consists in four timber spans.

During the fiscal year 1896-97 a sum of \$725.32 was applied in carrying out sundry repairs on this bridge and its approaches such as tightening counter-braces, renewing parts of the hand rail, etc., and making good portions of approaches and roadway where wash-outs had taken place; repairing fencing, etc.

At the close of the year the structure was in good condition for traffic.

LANGEVIN BRIDGE, CALGARY, ALBERTA.

The Langevin Bridge spans the Bow River at the town of Calgary, Alberta.

Calgary is the principal town and railway centre (branch lines of the Canadian Pacific Railway to Edmonton and Macleod) of the district of Alberta; also a division station of the Mounted Police. Population by census of 1891, 3,876.

The bridge is a Howe truss timber structure about 370 feet long inclusive of abutments, but exclusive of trestle approaches and consists of three spans of 100 feet each, two intermediate piers of cribwork, 33 feet by 12 feet, at the base and about 17 feet high, and two abutments of similar construction 22 feet by 15 feet at the base. The structure was built under contract in 1890; its apron is about 18 feet wide and stands some 15 feet above the low and $6\frac{1}{2}$ feet above the high water level of the Bow River.

During the latter half of the fiscal year 1896-97, the sum of \$1,016.20 was applied as follows:—

1. Protecting the north pier, which had been undermined in some places 10 feet, by forming slopes around it with large blocks of rock placed with a derrick and filling in between the blocks with small stones, so as to prevent, if possible, further damage by scour.

2. Placing some rip-rap around the north-east corner of the south pier and along the face of the north abutment.

3. Replacing decayed braces, etc., and tightening up the truss work throughout.

OLD MAN'S BRIDGE, MACLEOD.

The Old Man's bridge crosses the Old Man's River, about two miles west of the town of Macleod, Southern Alberta.

Department of Public Works.

Macleod is the principal trading town of a large district of horse and cattle ranches, and is a division station of the Mounted Police. It is connected by a branch line of the Canadian Pacific Railway 105 miles in length, with the main line at Calgary, and will be connected with the Crow's Nest Pass Railway now under construction.

The bridge was built under contract with Messrs. John Heney and Henry Smith of Ottawa, being commenced in May and completed in December, 1891.

The bridge consists of two spans of 150 feet each, one pier, two abutments, an earth and trestle approach on the north side and an embankment approach on the south side.

Since its completion this bridge has undergone various repairs at different times, such as rip rapping round the pier twice, protecting south bank by hand laid stone, trussing up bridge three times, etc.

The traffic over the bridge, which has always been very heavy, has greatly increased since the construction of the branch line of railway from Calgary, the terminus of which is not in the town but on the opposite side of the river. All the traffic has, therefore, to pass over the bridge, including many loads of lumber and many bands of cattle and horses which invariably race over it. In consequence of this, more than heavy strain, it may be assumed that an annual expenditure of some \$300 will be required in order to keep the bridge in proper shape.

During the fiscal year 1896-97 a sum of \$498.00 was expended in putting counterbraces back into their proper places from which they had nearly all fallen out, tightening screw bolts, etc., so as to render the bridge safe for the very heavy traffic which has to pass over it.

SURVEYS, EXAMINATIONS AND INSPECTIONS.

Surveys, examinations and inspections, with objects in view too numerous and diverse to be here stated, were made in the following localities during the fiscal year ended 30th June, 1897 :—

NOVA SCOTIA.

Arisaig.....	Antigonish Co.	McNair's Cove.....	Antigonish Co.
Aspey Bay.....	Victoria.	Monk's Head.....	do
Avonport.....	King's.	Neill's Harbour.....	Victoria.
Beaver River.....	Yarmouth.	Newellton.....	Shelburne.
Boularderie (Ross Ferry).....	Antigonish.	Noel.....	Hants.
Breeding Cove.....	Victoria.	North River.....	Victoria.
Canada Creek.....	King's.	North Sydney.....	Cape Breton.
Chebogue Point.....	Yarmouth.	Oyster Pond.....	Guysboro'.
Chegoggin.....	do	Pennant Harbour.....	Halifax.
Cheticamp Point.....	Inverness.	Picket's Pier.....	King's.
Chipman Brook.....	King's.	Pictou (Public Building).....	Pictou.
Clarke's Harbour.....	Shelburne.	Port George.....	Annapolis.
Cow Bay.....	Cape Breton.	Port Hood.....	Inverness.
Cranberry Head.....	Yarmouth.	Port Latour.....	Shelburne.
Cribbin's Point.....	Antigonish.	Port L'Hébert.....	do
Georgeville.....	do	Port Lorne.....	King's.
Grand Etang.....	Inverness.	Port Maitland.....	Yarmouth.
Hampton.....	King's.	Port Mouton.....	Queen's.
Harbour Bouché.....	Antigonish.	Pubnico Head.....	Yarmouth.
Hantsport.....	Hants.	Pugwash.....	Cumberland.
Hiltz Narrows.....	Lunenburg.	Ross Ferry (Road).....	Victoria.
Horton Landing.....	King's.	Seaside.....	Inverness.
Iona.....	Victoria.	St. Mary's River.....	Guysboro'.
Joggins.....	Cumberland.	Smith's Island.....	Inverness.
Judique.....	Inverness.	Stanwood Beach.....	Yarmouth.
Lafford's Cove.....	Richmond.	Stony Island.....	do
Larry's River.....	Guysboro'.	Sydney (Quarantine wharf).....	Cape Breton.
Little Narrows.....	Victoria.	Tony River.....	Pictou.
Liverpool.....	Queen's.	Wallace.....	Cumberland.
Lockeport.....	Shelburne.	West Pubnico.....	Yarmouth.
Maitland.....	Hants.	Whitewater.....	King's.
Malcouche.....	Cape Breton.	Windsor.....	Annapolis.
Margaree.....	Inverness.	Woods' Harbour.....	Shelburne.
Meteghan.....	Digby.		

PRINCE EDWARD ISLAND.

Apple Tree Pier.....	Queen's.	Mount Stewart.....	Queen's.
Brae Harbour.....	Prince.	McConnel's Pier.....	do
Canoë Cove.....	Queen's.	Red Point.....	do
Cranberry Pier.....	do	St. Peter's Bay.....	King's.
China Point.....	do	Souris Harbour.....	do
Gillis River.....	do	Summerside.....	Prince.
Haggarty's Wharf.....	do	Tignish Harbour.....	do
Hayden's Wharf.....	do	Vernon River (pier).....	Queen's.
Miminigash Harbour.....	Prince.	West Point.....	Prince.

NEW BRUNSWICK.

Anderson's Hollow.....	Albert.	Maisonnette.....	Gloucester.
Buctouche.....	Kent.	Negro Point.....	St. John.
Cape Tormentine.....	Westmoreland.	Newcastle.....	Northumberland.
Clifton (Stonehaven).....	Gloucester.	Oromocto (R. St. John).....	Sunbury.
Cocagne.....	Kent.	Partridge Island.....	St. John.
Dalhousie.....	Restigouche.	Quaco.....	do
Fort Dufferin.....	St. John.	Restigouche River.....	Restigouche.
Fredericton (R. St. John).....	York.	Shediac.....	Westmoreland.
Gardner's Creek.....	St. John.	St. John Harbour.....	St. John.
Grand Falls (R. St. John).....	Victoria.	St. Mary's.....	Kent.
Gray's Point (R. St. John).....	King's.	Tracadie.....	Gloucester.
Herring Cove.....	Albert.	Tynemouth Creek.....	St. John.
Jemseg (R. St. John).....	Queen's.	Westfield (R. St. John).....	King's.
Mispec.....	St. John.	Wilson's Beach.....	Charlotte.

Department of Public Works.

QUEBEC.

Anse à Beaufils.....	Gaspé.	Rivière du Lièvre (Little Rapids, lock, &c.).....	Labelle.
Baie St. Paul.....	Charlevoix.	Rivière Noire.....	Charlevoix.
Berthier (en haut).....	Berthier.	Rivière Ouelle.....	Kamouraska.
Cap à l'Aigle.....	Charlevoix.	River St. Francis.....	Yamaska.
Cap de la Magdeleine.....	Champlain.	River Yamaska (lock, &c.).....	do
Chateauguay.....	Chateauguay.	River St. Maurice.....	St. Maurice.
Chenal du Moine (ice piers).....	Richelieu.	River St. Lawrence Ship Chan-	
Chicoutimi.....	Chicoutimi and Saguenay.	nel, between Montreal and Quebec.....	do
Eboulements.....	Charlevoix.	Shawenegan.....	Kamouraska.
Kamouraska.....	Kamouraska.	St. Anne la Pocatière.....	Champlain.
Ile aux Coudres.....	Charlevoix.	St. Anne de la Pérade.....	Richelieu.
Iberville.....	St. Jean and Iberville.	St. Anne du Saguenay.....	Chicoutimi and Saguenay.
Lanoraie.....	Berthier.	St. Barbe.....	Huntington.
La Tortue.....	Laprairie.	St. Famille.....	Montmorency.
L'Islet.....	L'Islet.	St. Geneviève.....	Jacques Cartier.
Lotbinière.....	Lotbinière.	St. Irénée.....	Charlevoix.
Louiseville.....	Maskinongé.	St. Jean, Ile d'Orléans.....	Montmorency.
Maguacha.....	Bonaventure.	St. Jean Port Joli.....	L'Islet.
Manigance Rapid.....	St. Maurice.	St. Michel de Bellechasse.....	Bellechasse.
Mistassini.....	Chicoutimi and Saguenay.	St. Nicholas.....	Lévis.
Murray Bay.....	Charlevoix.	St. Vincent de Paul.....	Laval.
Philipsburg.....	Missisquoi.	St. Zotique.....	Soulanges.
Rivière Blanche.....	Rimouski.	Three Rivers.....	Three Rivers and St. Maurice.
River Richelieu (Sorel ice piers).....	Richelieu.		

ONTARIO.

Desbarats River.....	Algoma.	Port Stanley.....	Elgin (East).
Fort Francis.....	do	Prescott.....	Grenville (South).
Goderich.....	Huron (West).	Rainy River.....	Algoma.
Kincardine.....	Bruce (West).	Sparrow Lake.....	Ontario (North).
Kingston Harbour.....	Kingston City.	Toronto.....	Toronto City.
Owen Sound.....	Grey (North).	Wasiale's Falls.....	Ontario (North).
Point Edward.....	Lambton (West).		

MANITOBA.

St. Andrews Rapids, Red River, Selkirk County.

BRITISH COLUMBIA.

Fraser River.

During the year 1896-97, 845 official papers were referred by the Secretary of the department to the Chief Engineer's office for report or action. Over 10,000 letters were received from the Resident Engineers and others, and 4,994 were sent out.

LOUIS COSTE, *Chief Engineer,*
Public Works of Canada.

Department of Public Works.

APPENDIX No. 4.

REPORT OF THE COLLECTOR OF REVENUE

DEPARTMENT OF PUBLIC WORKS, 1896-97

Department of Public Works.

REPORT OF THE COLLECTOR OF REVENUE.

DEPARTMENT OF PUBLIC WORKS,
COLLECTION OF REVENUE,
OTTAWA, 30th November, 1897.

E. F. E. ROY, Esq.,
Secretary, Department of Public Works,
Ottawa.

SIR,—I have the honour of submitting my report for the fiscal year ended 30th June, 1897.

I have examined the books and accounts of the several officials under my control, with the exception of those of the dock master at Esquimalt, and have much pleasure in testifying that all these officers have complied with the rules laid down by the Department, and have faithfully accounted for all the revenues collected by them, and it affords me much pleasure to state that the gross collections exceed those of 1895-96 by \$5,565.44.

With your permission I will refer to the different sources of revenue, seriatim, commencing with that from

SLIDES AND BOOMS.

OTTAWA DISTRICT.

The revenue accrued, including interest, amounted to \$51,580.67, or \$2,180.52 more than for the previous year.

The number of saw-logs which passed through the works was 4,329,353 pieces, or 204,050 pieces more than in 1895-96, and the number of pieces of square timber was 14,072, or 1,052 less than in 1895-96—in this connection I may mention that a considerable portion of the timber, that would formerly have come through the slides, is now conveyed to market or to points below Ottawa by rail; it is also worthy of remark that the Ottawa, Arnprior and Parry Sound Railway carried to Ottawa large quantities of saw-logs and dimension timber for Mr. Booth during the past two years.

All the revenue from the Ottawa district for the year 1896-97 was collected and accounted for within the year, excepting the sum of \$196.71 against which Messrs. Bryson & Fraser hold an account unsettled at this date.

Of the dues accrued since 1st July, 1889, there remains uncollected \$6,903.05 Chaudière boomage, reported to the Public Accounts Committee in 1895 for the purpose of being written off; \$28.42, to recover which legal proceedings have been taken, so far without success, and \$379.80, against which Mr. J. R. Booth has an acknowledged account for material, &c., supplied the Department, payment of which was refused by the Auditor General because certain old charges, reported to the Public Accounts Committee and which should have been written off, still stand at Mr. Booth's debit in our books. These items, with \$196.71 referred to in the preceding paragraph, make a total of \$7,507.98, or \$237.50 less outstanding on this account than on 30th June, 1896; for particulars see Statement No. 2.

Of the dues accrued prior to 1st July, 1889, there remains uncollected \$56,805.65, all of which should be written off. See Statement Nos. 1 and 3 for details.

The accounts for the Ottawa district stand thus:—

Dues accrued during the year 1896-97 including interest	\$51,580 67
Of which there was collected during the year.....	51,383 96
Leaving outstanding as above explained.....	<u>\$ 196 71</u>

The gross collections were as follows:—

Dues of 1896-97.....	\$51,383 96
“ 1895-96.....	434 21
	<u>\$51,818 17</u>

The amounts outstanding on 30th June last, were as follows:—

Dues accrued prior to the collection being transferred to this department, 1st July, 1889.	\$56,805 65
Dues of 1889-90.....	\$6,903 05
“ 1890-91.....	28 42
“ 1892-93.....	379 80
“ 1896-97.....	196 71
	<u>\$7,507 98</u>
	<u>\$64,313 63</u>

Or \$237.50 less than last year.

I would respectfully ask attention to the fact that, since the collection of slide and boom dues was transferred to this department 1st July, 1889, of the revenue accrued, excluding \$6,903.05 which should never have been charged, amounting to \$486,232.72 but \$28.42 of absolutely established revenue is uncollected; all the remainder should be written off, but the item of 1896-97 which possibly ought to meet with the same treatment.

Herewith are statements in detail, as follows:—

No. 1. Statement of amounts outstanding prior to 1st July, 1889, at Ottawa, uncollected 30th September, 1897.

No. 2. Statement of amounts accrued at Ottawa since 1st July, 1889, uncollected 30th September, 1897.

No. 3. Statement of dues outstanding at Quebec, prior to 1st July, 1889, uncollected 30th September, 1897.

No. 4. Statement of the number of pieces of square timber, saw-logs, &c., which passed through the Ottawa District Works during the year ended 30th June, 1897.

No. 5. Statement of dues accrued from each of the slides and works in the Ottawa district during the year ended 30th June, 1897.

ST. MAURICE DISTRICT.

The revenue for 1896-97 amounted to \$22,090.50, being \$731.76 more than for 1895-96, and is the largest ever derived from these works.

All the dues of 1896-97 were collected within the financial year.

Of the amount outstanding when I took charge of this district in 1892, and which was uncollected on 30th June, 1896, nothing was collected during the past year; as a matter of fact, all of it, namely, \$14,481.49 should be written off—and I may here say that, during the past five years, not a dollar of the revenue from this district has been lost.

Full details of this amount appear in Statement No. 6.

Department of Public Works

NEWCASTLE DISTRICT.

The accompanying statement No. 7 shows details of \$6,058.34 uncollected of which \$3,521.19 should be written off in accordance with a judgment of the Exchequer Court.

With regard to the remainder \$2,537.15 a settlement has been proposed to the Department but, for various reasons, a decision has not been arrived at.

As this proposition involves a possible re-modelling of the tariff and as our right in equity to impose and collect tolls on certain of the works is challenged, it has been deemed best not to enforce the existing tariff pending settlement of the cases now before the Department, as the opposite course might expose the Department to legal proceedings, involving expense and possible loss. Hence there have been no dues from this district charged up, although I have the material necessary to ascertain the amounts due when the question of the tariff is decided.

Summary of collection of slide and boom dues:—

From the Ottawa district.....	\$51,818 17
“ St. Maurice district	22,090 50
Total	<u>\$73,908 67</u>

GENERAL REMARKS.

Shipments of sawn lumber to the United States during the early months of the year were very large, but almost entirely ceased after the 1st of July. Those to Great Britain were steady and, if anything, larger than the previous year. The quantity of square timber cut last winter was more than twice as large as the previous winter and there is every indication that the out-put this winter will be fully one-half greater than that of last year.

The cut of saw logs in the Ottawa district will probably be from 20 to 30 per cent less than last year—but all things considered, I do not anticipate that the revenue will fall below the estimated average of \$49,000.

In the St. Maurice district the cut will be somewhat smaller than last year, and the revenue probably from 10 to 20 per cent less than 1897-98.

GRAVING DOCKS.

ESQUIMALT GRAVING DOCK.

The revenue was \$7,514.89 or \$2,706.79 less than last year. The tonnage of vessels docked was 27,914 tons or 1,183 more than in 1895-96. But the dock was occupied for only 103 days compared with 163 days in the previous year. See Statement No. 10 for details.

This dock suffers very much from the competition of the Marine Railway, which accommodates vessels up to 2,500 tons at rates so much lower than ours as to make it an object to wait even weeks for it. I am not, however, prepared to say that a reduction of the rates would result in such an increase in the business as would compensate for the loss on the larger class of vessels which we now get and which are too large for the Marine Railway. In this connection I may say that the impulse given to the shipping business by the Yukon discoveries is bringing a number of vessels to British Columbia ports of the larger class which will, when required, have to use our dock.

LÉVIS GRAVING DOCK.

The revenue for the year ending 30th June, 1897, was \$12,346.57 exceeding that of the previous year by \$3,511.18. See Statement No. 8 for details.

It will be seen that the dock was occupied for 77 days as against 65 days the year before.

The tonnage of vessels docked was 16,854 tons, or 748 more than the previous year.

The dock was unoccupied during the winter of 1896-97.

KINGSTON GRAVING DOCK.

The total revenue from this work during the financial year was \$6,360.60, being \$2,405.82 more than in 1895-96.

It will be seen that the vessels docked in 1896-97 measured 26,006.03 tons as against 25,063.60 tons in the previous year, and the number of vessels docked was 52 or 14 less than in 1895-96.

For details see Statement No. 9 herewith.

LOCKS.

RIVIÈRE DU LIÈVRE.

The revenue from this source was \$198.45, being \$31.88 less than the previous year.

The falling off is accounted for by the removal to Buckingham of a saw-mill formerly operated near the High Falls, the lumber from which was conveyed in scows down through the locks.

RIVER YAMASKA.

From this lock the revenue amounted to \$264.91, being less by \$19.49 than in 1895-96.

The total collections from all sources, that passed through my hands were as follows:—

SUMMARY.

From Slides and booms.....	\$ 73,908 67
“ Graving docks.....	26,222 06
“ Locks.....	463 36
	<hr/>
	\$100,594 09

In conclusion, I have to acknowledge the uniform courtesy and cheerful assistance accorded me by all the officials with whom I have been brought in contact during the year.

I have the honour to be, respectfully, Sir,
Your very obedient servant,

EDWARD T. SMITH,
Collector Public Works Revenue.

Department of Public Works

No. 1.—*STATEMENT of Slidage and Boomage from the Ottawa Slides and Works, accrued prior to 1st July, 1889, outstanding 30th June, 1897, and remaining uncollected on 30th September, 1897.*

By Whom Due.	Bad and Doubtful	Chaudière Boomage in Suspense.	Other Slide and Boom Dues disputed.	Total Outstanding on 30th Sept., 1897.	Year to which Dues belong.	Remarks.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.		
John & Wm. McLean.....	53 14	*		53 14	1873.....	Insolvent.
John Rowan.....	342 50			342 50	1872-1873.....	do
Lemieux & Charrette.....	21 30			21 30	1873.....	do
Tailon & Lapierre.....	148 10			148 10	1873-1874.....	do
Mosgrove & McHarry.....	261 42			261 42	1873-1874.....	do
W. C. Wells.....	600 90			600 90	1873-1874.....	do
Duressne & McGarity.....	528 80			528 80	1874-1875.....	do
Walton Smith.....	171 46			171 46	1874-1875.....	do
A. H. Baldwin.....	3,507 92			3,507 92	1871 to 1874.....	do
Hon. James Skead.....	9,807 65			9,807 65	1861, 1862, 1864, 1869, 1875 to 1878.....	do
Babson & Currier.....	5,558 70			5,558 70	1875 to 1877.....	do
A. F. A. Knight.....	546 30			546 30	1878.....	do
James Walker.....	11 25			11 25	1877.....	do
R. Campbell & Son.....	1,558 50			1,558 50	1879 to 1881.....	do
James G. Bryson.....	73 50			73 50	1886.....	do
Costello Bros.....	90 62			90 62	1882.....	do
N. E. Cormier.....	428 34			428 34	1888.....	do
James Yull.....	9 29			9 29	1876.....	Overcharge.
J. & B. Grier.....	76 84			76 84	1883.....	do
R. & W. Conroy.....	95 42			95 42	1882-1883.....	do
A. & P. White.....	101 00			101 00	1881.....	do
E. Caldwell & Son.....	4 33			4 33	1887.....	do
J. R. Booth.....		9,871 93	398 88	10,270 81	1881 to 1888.....	Reported in return S-38 for March, 1886.
Perley & Pattee.....		8,889 85		8,889 85	1881 to 1884.....	\$398.88 counter claim for damages by the breaking of Coulouge Boom.
The Bronson and Weston Lumber Co.....		8,180 79		8,180 79	1881 to 1885.....	
Pierce & Co.....		462 18		462 18	1888.....	
G. A. Grier & Co.....		1,060 59		1,060 59	1886-1887.....	
Estate late Levi Young.....		1,461 20		1,461 20	1881 to 1885.....	
Wm. Mason.....		413 85		413 85	1881 to 1888.....	

*Chaudière Boomage.—These parties claim that they have maintained these works wholly at their own expense since 1881.

No. 1.—STATEMENT of Slidage and Boomage from the Ottawa Slides and Works, accrued prior to 1st July, 1889, outstanding 30th June, 1897, and remaining uncollected on 30th September, 1897—*Concluded.*

By Whom Due.	Bad and Doubtful Debts.		Chaudiere Boomage in Suspense.		Other Slide and Boom Dues disputed.		Total Outstanding on 30th Sept., 1897.		Year to which Dues belong.	Remarks.
	\$	cts.	\$	cts.	\$	cts.	\$	cts.		
Gilmour & Co.	406 27	406 27	1884.....) Counter claim for damages by breaking of Coulonge works.
John Rochester. ....	.....	.....	258 88	.....	.....	.....	258 88	.....	1881-1883.....
J. & G. Bryson.....	.....	.....	.....	.....	252 20	.....	252 20	.....	1886.....
	23,997 28		31,005 54		651 08		55,653 90			

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th September, 1897.

Department of Public Works

No. 2.—*STATEMENT of Slide and Boom Dues accrued from the Ottawa River Works since 1st July, 1889. Outstanding on 30th September, 1897.*

Name.	Year to which Dues belong.	Chaudière Boomage in suspense.	Ordinary Dues.	Total Outstanding.	Remarks.
J. R. Booth	1889 90	\$ cts. 2,561 69	\$ cts.	\$ cts. 2,561 69	Chaudière Boomage reported to Council and referred to the Treasury Board ; should be written off.
The Bronsons and Weston Lumber Co.) ..	do	2,056 96	.....	2,056 96
Perley and Pattee.	do	1,203 26	.....	1,203 26
Wm. Mason & Sons.	do	167 66	.....	167 66
Pierce & Co.	do	913 48	.....	913 48
1890 91			28 42	28 42	Legal action taken to recover this. Retained by Mr. Booth in settlement of an account due him, which the Auditor General refuses to pay, as Mr. Booth appeared to be in arrears in this and statement No. 1. Have counter claim for works done on slide to this amount.
Alex. Fraser acct. Thos. Stephens	1892 93	.....	379 80	379 80
J. R. Booth.	1896	.....	196 71	196 71
Bryson and Fraser.		6,903 05	604 93	7,507 98	

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th September, 1897.

No. 3.—STATEMENT of Outstanding Slide Dues, Ottawa District, bonds for which were sent to Quebec for collection.

Name.	From 1860.	From 1861.	Total.
	\$ cts.	\$ cts.	\$ cts.
Hon. James Skead.....	245 00	210 00	455 00
James Mair.....	.....	696 75	696 75
	245 00	906 75	1,151 75

These amounts were uncollected, as the parties claimed damages for loss caused by the Madawaska boom breaking away in 1860.

A decision on their claim was not arrived at till 2nd August, 1869; on the 5th *idem*, Messrs. Skead and Mair were notified that the Department could not recognize their claim.

To the best of my knowledge this decision was never communicated to the collector of slide dues, consequently their accounts remained in abeyance.

Since then, both parties have died, and I believe both were insolvent at the time of their death.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th September, 1897.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

No. 4.—STATEMENT of the number of pieces of square timber, saw logs, &c., that passed through the government slides and works, on the River Ottawa and its tributaries, during the fiscal year ended 30th June, 1897.

Square timber.....	14,072 pieces.
Saw logs.....	4,329,253 do
Boom and dimension timber.....	79,926 do
Flat timber.....	6,640 do
Round timber.....	81 do
Cedars.....	23,291 do
Railroad ties.....	153,163 do
Fence posts.....	63,755 do
Total.....	4,670,181 do

Also 13,842½ cords pulp wood and 331,172½ cords shingle wood. The revenue accrued on the above was \$51,533.04.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th November, 1897.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

Department of Public Works.

No. 5.—STATEMENT showing the dues accrued on the undermentioned works on the River Ottawa and its tributaries, during the fiscal year ended 30th June, 1897.

River or other Improvement.	Amount.
	\$ cts.
Main Ottawa.....	3,889 02
Cheneaux boom.....	8,526 76
River Petewawa.....	9,606 44
do Madawaska.....	14,661 35
do Coulonge.....	5,027 84
do Dumoine.....	565 78
Black River.....	2,124 26
Gatineau boom.....	7,131 59
Total.....	51,533 04

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th November, 1897.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

No. 6.—**STATEMENT** of Slide and Boom Dues from the St. Maurice Slides and Works outstanding on 30th June, 1897, and remaining uncollected on the 30th September, 1897.

Name.	Year to which Dues belong.	Amount.	Total.	Remarks.
		\$ cts.	\$ cts.	
George Baptist, Son & Co.	1878	469 95		Have counter claims for damages to logs caused by the booms not being stretched early enough in the spring of 1878 to prevent the logs going over the Chutes.
do do ..	1879	2,110 62		
do do ..	1880	1,696 18		
do do ..	1881	293 69		
do do ..	1882	165 80		
do do ..	1884	118 50		
do do ..	1888	4 28		
Ross, Ritchie & Co.	1878	3,072 84	4,859 02	These claims were submitted to special commissioner, Mr. McDougall, afterwards judge, who, after hearing the evidence on both sides, recommended that the claims of the parties should be allowed.
do	1883	2,173 68		
do	1884	28 96		
do	1886	1 62		
do	1887	4 38		
Alex. Baptist	1879		5,281 48	Of this amount \$754.20 is claimed to be an overcharge.
William Ritchie & Co.	1888	779 24	2,116 96	
do do ..	1889	332 11		
Ritchie Bros.	1886	413 43	1,111 35	This amount is composed of overcharges in 1886 and 1887 of \$842.76 and overpayment in 1884 of \$205.38.
do	1887	634 71	1,048 14	
G. B. Hall	1890		49 34	Insolvent.
T. E. Normand	1890		14 28	Claims that this balance is an overcharge.
Treffé Biron	1891		0 92	Would cost more to collect than it is worth.
Total			14,481 49	

To make this balance agree with the Public Accounts, there should be deducted \$7.93 overcredited Alex. Baptist, and \$217.17 added thereto, being \$190.40 paid 23rd July, 1884, and \$26.77 overcharged in error to Wm. Little, not in any of the collector's returns, which will give balance due 30th September, 1894, of \$14,690.73.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th September, 1897.

Department of Public Works.

No. 7.—STATEMENT of Slide and Boom Dues accrued from the Newcastle and Trent River Works outstanding on the 30th June, 1897, and remaining uncollected on the 30th September, 1897.

Name.	Year to which Dues belong.	Amount.	Total.	Remarks.
		\$ cts.	\$ cts.	
Irwin & Boyd.....	1881.....	59 79	.....	Insolvent.
Thomson & McArthur.....	1880	52 78	.....	do
Jabez Thurston.....	1882.....	12 50	.....	do
McDougall & Ludgate.....	1879.....	65 07	.....	do
Bigelow & Trounce.....	1882 to 1885.....	216 21	.....	do
R. & G. Strickland.....	1882, 1883, 1885, 1886 and 1887.	215 08	.....	do
Estate late Geo. Hilliard..	1877 to 1883 and 1886.....	354 15	.....	Dead and estate distributed.
T. G. Hazlett.....	1881, 1882, 1884 to 1889.....	885 25	.....	According to judgment in Exchequer Court <i>re</i> Boyd <i>vs.</i> Smith these cannot be collected.
J. M. Irwin.....	1882, 1883, 1885 to 1888.....	698 45	.....
D. Ulliyott.....	1881 to 1887.....	547 68	.....
Greene & Ellis.....	1881 to 1883, 1885, 1888 and 1889	157 01	.....
A. W. Parkin.....	1884, 1885, 1888, 1890 and 1891.	65 92	.....
The Dixon Estate.....	1883.....	137 50	.....
Alfred McDonald.....	1888.....	40 80	.....
John Parkin.....	1889.....	13 00	.....
Gilmour & Co.	1893.....	690 58	.....
The Rathbun Company ...	1893.....	1,846 57	.....
			6,058 34	

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th September, 1897.

THE DRY DOCK AT LEVIS.

No. 8.—STATEMENT of Dues and other charges collected during the year ended
30th June, 1897.

NAME OF VESSEL DOCKED.	Tonnage.	PERIOD OF DOCKAGE.		Dockage Charges.	Other Charges	Total.
		From	To			
		1896.	1896.	\$ cts.	\$ cts.	\$ cts.
Repton	1,881	July 1....	July 13....	1,491 44	28 00	1,519 44
Vancouver.....	5,231	Aug. 14...	Entry Fee.	200 00	.....	200 00
do .....	.....	.....	Oct. 7....	8,549 48	26 00	8,575 48
Bark Winnipeg	930	Oct. 8....	do 9....	346 50	.....	346 50
Str. Carolina.....	.....	.....	Entry Fee.	.....	.....	200 00
Str. Campana.....	1,681	Nov. 27,1897	Nov. 28,1897	425 64	.....	425 64
do	1,681	May 17....	May 24....	879 51	.....	879 51
S.S. Arcadia.....	5,450	.....	Entry Fee.	.....	.....	200 00
Total .....	.....	.....	.....	.....	.....	12,346 57

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th November, 1897.

Department of Public Works

THE DRY DOCK AT KINGSTON.

No. 9.—STATEMENT of Dues and other charges collected during the year ended 30th June, 1897.

NAME OF VESSEL DOCKED.	Tonnage.	PERIOD OF DOCKAGE.		Dockage Charges.	Other Charges.	Total.
		From	To			
		1896.	1896.	\$ cts.	\$ cts.	\$ cts.
Str. Cuba	931 ¹⁸	July 3.	July 4.	169 02		169 02
do freight	259					
Barge Gaskin	487	do 15.	do 16.	97 40		97 40
Barge Winnipeg.	734 ²⁷	do 17.	do 18.	123 43		123 43
Tug Active	301 ¹⁷	do 23.	do 24.	60 34	5 00	65 34
Tug Bronson and	70	do 28.	do 29.	78 20	10 50	88 70
Barge Star.	321					
Steam Barge St. Andrew	1,113 ⁴⁹	do 30.	do 31.	239 30		239 30
Str. Rodney.	156 ¹³	do 31.	Aug. 1.	31 23		31 23
Tug J. Hall	29	Aug. 3.	do 3.	20 00		20 00
Tug Petrel.	345 ⁷⁶	do 3.	do 3.	69 16		69 16
Str. J. Bain	44 ³⁷	do 12.	do 12.	20 00		20 00
Str. Rosemount	1,580 ³⁷			Entrance fee		100 00
do		12 days from 24th Aug. special rate.		800 00		700 00
Str. Monteagle.	1,273 ¹³	Less entrance fee paid in Aug.		100 00		
do cargo	885	Sept. 9.	Sept. 11.	416 86	5 00	421 86
Str. Saturn	883	do 14.	do 17.	261 92		261 92
Str. Orion.	846 ⁴³	do 17.	do 18.	193 89		193 89
Str. Tecumseh.	839 ⁶⁷	do 30.	Oct. 1.	192 75	19 50	212 25
Schr. J. I. Case	827 ⁹⁰	Oct. 2.	do 2.	132 79		132 79
Tug Walker.	138 ⁵⁸	do 10.	do 11.	27 72	5 00	32 72
Barge Regina.	440 ⁶⁰	do 14.	do 14.	88 12		88 12
Tug Walker.	138 ⁵⁸	do 16.	do 16.	27 72	5 00	32 72
Str. E. B. Bartlett	1,399 ⁸⁵	Nov. 1.	Nov. 2.	189 98	5 00	194 98
Barge Chicago	350	do 8.	do 9.	94 50		94 50
Barge Regina	440 ⁶⁰	do 10.	do 11.	118 96		118 96
Str. D. D. Calvin.	749 ⁵³	do 11.	do 12.	124 95		124 95
Str. Cuba.	931 ¹³	do 23.	do 26.	437 23	15 00	452 23
do freight	318					
Str. Glenagarry	438	do 27.	do 28.	87 60		87 60
Barge Winnipeg.	734 ²⁷	Dec. 2.	Dec. 4.	30 00	21 00	51 00
do cargo	75					
Barge Danforth.	669 ⁵⁶	do 5.	do 7.	210 65		210 65
Str. North King.	872 ⁹⁵	do 8.	do 18.	150 00	20 00	170 00
Str. Islander	118 ⁶¹	do 22.	do 23.	23 72		23 72
Str. Reginald	186 ²⁶	April 6.	April 7.	20 50		20 50
Schr. Norway.	359 ⁶⁸	do 7.	do 9.	20 00		20 00
Tug David G. Thomson.	185 ⁵	9th to 15th winter rate.				
Barge Lancaster.	219					
Tug Jessie Hall	29					
Barge Alberta	313 ⁹²			112 50	10 00	122 50
Tug Glide.	36					
Barge J. Gaskin	487					
Barge Cornwall	585 ⁹⁶	April 15.	April 16.	26 18		26 18
Barge Acadia.	374	do 16.	do 17.	50 80		50 80
do		do 27.	do 29.	79 15		79 15
Barge McCarthy	254	do 29.	Entrance fee	100 00		100 00
Str. Paul Smith.	293 ¹⁶				10 00	10 00
Str. Bannockburn	1,619 ⁶⁶	April 29.	May 8.	1,018 83		1,018 83
Schr. Wayne.		May 8.	do 9.	92 21		92 21
Str. Bannockburn	461 ⁰⁸	do 10.	do 11.	52 40		52 40
Barge Jennie.	262	do 29.	do 29.	20 00		20 00
Barge Harvest.	29	do 31.	do 31.	67 00		67 00
Tug Jessie Hall	335	June 14.	June 14.	32 59		32 59
Barge Toronto.		do 24.	do 24.	20 00		20 00
Strs. Islander (118.61) and Jessie Bain (44.37)	162 ⁹⁸					
Tug Bronson.	70					
Total						6,360 60

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th November, 1897.

EDWD. T. SMITH,
Collector Public Works Revenue.

THE DRY DOCK AT ESQUIMALT.

No. 10.—STATEMENT of Dues and other charges collected during the year ended 30th June, 1897.

NAME OF VESSEL DOCKED.	Tonnage.	PERIOD OF DOCKAGE.		Dockage Charges.	Other Charges.	Total.
		From	To			
		1896.	1896.	\$ cts.	\$ cts.	\$ cts.
H.M.S. Comus.	2,380	July 4.	July 8.	Working ex-		202 04
				penses.....		
Str. Peter Jebsen.....	3,077	Aug. 6.	Aug. 7.	400 00	1 80	401 80
Str. Progressist.....	3,188	do 17.	do 19.	504 00	4 20	508 20
Str. Chittagong.....	1,912	Sept. 29.	Oct. 5.	880 00	3 60	883 60
Str. Costa Rica.....	1,983	Oct. 5.	do 9.	620 00	14 40	634 40
H.M.S. Icarus.....	970	do 12.	do 17.	Working ex-		
				penses.....		343 28
H.M.S. Satellite.....	1,420	do 19.	Nov. 4.	do ..		568 75
Str. Kinshin Mara.....	3,596	Nov. 13.	do 15.	512 00		512 00
H.M.S. Wild Swan....	1,130	Dec. 9.	Dec. 28.	Working ex-		
				penses.....		817 70
		1897.	1897.			
H.M.S. Comus.....	2,380	March 4.	March 30.	do ..		1,027 49
Str. Quadra.....	573	April 13.	April 17.	390 00	2 40	392 40
Glory-of-the-Seas.....	2,103	May 31.	June 6.	815 00	1 80	816 80
Str. Florida.....	3,202	June 28.	do 29.	400 00	1 00	401 00
For water supplied sundry vessels not in dock.					5 40	5 40
						7,514 86

Besides the above charges there were 3 cents overcollected

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th November, 1897.

EDWARD T. SMITH,
Collector of Public Works Revenue.

APPENDIX No. 5.

LIST OF SOME OF THE ACTS OF PARLIAMENT

PASSED AT THE SESSION OF 1897

HAVING

REFERENCE TO THE DEPARTMENT OF PUBLIC WORKS
OR WORKS UNDER ITS CHARGE

Department of Public Works.

LIST of some of the Public Acts of the Parliament of Canada passed at the Second Session of the Eighth Parliament, closed by Prorogation on the 29th Day of June, 1897, and having reference to the Public Works Department or works under its charge (60-61 Victoria).

Subject.	Full Title of the Statute.	Chapter.	Page in Statute Book.
Sums granted to Her Majesty for the financial year ending 30th June, 1897, and the purposes for which they are granted.	An Act for granting to Her Majesty certain sums of money required for defraying certain expenses of the public service for the financial years ending respectively the 30th June, 1897, and the 30th June, 1898, and for other purposes relating to the public service.	2	5
Respecting the Civil Service Act.	An Act further to amend the Civil Service Act.....	14	81
Respecting the Civil Service Superannuation.	An Act further to amend the Civil Service Superannuation Act.	15	83

N.B.—Tariff proposed to be charged by the Upper Ottawa Improvement Company during season 1897—Order in Council passed on the 2nd March, 1897, page xcii.

J. A. CHASSÉ,
Law Clerk.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 1st December, 1897.

Department of Public Works

APPENDIX No. 6.

STATEMENTS

SHOWING

- 1st.—CONTRACTS LET BY THE DEPARTMENT OF PUBLIC WORKS OF CANADA, FROM
THE 30TH JUNE, 1896, TO THE 30TH JUNE, 1897.
- 2nd.—PROPERTY PURCHASED OR SOLD BY THE DEPARTMENT OF PUBLIC WORKS,
DURING THE FISCAL YEAR ENDED 30TH JUNE, 1897.
- 3rd.—PROPERTY LEASED TO AND BY THE DEPARTMENT OF PUBLIC WORKS, DURIN
THE FISCAL YEAR ENDED 30TH JUNE, 1897.

Department of Public Works

DEPARTMENT OF PUBLIC WORKS OF CANADA,

OTTAWA, 1st December, 1897.

SIR,—I have the honour to transmit to you, herewith inclosed, the following statements which are required for insertion in the Annual Report, 1896–97, namely:—

No. 1.—Statement of contracts let by this department during the fiscal year ended 30th June last.

No. 2.—Statement of property purchased and sold by this department during the same period.

No. 3.—Statement of property leased to and by this department also during the same period.

I have the honour to be, Sir,

Your obedient servant,

J. A. CHASSÉ,

Law Clerk.

E. F. E. ROY, Esq.,
Secretary of the Department of Public Works of Canada.

No. 1.—CONTRACTS let by the Department of Public Works of Canada from the 30th June, 1896, to the 30th June, 1897.

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS.			\$ cts.
<i>Government House, Parliament and Departmental Buildings.</i>			
Parliament and Departmental Buildings—Supply of coal.....	J. W. McRae	Mar. 30, 1896	12,309 21
Parliament and Departmental Buildings and Grounds—Removal of snow.....	J. A. Thompson.....	Nov. 27, 1896	445 00
Parliament and Departmental Buildings—Supply of ice.....	The Capital Ice Co....	Mar. 31, 1897	For season 350 00 per sup.yd. 2 19 persup.yd. 3 39
Parliament Grounds—Sicilian Mastic Asphalt Works	The Sicily Asphaltum Paving Co., Ltd....	June 18, 1897	
Post Office Esplanade—Sicilian Rock Asphalt pavement.....	do	do 18, 1897	persup.yd. 3 39
Rideau Hall—Removal of snow.....	Alexander Hunter	Dec. 1, 1896	267 00
do Supply of ice.....	J. O. Charlebois.....	Mar. 5, 1897	per blk. 0 4 1/2
Major's Hill Park—Maintenance of public grounds...	Thos. E. Davis.....	Sept. 12, 1896	2,200 00
Parliament Hill—do do.....	J. N. Grieves.....	Dec. 14, 1896	3,400 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—Continued.

Works.	Name of Contractor.	Date of Contract.	Amount.
PUBLIC BUILDINGS—Continued.			\$ cts.
<i>Nova Scotia.</i>			
Amherst post office building—Supply of coal.....	The Canada Coal and Ry. Co., Ltd..	Oct. 17, 1896	186 00
Annapolis do do	do	do 17, 1896	141 33
Antigonish do do	James Kenna	Aug. 29, 1896	66 00
Arichat do do	F. L. Malzard	Oct. 23, 1896	112 50
do savings bank do	do	do 23, 1896	
Baddeck post office do	James Kenna	Aug. 29, 1896	90 00
Dartmouth do do	Intercolonial Coal Mining Co.	Oct. 19, 1896	60 40
Halifax Dominion building do	do	Sept. 16, 1896	727 15
do Asst. Rec. Gen'l's office do	do	do 16, 1896	48 45
do examining warehouse do	do	do 16, 1896	127 32
Lunenburg post office do	Benjamin Anderson ..	Aug. 27, 1896	150 00
New Glasgow do do	Acadia Coal Co., Ltd..	do 28, 1896	136 08
North Sydney do do	Burchell Bros.	Sept. 11, 1896	145 12
Pictou do do	Acadia Coal Co., Ltd..	Aug. 28, 1896	49 39
do custom-house do	do	do 28, 1896	115 24
Sydney post office do	Burchell Bros.	Sept. 11, 1896	168 00
Truro do do	Acadia Coal Co., Ltd..	Aug. 28, 1896	32 50
Windsor do do	Fred. W. Dimock	do 26, 1896	150 44
Yarmouth do do	The Canada Coal and Railway Co., Ltd....	Oct. 17, 1896	211 25
<i>Prince Edward Island.</i>			
Charlottetown Dominion building—Supply of coal ..	C. Lyons & Co.	Aug. 28, 1896	447 20
Montague post office—Supply of coal	Geo. Wightman.	do 28, 1896	47 05
Summerside do do	James Kenna	do 29, 1896	261 04
<i>New Brunswick.</i>			
Bathurst post office—Supply of coal	Chs. Powell	do 28, 1896	293 93
Carleton do do	R. P. & W. F. Starr. ..	do 26, 1896	33 27
Chatham do do	R. R. Call	do 26, 1896	197 87
do do do	Burchell Bros.	Sept. 11, 1896	131 45
Dalhousie do do	The Canada Coal and Railway Co., Ltd....	Oct. 17, 1896	75 65
do do do	Chs. Powell	Aug. 28, 1896	127 84
Fredericton do do	Patrick Farrell	do 26, 1896	246 23
Moncton do do	The Canada Coal and Railway Co., Ltd....	Oct. 17, 1896	196 95
Newcastle do do	R. R. Call	Aug. 26, 1896	197 57
do do do	Burchell Bros.	Sept. 11, 1896	76 73
Portland do do	R. P. & W. F. Starr. ..	Aug. 26, 1896	7 20
St. John do do	do	do 26, 1896	495 89
do savings bank do	do	do 26, 1896	207 81
do custom-house do	do	do 26, 1896	1,273 76
do do do	J. S. Gibon & Co.	do 26, 1896	15 38
St. Stephen post office do	C. H. Clerke	do 27, 1896	119 90
Woodstock post office do	W. F. Dibblee & Son..	Aug. 28, 1896	208 69
<i>Quebec.</i>			
Aylmer post office—Supply of coal	T. G. Brigham	Aug. 29, 1896	193 50
Coaticook do do	W. C. Webster & Son..	do 28, 1896	198 75
Fraserville do do	Nap. Dion	do 26, 1896	288 00
Hull do do	G. W. McCullough	do 26, 1896	280 80
Joliette do do	M. H. Leprohon & Co.	do 26, 1896	190 10
Laprairie do do	Jacques Bourdon	do 27, 1896	94 35
Montreal custom-house do	Wilson & Frères	do 24, 1896	599 98
do examining warehouse—Supply of coal	T. F. Moore & Co.	do 24, 1896	1,600 00
do post office do	L. Cohen & Son.	do 24, 1896	717 73
do revenue building do	Amiot, Lecours & Larivière	do 24, 1896	174 95

Department of Public Works.

No. 1.—CONTRACTS let by the Department of Public Works, &c.—Continued.

Works.	Name of Contractor.	Date of Contract.	Amount.
PUBLIC BUILDINGS—Continued.			\$ cts.
Quebec—Concluded.			
Quebec (H. E. Quarters) Citadel—Supply of coal.....	Geo. M. Webster & Co.	Sept. 3, 1896	11 40
do cullers' office do	do do	do 3, 1896	8 12
do marine agency do	do do	do 3, 1896	14 40
do immigration building do	do do	do 3, 1896	6 29
do Citadel do	Madden & Ellis	Sept. 17, 1896	54 50
do cullers' office do	do do	do 17, 1896	159 68
do custom-house do	do do	do 17, 1896	124 75
do marine agency do	do do	do 17, 1896	124 75
do examining warehouse do	do do	do 17, 1896	484 56
do post office do	do do	do 17, 1896	499 31
do quarantine station do	do do	do 17, 1896	39 92
do post office—Supply of water.....	The City of Quebec	May 1, 1897	750 00
do custom-house do	do do	do 1, 1897	850 00
do examining warehouse do	do do	do 1, 1897	450 00
do marine and fisheries do	do do	do 1, 1897	750 00
Richmond post office—Construction of a heating apparatus.....	Joseph Lamarche.....	March 8, 1897	644 60
Rimouski public building—Construction of a heating apparatus.....	do	April 9, 1897	493 00
St. Henri post office—Supply of coal.....	J. O. Labrecque, Cousineau & Cie.....	Oct. 13, 1896	72 41
St. Hyacinthe do do	Wm. Bousquet & Co.....	Aug. 26, 1896	184 37
St. Jérôme do do	Chs. Godmer.....	Oct. 17, 1896	232 25
St. John's do do	Bissett & Donaghy.....	Aug. 27, 1896	140 25
Sherbrooke do do	Codère, Fils & Cie.....	Oct. 13, 1896	262 86
Sorel do do	H. C. Charland & Co.....	Aug. 26, 1896	189 60
Three Rivers do do	Zéphirin Marchand	do 26, 1896	232 80
do custom-house do	do	do 26, 1896	117 50
do experimental farm exhibit building—Construction of.....	J. U. Dufresne.....	do 14, 1896	4,130 00
Valleyfield post office—Supply of coal.....	Jos. Edouard Meloche.....	do 26, 1896	43 20
Ontario.			
Almonte post office—Supply of coal.....	Wm. McArthur.....	Aug. 25, 1896	125 00
Amherstburg do do	O. W. Shipman.....	do 31, 1896	109 65
Barrie do do	J. G. Scott.....	do 28, 1896	227 50
Belleville do do	Thos. Stuart.....	Sept. 2, 1896	360 00
Berlin do do	Kloepfer & Co.....	do 1, 1896	186 41
Brampton do do	Peaker & Son.....	do 26, 1896	147 23
Brantford do do	The Huffman Gibson Coal Co.....	do 2, 1896	330 44
Brockville do do	The Central Canada Coal Co., Ltd.....	do 9, 1896	287 50
Carleton Place post office do	Wm. Steele.....	Aug. 30, 1896	107 40
Chatham do do	Angus R. Crowe.....	do 26, 1896	168 63
Clifton do do	W. E. Thomas.....	do 31, 1896	113 50
Cobourg do do	Jones & Barnum.....	do 29, 1896	213 85
Cornwall do do	Mulhern & Conroy.....	do 28, 1896	248 00
Galt do do	Colvin & Fraser.....	do 31, 1896	142 00
Gananoque post office—Supply of coal.....	The Rathbun Co.....	Sept. 9, 1896	90 75
do custom-house do	do	do 9, 1896	133 00
Goderich post office do	Wm. Lee.....	Aug. 31, 1896	182 84
Guelph do do	Frank Frank.....	do 31, 1896	124 58
Hamilton do do	Peoples Coal Co.....	do 29, 1896	820 98
Kingston do do	James Sowards.....	Sept. 3, 1896	209 43
do custom-house do	do	do 3, 1896	337 57
do do construction of a heating apparatus.....	Purdy, Mansell & Mash-inter	June 23, 1897	893 00
Lindsay post office—Supply of coal.....	McLennan & Co.....	Sept. 2, 1896	143 82
London do do	John M. Daly.....	do 2, 1896	367 50
do custom-house do	do	do 2, 1896	418 01
Napanee post office do	The Rathbun Co.....	do 9, 1896	182 00
Orangeville do do	Thos. Lynn.....	Aug. 31, 1896	110 12

No. 1.—CONTRACTS let by the Department of Public Works, &c.—Continued.

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS—Continued.			\$ cts.
<i>Ontario.</i>			
Orillia post office—Supply of coal	A. Tait.	Oct. 19, 1896	169 96
Ottawa Langevin block, post office building, printing bureau, geological and fisheries museums, Cartier square, &c.—Removal of snow	Michael Hayes	Dec. 1, 1896	345 00
Ottawa eastern block—Construction of three tubular boilers	Wm. J. Campbell	Jan. 22, 1897	1,413 00
Ottawa central experimental farm—Supply of coal	G. W. McCulloch	Aug. 26, 1896	927 71
Pembroke post office	James Stewart	Sept. 12, 1896	168 98
Peterborough do	A. G. McClellan	Aug. 28, 1896	242 00
do custom-house	do	do 28, 1896	
Petrolia post office	The Huffman, Gibson Coal Co.	Sept. 2, 1896	127 81
Port Arthur do	Louis Walsh	Aug. 31, 1896	165 00
Port Hope do	Wright & Rosevear	do 26, 1896	226 00
Prescott do	James Buckley	Sept. 1, 1896	164 50
St. Catharines do	E. C. Rogers	do 10, 1896	115 26
do do	D. Dittick	do 9, 1896	115 84
St. Thomas do	Ellison H. Lewis	Aug. 31, 1896	204 00
Smith's Falls do	Thos. Graham	do 31, 1896	112 00
Stratford do	M. F. Goodwin	do 29, 1896	409 75
Strathroy do	Alexander Reed	do 28, 1896	145 96
Toronto public buildings	Peoples' Coal Co.	do 29, 1896	2,081 13
Trenton post office	Chas. Crowe	do 29, 1896	120 00
Walkerton do	Traill Bros.	do 31, 1896	141 34
Windsor do	John & Timothy Hurley	do 31, 1896	399 75
do do	Scully & Brydges	do 31, 1896	40 30
<i>Manitoba.</i>			
Brandon post office—Supply of coal	John Hanbury	Sept. 2, 1896	510 00
do experimental farm—Supply of coal	do	do 2, 1896	136 50
Winnipeg post office	Alberta Ry. & Coal Co., Ltd.	Oct. 19, 1896	2,781 25
do custom-house	Paul H. McKinnon	Sept. 3, 1896	631 75
do immigration office and sheds—Supply of coal	do	do 3, 1896	325 76
do Indian office and crown timber office—Supply of coal	do	do 3, 1896	266 05
do examining warehouse—Supply of coal	do	do 3, 1896	522 60
<i>North-west Territories.</i>			
Calgary immigration shed—Supply of coal	W. R. Hull	Sept. 3, 1896	47 49
do post office	do	do 3, 1896	276 10
do court-house	do	do 3, 1896	272 70
do registry office	do	do 3, 1896	
do immigration shed	Thos. O'Brien	do 3, 1896	62 87
do post office	do	do 3, 1896	42 85
do court-house	do	do 3, 1896	34 48
Calgary registry office—Supply of coal	Thos. O'Brien	Sept. 3, 1896	69 35
Edmonton Dominion land office—Supply of coal	Sam. Moran	do 7, 1896	108 45
Indian Head experimental farm	Geo. Thompson	Oct. 12, 1896	201 00
Lethbridge post office	Alberta Ry. Coal Co.	Sept. 5, 1896	106 21
Macleod court-house	do	do 5, 1896	80 00
Moosomin court-house—Construction of heating apparatus	Jos. Lamarche	March 1, 1897	1,127 80
Prince Albert court-house and jail—Construction of heating apparatus	Jos. B. Kernaghan	June 30, 1897	1,220 00
Regina court-house—Supply of coal	Smith & Ferguson	Sept. 1, 1896	27 08
do post office	do	do 1, 1896	33 78
do court-house	Rembler Paul	do 1, 1896	605 00
do post office	do	do 1, 1896	205 00
do land titles office	do	do 1, 1896	186 90

Department of Public Works.

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Concluded.*

Works.	Names of Contractors.	Date of Contract.	Amount.
HARBOURS AND RIVERS.			\$ cts.
<i>Nova Scotia.</i>			
Hantsport—Construction of a public wharf.....	Simmons & Burpee....	June 16, 1897	5,947 00
Margaretville—Extension to breakwater.....	do	March 29, 1897	10,854 00
Pugwash—Construction of a public wharf..	McDonald & Moffatt..	May 12, 1897	8,640 00
Wallace—Construction of a pile wharf.	John D. Reid.....	March 17, 1897	2,329 00
<i>Quebec.</i>			
Lotbinière—Construction of a public wharf.....	Joseph Archer.....	March 31, 1897	4,940 00
St. Valentin—Construction of a landing pier.....	A. Messier & B. V. Naylor.....	do 17, 1897	5,388 54
<i>Ontario.</i>			
Collingwood harbour—Deepening and dredging	C. S. Boon & J. H. Armstrong.....	April 29, 1897	144,960 00
Goderich harbour—Reconstruction of breakwater....	Luke Madigan	March 25, 1897	50,999 00
Kincardine harbour—Construction of works..	Bowman, Bowman & Porter.....	do 22, 1897	11,000 00
L'Orignal—Reconstruction of the approach to the landing pier	Munro & Murray....	June 8, 1897	13,417 12
TELEGRAPH AND SIGNAL SERVICE.			Per mile.
Pointe aux Esquimaux to Peashte Bay, Que.—Con- struction of a telegraph line.....	L. P. de Courval.....	Jan. 5, 1897	105 00
St. Alexis to L'Anse St. Jean, Que.—Construction of a telegraph line.....	Elz. Boivin.....	Feb. 22, 1897	50 00

J. A. CHASSÉ,
Law Clerk.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 1st December, 1897,

No. 2.—STATEMENT of Property purchased or sold by the Department of Public Works during the Fiscal Year ended 30th June, 1897.

Date of Conveyance.	Vendors.	Purchasers.	Description of Property.	For what purpose.	Area.	Price.
1896.						\$ cts.
Aug. 31.....	L'Association Agricole du Dist. des Trois Rivières.	Her Majesty	Lot of land No. 1,096 situate in the City of Three Rivers.	For erection of a public building.	36,907 sup. feet.	Free grant.
Nov. 11.....	John Dunlop Reid.....	do	Parts Secs. 40, 41, 42 in Mechosin District, B.C.....	For Quarantine Station.	1 1/4 of an acre, more or less.	197 00
Dec. 10.....	E. J. Price & Bros.....	do	Wharf at L'Anse à L'Eau, Tadoussac, Que.....	Government purposes.	.....	1 00
do 11.....	Her Majesty.....	Sun Life Assurance Co. of Canada.	Old post office building with lots 55 and 56 in the City of Hamilton, Ont.....	Private enterprise.	.....	12,250 00
1897.						
Feb. 1.....	David H. Tétu.....	Her Majesty	Buildings and land at Pentecoste River, Saguenay Co., Q.	Government purposes.	3 acres, more or less.	500 00

Department of Public Works

No. 3.—STATEMENT of Property leased to and by the Department of Public Works during the Fiscal Year ended 30th June, 1897.

Date of Lease.	Lessor.	Lessee.	Property Leased.	For what purpose.	Duration of Lease.	Annual rental payable.
1896.						
Sept. 25..	Her Majesty	The Grand Trunk Ry. Co.	Parcel of land with esplanade, dock or wharf at Owen Sound, Ont.	Private enterprise	21 years	\$ 1 per annum.
1897.						
May 1..	do	Archie McNee	Portion of land 35 x 60 feet, Windsor, Ont.	do	do	\$120 do
do 15..	J. C. Armstrong	Her Majesty	Rooms in Armstrong's Block, New Westminster, B.C.	Government purposes	1 year	\$258 do
do 15..	Benj. Young	do	Rooms in Young's Block, New Westminster, B.C.	do	do	\$198 do
do 31..	"Corporation of New Westminster, B.C.	do	Portion of foreshore of Lulu Island, B.C.	For safe quarters for government plant	5 years	\$ 12 do

J. A. CHASSE,
Law Clerk.

DEPARTMENT of PUBLIC WORKS,
OTTAWA, 1st December, 1897.

Department of Public Works.

APPENDIX No. 7.

NAMES OF THE CHIEF OFFICERS OF THE DEPARTMENT OF PUBLIC WORKS

WITH

DATES OF APPOINTMENT, &c., FROM 1841 TO 1897

Department of Public Works.

NAMES OF THE CHIEF OFFICERS.

APPENDIX No. 7.—The names with the dates of appointment, &c., of the principal Officials of the Department of Public Works, from 1841 to 1897.

Names.	Capacity or Office.	Date of Appointment. Served	
		From	To
<i>Under Statute 4-5 Vic., Cap. 38.</i>			
CORPORATION BOARD OF WORKS.			
Killaly, Hon. H. H.	Chairman	Dec. 29, 1841	Oct. 3, 1844
Daly, Hon. D.	Members		
Harrison, S. B.			
Sullivan, R. B.	Secretary	Aug. 17, 1841	
Davidson, J., Esq.			
Begly, Thomas A.	Chief Engineer	do 17, 1841	
Keefer, Samuel	Architect and Assistant Chief Engineer	Dec. 15, 1841	
Rubidge, F. B.			
NEW BOARD OF WORKS.			
Killaly, Hon. H. H.	Chairman	Oct. 4, 1844	June 8, 1846
Daly, Hon. D.	Members		
Draper, Hon. W. H.			
Morris, Hon. W.			
Papineau, Hon. D. B.			
<i>Under Statute 9th Vic., Cap. 37, &c.</i>			
Robinson, Hon. W. B.	Chief Commissioner	June 22, 1846	March 10, 1848
Taché, Hon. E. P.	do	March 11, 1848	Nov. 26, 1849
Chabot, Hon. J.	do	Dec. 13, 1849	March 31, 1850
Merritt, Hon. W. H.	do	April 8, 1850	Feb. 11, 1851
Bourret, Hon. J.	do	Feb. 12, 1851	Oct. 27, 1851
Young, Hon. John	do	Oct. 28, 1851	Sept. 22, 1852
Chabot, Hon. J.	do	Sept. 23, 1852	Jan. 26, 1855
Lemieux, Hon. F.	do	Jan. 27, 1855	Nov. 25, 1857
Alleyn, Hon. C.	do	Nov. 26, 1857	Aug. 1, 1858
Holton, Hon. L. H.	do	Aug. 2, 1858	do 6, 1858
Sicotte, Hon. L. V.	do	do 7, 1858	Jan. 10, 1859
Rose, Hon. John	do	Jan. 11, 1859	June 12, 1861
Cauchon, Hon. Jos.	Commissioner	June 13, 1861	May 23, 1862
Tessier, Hon. U. J.	do	May 24, 1862	do 27, 1863
Drummond, Hon. L. T.	do	do 28, 1863	July 23, 1863
Laframboise, Hon. M.	do	July 24, 1863	March 29, 1864
Chapais, J. C.	do	March 30, 1864	June 30, 1867
Casgrain, Hon. Chas. Eus.	Second Commissioner	July 9, 1846	Feb. 29, 1848
Cameron, Hon. M.	Assistant Commissioner	March 11, 1848	do 1, 1850
Wetenhall, John S., Esq.	do	Feb. 2, 1850	April 16, 1850
Bourret, Hon. Jos.	do	April 17, 1850	Feb. 11, 1851
Killaly, Hon. H. H.	do	Feb. 12, 1851	May 6, 1859
Keefer, Samuel	Deputy Commissioner	May 6, 1859	March 7, 1864
Trudeau, Toussaint	do	March 8, 1864	
Begly, Thomas A.	Secretary	Feb. 10, 1841	Oct. 31, 1858
Trudeau, Toussaint	do	Dec. 13, 1859	March 7, 1864
Braun, Frederick	do	March 8, 1864	
Page, John	Chief Engineer	Oct. 31, 1863	Oct. 1, 1879

APPENDIX No. 7.—The names with the dates of appointment, &c., of the principal Officials of the Department of Public Works, from 1841 to 1897—*Concluded.*

Names.	Capacity or Office.	Date of Appointment. Served	
		From	To
<i>Under Statute 31 Vic., Cap. 12.</i>			
McDougall, Hon. Wm.	Minister	July 1, 1867	Dec. 7, 1869
Langevin, C. B., Hon. Hector L.	do	Dec. 8, 1869	Nov. 6, 1873
Mackenzie, Hon. Alexander	do	Nov. 7, 1873	Oct. 16, 1878
Tupper, C.B., K.C.M.G., Sir Charles	do	Oct. 17, 1878	May 19, 1879
Langevin, C.B., K.C.M.G., Sir Hector L.	do	May 20, 1879	Aug. 11, 1891
Smith, Hon. Frank	Acting Minister	Aug. 14, 1891	Jan. 10, 1892
Ouimet, Hon. Joseph Aldric	Minister	Jan. 11, 1892	April 30, 1896
Desjardins, Hon. Alphonse	do	May 1, 1896	July 12, 1896
Tarte, Hon. J. Israel	do	July 13, 1896	
Trudeau, Toussaint	Deputy Minister	May 29, 1868	Oct. 1, 1879
Baillairgé, G. F.	do	Oct. 4, 1879	Dec. 31, 1890
Gobeil, A.	Deputy Minister	Jan. 1, 1891	
Braun, Frederick	Secretary	July 1, 1867	Sept. 30, 1879
Chapleau, S.	do	Oct. 1, 1879	Nov. 4, 1880
Ennis, F. H.	do	Nov. 5, 1880	Jan. 13, 1885
Gobeil, A.	do	Jan. 23, 1885	Dec. 31, 1890
Roy, E. F. E.	do	Jan. 1, 1891	
McPherson, D. A.	Assistant Secretary	do 18, 1891	April 11, 1893
Desroches, Charles Rodolphe	do	Jan. 8, 1896	
Perley, H. F.	Chief Engineer	Nov. 25, 1880	July 10, 1891
Baillairgé, G. F.	Assistant Chief Engineer	July 5, 1871	do 4, 1879
Coste, Louis	Chief Engineer	do 26, 1892	
Scott, Thos. S.	Chief Architect	May 26, 1871	Oct. 30, 1881
Fuller, Thomas	do	Oct. 31, 1881	
Page, John	Chief Engineer	July 1, 1868	do 1, 1879

APPENDIX No. 8.

NAMES OF THE OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS OF CANADA

ON THE 30th JUNE, 1897

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS.

STATEMENT showing the Names, Dates of Appointment, Salaries, &c., of Persons employed on the various Slides and Booms, on 30th June, 1897.

Name.	Date of Birth.	Position.	Where employed.	Date of Appointment.	Salary.	Remarks.
<i>Collector of Slide and Boom Dues.</i>						
E. T. Smith	Nov. 26, 1846	Collector	Ottawa.	July 1, 1889	\$ cts. 1,800 00 a year	Date of first appointment to Crown Timber office, Ottawa, 23rd June, 1884. Clerk, Dept. of Inland Revenue, 1st July, 1870, to 30th June, 1889. Transferred to civil list with rank of first class clerk, 5th January, 1892.
James Slater	April 30, 1847	Assistant Collector	do	Nov. 14, 1889	1,000 00 do	Date of first appointment to Crown Timber office, Ottawa, 21st April, 1877. Clerk, Dept. of Inland Revenue, 1st April, 1883, to 30th June, 1889. Transferred to civil list with rank of 3rd class clerk, January, 1892.
James Steen	June 17, 1830	Boatman	do	July 12, 1889	60 00 a month	Employed during the season of navigation, for 8 months each year. Date of first appointment, 26th May, 1861. Timber counter, Ottawa, for Dept. of Inland Revenue, 7th Jan., 1884, to 30th June, 1889.
John Redmond	August 2, 1833	do	do	do 12, 1889	60 00 do	Employed during the season of navigation, for 8 months each year. Date of first appointment, 1st May, 1872. Assistant timber counter, Ottawa, for Dept. of Inland Revenue, 7th Jan., 1884, to 30th June, 1889.
<i>Saguenay District.</i>						
<i>St. Maurice District.</i>						
Nap. Dagueau	.....	Paymaster	Three Rivers	Aug. 1, 1886	50 00 a month.	Saguenay District slides abandoned by authority of O. C. dated 5th February, 1896 (No. 168,740).
Cyrilac Lymburner	.....	Slide master	Mouth of St. Maurice	April 26, 1881	46 67 do	
Jos. Page	July 7, 1845	Asst. do	Cap aux Cornelles	Dec. 10, 1879	60 00 do	
Gédéon Brousseau	.....	do do	Shawenegan and (res)	April 7, 1896	54 16 do	
Arth. Pellerin	.....	do do	do	Aug. 5, 1885	33 33 do	

Department of Public Works

N. Lymburner	Boom master	Grand Mère	July 1, 1895	55 00	do	<i>Ottawa River Works.</i> —In addition to the above officers, &c., there are employed during the running season, one foreman on slide at \$1.50 and one assistant foreman at \$1.25 a day; also 25 to 30 labourers at from \$1 to \$1.40 a working day. Actively employed about 7 months. Oversees repairs in winter.
Jos. Brousseau	Boom keeper	Grandes Piles	July 1, 1892	55 00	do	
<i>Richelieu District.</i>						
Azaire Bienvenue	Boom master	Beleil Station	Jan. 1, 1882	100 00	a year.	
<i>Ottawa District.</i>						
G. P. Brophy	Superintendent	Ottawa	July 6, 1873	2,500 00	do	
D. Scott	Accountant	do	Oct. 1, 1854	1,500 00	do	
J. C. Scott	Measurer	do	April 1, 1880	3 25	a day	
J. Kent	Clerk	do	Aug. 1, 1886	3 00	do	
Wm. Cain	Messenger	do	Jan. 1, 1892	1 25	do	
Pierre St. Pierre	Deputy slide master	Carillon	June 1, 1897	1 40	do	
D. Noonan	Boom master	Gatineau	Mar. 21, 1878	500 00	a year.	do do
J. Soulière	Deputy slide master	Chaudière	Nov. 8, 1829	2 50	a day	do do
J. McDonell	do	Hull	Mar. 1, 1877	1 25	do	do do
M. McFarlane	do	Chats	April 27, 1897	480 00	a year.	do Oversees repairs in winter.
John Harvey	Slide master	Amprior	July 12, 1882	2 50	a day	Actively employed about 7 months.
Joseph McCrea	Boom master	Springtown	May 15, 1880	300 00	a year.	Employed about 3 months during season of navigation.
Patrick Barry	Slide master	High Falls	Mar. 10, 1888	1 50	a day	Employed 5 months during season of navigation. Oversees repairs in winter.
Duncan McLaren	Deputy slide master	Portage du Fort	Sept. 7, 1881	456 25	a year.	do do
J. G. Poupore	do	Black River	Oct. 15, 1880	480 00	do	do do
James Steen Rowan	do	Lower Petewawa	Mar. 18, 1887	480 00	do	do do
W. E. Biggs	Deputy slide master	Upper Petewawa	Oct. 10, 1879	2 00	a day	do 6 months
Wm. Thomson	do	Mountain	April 1, 1894	360 00	a year.	do do 6 to 7 months
G. H. Brabazon	do	Calumet	April 1, 1894	360 00	do	do do 4 months
E. Davis	do	Coulange	April 1, 1889	300 00	do	do do do
H. R. Downey	do	Des Joachims	July 1, 1889	300 00	do	Employed 3 months during season of navigation. Will inspect works when required.
J. A. McGuire	do	Dumoulin	May 1, 1897	300 00	do	do do do
J. W. Carmichael	do	Rocher Capitaine	Dec. 24, 1896	480 00	do	do do
A. H. Johnson	do	Chenaux	..... 1865	2 50	a day	Paid during season of navigation 7 months. Attends to repairs in winter.
G. T. Johnson	do	do	..... 1872	1 75	do	do do
<i>Newcastle District.</i>						
R. B. Rogers	Superintendent	Peterboro'	July 1, 1884	800 00	a year.	Receives \$800 a year from Department of Railways and Canals.
G. H. Giroux	Clerk, supt.'s office	do	July 1, 1880	400 00	do	do \$400 do
Clement Armstrong	Slide master	Chisholm Rapids	April 1, 1883	200 00	do	\$250 a as lock year master.
Wm. McArthur	do	Fenelon Falls	July 1, 1895	100 00	do	do R. & C.
R. T. Hill	do	Buckhorn	July 1, 1891	100 00	do	Receives \$150 a year from Department of Railways and Canals.

STATEMENT showing Names, &c., of persons employed on the various Slides and Booms—*Concluded.*

Name.	Date of Birth.	Position.	Where Employed.	Date of Appointment.	Salary.	Remarks.
<i>Newcastle District—Con.</i>						
Hamilton Johnston.....		Slidemaster.....	Heeley's Falls.....	July 15, 1893.....	200 00 a year.....	
John Dinwoodie.....		do.....	Lakefield.....	June 20, 1893.....	150 00 do.....	
<i>Burlington Channel.</i>						
<i>Swing Bridge.</i>						
Wm. Omand.....		Bridge attendant.....	Burlington.....	Sept. 19, 1896.....	600 00 do.....	Employed 9 months.
A. McDonald.....		Bridge asst.....	do.....	April 1, 1896.....	1 25 a day.....	
Ch. Rosberry.....		do.....	do.....	Sept. 19, 1896.....	1 25 do.....	
Joe. Eustice.....		do.....	do.....	Sept. 19, 1896.....	1 25 do.....	
<i>Yanaska District.</i>						
A. Labbé.....		Lock keeper.....	Yanaska.....	Sept. 1, 1885.....	40 00 a month.....	
O. Mineau.....		do.....	do.....	Sept. 1, 1885.....	40 00 do.....	
<i>Rivière du Lièvre.</i>						
Alex. MacCallum.....		Lock master.....	Rivière du Lièvre.....	May 14, 1892.....	40 00 do.....	
Simon Raymond.....		Labourer.....	.....	April 1, 1894.....	35 00 do.....	

R. STECKEL.

APPENDIX No. 9.

LIST OF ENGINEERS, ENGINEMEN, FIREMEN AND CARETAKERS

EMPLOYED

IN THE PUBLIC BUILDINGS THROUGHOUT THE DOMINION
ON THE 30TH JUNE, 1897

GIVING

DATES OF APPOINTMENTS, SALARIES, Etc.

ENGINEERS AND CARETAKERS, PUBLIC BUILDINGS.

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on 30th June, 1897.

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary	Time employed each Year.	Yearly Salary.
						\$ cts.		
Amherst.	Post office.	James Morrison	May 2, 1824	Caretaker.	Nov. 2, 1886	33 33	12 months	400 00
Antigonish	Public building	Angus McDonald	Mar. —, 1820	do	Feb. 5, 1891	33 33	12 do	400 00
Annapolis	Post office and C.-house	John McKay	Oct. 26, 1847	do	April 1, 1891	33 33	12 do	400 00
Baddeck	Public building	Alex. S. McDonald	Dec. 11, 1855	do	Dec. 23, 1886	18 67	12 do	200 00
Dartmouth.	do	I. C. Henley	do 11, 1846	do	May 22, 1894	20 83	12 do	250 00
Halifax.	Dominion building	Richard Power.	Aug. 15, 1834	Engineer	Oct. do	62 50	12 do	750 00
do	do	John Powell.	do 21, 1836	Fireman	do 1, 1871	50 00	9 do	450 00
do	do	J. F. Sullivan.	April 16, 1866	Caretaker.	July 1, 1892	33 33	12 do	400 00
do	do	W. H. Gray	Nov. 26, 1848	Watchman.	Sept. 10, 1891	39 00	12 do	468 00
do	Examining warehouse.	Wm. Power	Feb. 6, 1834	Caretaker.	Jan. 26, 1887	41 67	12 do	500 00
do	Immigrant building.	John Oxley	April 17, 1856	Fireman	Feb. 2, 1897	50 00	12 months	300 00
do	Public building.	J. E. Hebb	Nov. 3, 1833	Caretaker.	June 7, 1895	25 00	12 do	300 00
Lunenburg	Post office.	Daniel McDonald	Dec. 17, 1832	do	Oct. do	33 33	12 do	400 00
New Glasgow	Public building.	Angus McEachran.	do 24, 1847	do	Jan. 20, 1890	25 00	12 do	300 00
North Sydney	Public building.	James Arbuckle.	Feb. 18, 1836	do	Dec. 20, 1886	25 00	12 do	300 00
Pictou	Post office and C.-house	N. H. McNeill	Dec. 25, 1845	do	do 13, 1890	33 33	12 do	400 00
Sydney, South.	do	Alex. Smith	May 17, 1837	do	April do	25 00	12 do	300 00
Truro	do	Aug. F. Parsons	Mar. 3, 1846	do	Sept. 22, 1892	33 33	12 do	400 00
Windsor	Public building	Robert Spears	Sept. 15, 1824	do	Dec. 23, 1886	33 33	12 do	400 00
Yarmouth.	Dominion building	Wm. J. Fraser	Jan. 1, 1836	do & fireman	April 3, 1894	33 33	12 do	400 00
Charlottetown.	do	Geo. Walker	Aug. 28, 1826	Messenger	Jan. 19, 1875	37 03	12 do	444 36
do	do	Wm. Byrne	Jan. 15, 1851	do	Dec. 5, 1892	37 50	12 do	450 00
do	do	Angus McKenzie	Mar. 12, 1856	Watchman.	Nov. 1, 1896	33 33	12 do	400 00
Montague	Public building	Martin Lambert	Nov. 12, 1845	Caretaker.	Jan. 12, 1887	13 33	12 do	160 00
Summerside	Dominion building	James Brazil	do 1816	do	Nov. 5, 1885	33 33	12 do	400 00
Bathurst.	Post office	J. A. Melançon.	Jan. 20, 1825	do	Nov. 13, 1887	33 33	12 do	400 00
Chatham	do	C. Johnston	May 18, 1856	do	Mar. 27, 1895	25 00	12 do	300 00
Carleton, St. John	do	James R. Reid	Aug. 15, 1823	do	Oct. 1, 1889	8 33	12 do	100 00
Dalhousie.	do	Wm. Gould	Jan. 1, 1843	do	Nov. 26, 1890	33 33	12 do	400 00
Fredericton	do	Jas. Perkins	Oct. 5, 1837	do	May 31, 1881	33 33	12 do	400 00
Moncton.	do	E. B. Hicks	Jan. 11, 1832	do	Jan. 11, 1886	33 33	12 do	400 00

Department of Public Works

Newcastle	do	Patrick Keating	March 13, 1840	do	Oct.	23, 1886	33 33 12	do	400 00
St. Stephen	do	Samuel Topping	April 2, 1839	do	May	25, 1887	33 33 12	do	400 00
Sussex	do	Shepherd Dryden	May 15, 1839	do	Jan.	27, 1897	16 66 12	do	200 00
St. John	do	Neil J. Morrison	May 25, 1858	Engin'r & caretaker	April	27, 1894	60 00 12	do	720 00
do	do	Christopher White	Nov. 20, 1844	Fireman.	Nov.	9, 1885	50 00 6	do	300 00
do	do	Jas. A. Paul	Aug. 1, 1891	Caretaker.	Oct.	13, 1891	41 67 12	do	500 00
do	do	James Wolfe	March 10, 1850	Engineer.	Dec.	1, 1893	55 00 12	do	600 00
do	do	Ed. Hancy	Feb. 22, 1849	Huist attendant.	Nov.	27, 1882	50 00 12	do	600 00
Woodstock	do	Charles Trafon	Jan. 20, 1839	Caretaker.	May	1, 1897	33 33 12	do	400 00
Aylmer	do	Miss M. G. Woods	Nov. 16, 1839	do	April	29, 1895	5 00 12	do	60 00
Castrook	Public building.	Israel Baldwin	Nov. 15, 1824	do	June	27, 1889	33 33 12	do	400 00
Fraserville	Post office	Z. Boucher	May 15, 1824	do	July	2, 1892	20 83 12	do	250 00
Hull	Post office, &c.	J. H. Kerr	April 13, 1847	do	Feb.	14, 1893	12 50 12	do	150 00
Joliette	do	Chas. Guilbault	Sept. 29, 1826	do	Oct.	15, 1889	33 33 12	do	400 00
Lachine	do	F. Caisse	Feb. 21, 1831	do	Sept.	22, 1893	8 33 12	do	100 00
Laprairie	do	A. Thomas	Aug. 8, 1848	do	Nov.	13, 1894	4 16 12	do	50 00
Montreal	Dominion buildings.	Thos. Ryan	June 18, 1836	Foreman engineer.	March	4, 1882	100 00 12	do	1,200 00
do	Examining warehouse.	M. Boyer	Feb. 18, 1848	Fireman.	do	4, 1882	50 00 12	do	600 00
do	Post office	F. Green	Oct. 4, 1837	Engineer.	Jan.	1, 1885	60 00 12	do	720 00
do	do	F. A. Thibault	Jan. 28, 1861	Electrician.	June	1, 1885	60 00 12	do	720 00
do	do	G. S. Gingras	Dec. 13, 1867	Electrician, &c.	Jan.	7, 1895	60 00 12	do	720 00
do	do	Jos. Durieac	Feb. 2, 1863	Elevator man.	Dec.	15, 1893	50 00 12	do	600 00
do	do	Art. Forget	July 25, 1867	do	do	15, 1893	50 00 12	do	600 00
do	do	S. N. Nickle	Dec. 25, 1871	do	March	1, 1894	50 00 12	do	600 00
do	do	C. Vadebonceur	May 17, 1840	Caretaker W. C.	Feb.	6, 1894	1 25 p.d. 12	do	456 25
do	Inland revenue.	Louis St. Jean	Sept. 6, 1849	Fireman.	Dec.	1, 1892	50 00 12	do	600 00
do	Custom-house.	J. H. Marchand	do	do	do	2, 1892	50 00 12	do	600 00
do	do	C. Daudelin	June 18, 1843	do	July	16, 1892	29 16 12	do	350 00
do	Custom-h. and ex-wareh.	B. LaJeunesse	Nov. 20, 1861	do	Nov.	23, 1896	45 00 9	do	405 00
do	Drill hall and armouries.	Wm. McDonald	Sept. 17, 1832	Engineer.	Feb.	21, 1888	45 00 12	do	540 00
Quebec	Examining warehouse.	D. P. Kennedy	Feb. 9, 1865	Engineer.	April	1, 1897	75 00 12	do	900 00
do	do	Thos. P. McLaughlin	Aug. 25, 1871	Fireman.	Aug.	26, 1892	45 00 8	do	360 00
do	Culler's office.	James O'Neil	do	do	do	1, 1894	45 00 12	do	540 00
do	Custom-house.	John R. Mountain	Nov. 1, 1848	do	Nov.	10, 1888	45 00 12	do	540 00
do	Post office	A. Blouin	do	Caretaker.	May	1, 1896	58 33 12	do	700 00
do	do	Thos. Rawson	May 20, 1841	do	Dec.	12, 1884	33 33 12	do	400 00
do	do	P. St. Michel	Feb. 25, 1829	do	Sept.	22, 1896	33 33 12	do	400 00
do	do	A. C. A. Bissonnette	do	do	March	4, 1895	33 33 12	do	400 00
do	Public building.	F. X. Tétraut	Nov. 8, 1846	Fireman.	Aug.	5, 1893	33 33 12	do	400 00
do	Post office.	L. Forant	Jan. 21, 1849	Caretaker.	April	14, 1897	29 16 12	do	350 00
do	do	Wm. Comper	May 20, 1826	Watchman.	Dec.	28, 1881	12 50 12	do	150 00
do	Public building.	Ph. Gravel	June 3, 1828	Caretaker.	do	1, 1891	25 00 12	do	400 00
do	Custom-house.	Jos. Carboneau	do	do	July	27, 1893	33 33 12	do	400 00
do	Post office	R. Elliot	Aug. 22, 1835	do	May	7, 1897	33 33 12	do	400 00
Ont.	do	Wm. Moulton	March 23, 1839	do	Jan.	29, 1891	33 33 12	do	400 00
Amherstburg	do	W. H. Moore	Jan. 1, 1846	do	do	8, 1896	33 33 12	do	400 00
Almonte	do	John Squire	April 24, 1842	do	Oct.	27, 1890	50 00 12	do	600 00
Brookville	do	R. D. Hill	Nov. 1, 1857	do	June	26, 1896	33 33 12	do	400 00
Barrie	do	J. P. Reeves	do	do	Oct.	17, 1883	50 00 12	do	600 00
Belleville	do	do	27, 1820	do	do	do	do	do	do

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at the Dominion Public Buildings, &c.—Continued.

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary.	Time employed each Year.	Yearly Salary.
						\$ cts.		\$ cts.
Berlin	Post office.	A. E. Lyons.	Aug. 14, 1860	Caretaker.	Oct. 1, 1895	33 33	12 months	400 00
Brampton	do	James McBride.	Oct. 5, 1840	do	Jan. 29, 1891	33 33	12 do	400 00
Carleton Place	do	James F. Halpenny.	April 17, 1858	do	May 13, 1892	25 00	12 do	300 00
Chatham.	do	W. W. Mitchell.	May 25, 1848	do	Jan. 7, 1895	29 16	12 do	350 00
Cornwall.	do	R. Conroy.	Nov. 6, 1848	do	April 1, 1897	33 33	12 do	400 00
Cayuga	do	G. A. Gibson.	May 29, 1861	do	Sept. 3, 1891	4 16	12 do	50 00
Cobourg.	do	H. J. Payne.	Jan. 31, 1854	do	April 24, 1890	33 33	12 do	400 00
Galt.	do	Wm. Kilgour.	March 3, 1857	do	Sept. 23, 1886	33 33	12 do	400 00
Guelph.	do	Robert Higham.	May 20, 1834	do	Oct. 29, 1889	33 33	12 do	400 00
Gananoque.	do	Thos. P. Richardson	Feb. 25, 1834	do	May 1, 1889	33 33	12 do	400 00
Goderich.	do	Lewis Elliott.	April 8, 1832	do	July 2, 1890	33 33	12 months	400 00
Hamilton	do	Alfred Barnard.	Dec. 27, 1847	do	Dec. 10, 1894	50 00	12 do	600 00
do	do	John Wigglesworth.	Aug. 7, 1853	Fireman.	Oct. 1, 1896	40 00	6 do	240 00
do	do	Thos. Nicholson.	Dec. 17, 1841	Engineer.	March 2, 1887	50 00	12 do	600 00
do	do	Wm. J. Harris.	May 21, 1841	Fireman.	Dec. 12, 1889	45 00	8 do	360 00
Kingston.	Drill hall.	Wm. Johnston	Sept. 12, 1842	Engineer.	May 31, 1881	65 00	12 do	780 00
do	do	M. Madden	Dec. 22, 1838	Fireman.	Oct. 12, 1878	55 00	12 do	660 00
London.	Custom house.	M. Mulken	Sept. 4, 1837	Engineman.	Sept. 18, 1888	50 00	12 do	600 00
do	Post office.	Wm. Greer.	Oct. 12, 1836	Caretaker.	March 16, 1884	33 33	12 do	400 00
do	do	John Price.	do	Engineer.	Jan. 14, 1884	50 00	12 do	600 00
Lindsay	do	Wm. Galbraith.	Jan. 8, 1844	Caretaker.	Nov. 16, 1893	33 33	12 do	400 00
Napanee.	do	John Hearn.	March 28, 1853	do	June 22, 1889	33 33	12 do	400 00
Niagara Falls.	do	Wm. J. Sheppard.	Jan. 4, 1854	do	Jan. 15, 1897	33 33	12 do	400 00
Orangeville.	do	John Wilkins.	May 29, 1830	do	Sept. 15, 1886	33 33	12 do	400 00
Orillia.	do	T. Goffatt.	March 14, 1844	do	May 1, 1897	10 00	12 do	120 00
Peterborough.	do	John Irwin.	May 17, 1842	do	June 8, 1887	41 66	12 do	500 00
Petrolia.	do	Chs. McRitchie.	March 29, 1853	do	Feb. 1, 1894	33 33	12 do	400 00
Port Colborne.	do	Wm. Armstrong	Sept. 9, 1846	do	June 11, 1888	20 00	12 do	240 00
Port Hope	do	Levi Reynolds	Feb. 15, 1839	do	Nov. 17, 1885	33 33	12 do	400 00
Port Arthur.	do	John Whitehead.	April 15, 1839	do	Sept. 11, 1893	25 00	12 do	300 00
Pembroke	do	Samuel Hamilton.	June 4, 1834	do	Oct. 29, 1890	33 33	12 do	400 00
Prescott	Post office.	Rufus C. Henderson	April 6, 1822	do	Dec. 23, 1890	33 33	12 do	400 00
Stratford	do	J. H. Roberts	May 1, 1847	Engineer	Feb. 27, 1884	50 00	12 do	600 00
St. Catharines	do	Louis Reno	Oct. 24, 1842	Caretaker.	Feb. 27, 1897	33 33	12 do	400 00
St. Thomas.	do	Jas. Russell	Sept. 15, 1832	do	Sept. 4, 1895	33 33	12 do	400 00

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Strathroy.....	"	Public building.	Wm. J. Johnston.	May	12, 1840	do	Oct.	25, 1890	33	33	12	do	400 00
Smith's Falls.....	"	do	R. W. Lewis.	Aug.	19, 1863	do	.....	Jan.	8, 1896	25	00	12	do	300 00
Toronto.....	"	Dominion buildings.	Wm. Bell.	Sept.	9, 1836	Foreman, engineer.	.....	Sept.	30, 1893	100	00	12	do	1,200 00
do	"	Inland revenue building.	C. H. Ballie	do	22, 1852	do	.....	Jan.	13, 1891	50	00	12	do	600 00
do	"	Custom-house	Fred. Faragher.	Oct.	16, 1865	do	.....	Nov.	1, 1889	50	00	12	do	600 00
do	"	Examining warehouse.	Jas. Cosgrove.	Feb.	10, 1844	Engineer.	.....	Dec.	28, 1874	65	00	12	do	780 00
do	"	do	Ed. Appleton.	Sept.	26, 1864	Fireman.	.....	Sept.	23, 1886	55	00	12	do	640 00
do	"	do	Alex. Dey.	do	27, 1863	Hoist attendant.	.....	Dec.	1, 1887	50	00	12	do	600 00
do	"	do	Wm. Chenery.	Dec.	19, 1851	do	.....	do	1, 1887	50	00	12	do	600 00
do	"	do	W. J. Slean.	July	5, 1855	do	.....	do	2, 1888	50	00	12	do	600 00
do	"	do	Jas. Richardson.	Feb.	23, 1831	Watchman.	.....	Sept.	3, 1888	46	50	12	do	558 00
do	"	Post office.	John Coulter.	July	28, 1846	Engineer.	.....	Oct.	14, 1896	45	00	8	do	360 00
do	"	do	John Graham.	Mar.	16, 1840	Fireman.	.....	do	16, 1896	45	00	6	do	270 00
do	"	do	Geo. LeMay.	May	20, 1853	do	.....	Nov.	1, 1896	45	00	6	do	300 00
do	"	Drill hall.	Richard Eyre.	Oct.	11, 1849	do	.....	Mar.	25, 1895	45	00	12	do	540 00
do	"	do	Wm. Townley.	Feb.	25, 1856	do	.....	Dec.	31, 1895	45	00	12	do	540 00
do	"	Public building	David Allan.	May	13, 1844	Caretaker.	.....	Aug.	31, 1889	33	33	12	do	400 00
do	"	Post office.	F. Parker.	Aug.	6, 1833	Engineerman.	.....	Oct.	3, 1888	50	00	12	do	600 00
do	"	do	W. Curtis.	Mar.	6, 1844	Caretaker.	.....	Nov.	9, 1890	33	33	12	do	400 00
do	"	Public building	Andrew McLean.	Nov.	4, 1825	do	.....	July	20, 1891	33	33	12	do	400 00
do	"	do	John Fawcett.	May	11, 1857	do	.....	Aug.	18, 1890	40	00	12	do	480 00
do	"	do	J. R. Alexander.	Aug.	19, 1852	Engineerman.	.....	June	1, 1888	70	00	12	do	840 00
do	"	Post office.	Patrick Dillon.	Mar.	17, 1849	Fireman.	.....	Jan.	1, 1889	45	00	6	do	270 00
do	"	do	Jos. Coutin.	May	10, 1843	Hoist attendant.	.....	Mar.	16, 1887	45	00	12	do	540 00
do	"	do	Jos. Gagnier.	April	11, 1853	Watchman.	.....	June	7, 1892	45	00	12	do	540 00
do	"	Public building	G. L. Fraser.	Oct.	20, 1851	do	.....	Aug.	1, 1894	40	00	12	do	480 00
do	"	Court-house	E. N. Brown.	Mar.	8, 1845	do	.....	Jan.	24, 1891	45	00	12	do	540 00
do	"	Land and registry office.	R. Wylie.	July	7, 1859	do	.....	June	21, 1894	33	33	12	do	400 00
do	"	Court-house and C. house	Robert Sage.	Oct.	15, 1849	do	.....	Aug.	26, 1894	35	00	12	do	420 00
do	"	do	J. C. Jopp.	Jan.	6, 1848	Caretaker.	.....	April	29, 1897	45	00	12	do	540 00
do	"	do and C. house	W. J. White.	July	21, 1865	do	.....	Dec.	13, 1895	33	33	12	do	400 00
do	"	do	John Ryan.	June	24, 1837	do	.....	Nov.	1, 1893	14	58	12	do	175 00
do	"	do and jail.	George D. Northgraves.	May	20, 1838	do	.....	June	14, 1887	33	33	12	do	400 00
do	"	Land and registry office.	Geo. Cassie.	Jan.	13, 1833	do	.....	Aug.	25, 1893	33	33	12	do	400 00
do	"	Court-house and C. house	P. McAra.	Mar.	24, 1840	do	.....	Aug.	1, 1889	45	00	12	do	540 00
do	"	do	L. Rankin.	Aug.	8, 1855	Fireman.	.....	Oct.	20, 1896	40	00	12	do	480 00
do	"	do	Chas. Taylor.	June	11, 1844	Caretaker.	.....	do	2, 1895	45	00	12	do	540 00
do	"	Post office.	J. Thompson.	Sept.	2, 1836	do	.....	May	1, 1897	50	00	12	do	600 00
do	"	do	John McMurphy.	Aug.	12, 1812	do	.....	Oct.	1, 1894	50	00	12	do	600 00
do	"	Public building	W. H. Bailey.	May	7, 1865	do	.....	July	1, 1894	50	00	12	do	600 00
do	"	do	Atwell King.	April	6, 1843	do	.....	Aug.	25, 1893	33	33	12	do	400 00

R. STECKEL.

Department of Public Works.

APPENDIX No. 10

NAMES OF PERSONS EMPLOYED ON THE VARIOUS GRAVING DOCKS

ON THE 30th JUNE, 1897

WITH

DATES OF APPOINTMENTS. SALARIES, ETC.

GRAVING DOCK EMPLOYEES.

STATEMENT showing the Names, Dates of Appointment, Salaries, &c., of persons employed on the various Graving Docks,
30th June, 1897.

Name.	Date of Birth.	Position.	Where employed.	Date of Appointment.	Salary.	Remarks.
<i>Esquimalt Graving Dock, British Columbia.</i>						
John Devereux.....		Dockmaster.....	Esquimalt.....	Sept. 17, 1887.	\$166 66 a month...	
A. C. Muir.....		Engineer.....	do.....	April 1, 1887.	100 00 do	
J. W. Muir.....		Asst. engineer.....	do.....	Jan. 11, 1892.	80 00 do	
A. D. Greeves.....		Carpenter.....	do.....	Dec. 1, 1887.	80 00 do	
F. M. Jones.....		Stoker.....	do.....		60 00 do	
E. Williams.....		do.....	do.....		60 00 do	
John Stock.....		Watchman.....	do.....		50 00 do	
<i>Lévis Graving Dock.</i>						
Ulric Valiquette.....	30th June, 1856.	Dockmaster.....	Lévis.....	April 13, 1891.	1,800 00 a year...	Annual allowance of \$200 for house rent. First appointment, 9th May, 1873.
Wm. Macdougall.....		Mechanical engineer.....	do.....	June 1, 1888.	75 00 a month.	
Napoléon Lemelin.....		Asst. mechanical engineer.....	do.....	do 1, 1888.	45 00 do	
Narcisse Lemelin.....		Fireman.....	do.....	do 1, 1888.	32 00 do	
.....		Caretaker and watchman.....	do.....			
<i>Kingston Graving Dock.</i>						
F. S. Rees.....		Dockman.....	Kingston.....	April 1, 1897.	1,000 00 a year...	
Robert McLeod.....		1st engineer.....	do.....	July 1, 1892.	75 00 a month.	
Wm. Geaghcan.....		Fireman.....	do.....	do 1, 1892.	45 00 do	
C. Staley.....		Watchman.....	do.....	do 1, 1892.	45 00 do	

R. STECKEL.

APPENDIX No. II.

TABULAR STATEMENT

SHOWING THE DATES OF

THE CLOSING AND OPENING OF NAVIGATION

AT THE PRINCIPAL PORTS OF CANADA

ON THE SEABOARD, THE RIVER AND GULF ST. LAWRENCE,
AND ON THE GREAT LAKES

1896-97

STATEMENT showing the Date of the Closing and Opening of Navigation at the undermentioned Ports in Canada, in 1896 and 1897.

Port.	Province.	Location.	Date of Closing 1896-97.	Date of Opening 1897.	Remarks.
Arichat, C.B.	Nova Scotia	Isle Madame.	Feb. 12, 1897.	Apr. 2.	The period at which ice forms in this harbour sufficiently strong to impede navigation varies a good deal. It rarely, however, prevents vessels entering up to 20th January, and, as a rule, breaks up and the harbour is open to navigation about the latter part of March.
Bathurst.	New Brunswick.	Baie des Chaleurs.	Nov. 21, 1896.	May 5.	Navigation opened this year some days later than for several years owing to unusual thickness of ice and prevalence of easterly winds.
Belleville.	Ontario.	Lake Ontario.	do 30, 1896.	Apr. 9.	Ferry continued running with row boat till 30th Nov., 1896.
Campbellton.	New Brunswick.	Baie des Chaleurs.	do 28, 1896.	May 5.	On 9th January, 1897, the SS. "Stanley" from Picton, N.S., broke the ice into the harbour and towed out the barkentine "Kathleen."
Charlottetown.	P. E. Island.	Gulf of St. Lawrence.	Dec. 23, 1896.	Apr. 17.	Vessels could have arrived at and departed from this port on these dates.
Collingwood.	Ontario.	Georgian Bay, Lake Huron.	do 3, 1896.	do 13.	This port never closes.
Gaspé.	Quebec.	Gulf of St. Lawrence.	Jan. 4, 1897.	May 9.	A very open winter.
Georgetown.	P. E. Island.	do	Feb. 4, 1897.	Apr. 16.	Totally free from ice all winter, but closed for 3 or 4 days by gulf ice in April.
Goderich.	Ontario.	Lake Huron.	Jan. 1, 1897.	Mar. 20.	Last departure for sea in 1896 was SS. "Baltimore City," on 23rd Nov. The dates of opening and closing vary considerably, sometimes three weeks earlier.
Halifax.	Nova Scotia.	Atlantic Ocean.	Jan. 15, 1897.	Apr. 1.	Ice formed earlier than usual; drift ice not as heavy and did not remain so long; harbour ice not so heavy as in former years.
Kincardine.	Ontario.	Lake Huron.	Jan. 15, 1897.	Apr. 1.	For several years there has been no ice sufficient to prevent an iron steamboat from making regular trips to Owen Sound bay and river.
Kingston.	do	Lake Ontario.	Dec. 22, 1896.	do 3.	Steamers might have come into port about 25th March, as ice was breaking then.
Lonsburg, C.B.	Nova Scotia	Atlantic Ocean.	Dec. 19, 1896.	do 22.	On 14th April, there being still some floating ice in the harbour, steam-tug "Eureka," with two scows in tow, sailed for Philadelphia.
Montreal.	Quebec.	River St. Lawrence.	do 26, 1896.	do 15.	About 1st January the ice was broken up and blown out of Thunder Bay, forming again the latter part of January.
North Rustico.	P. E. Island.	Gulf of St. Lawrence.	Jan. 27, 1897.	do 22.	Ferry boats ran all winter between this port and—
North Sydney, C.B.	Nova Scotia	Atlantic Ocean.	1st w. of Mar.	do 7.	No ice formed in harbour; last call for fall navigation, 8th Dec., 1896.
Owen Sound.	Ontario.	Georgian Bay, Lake Huron.	Jan. 25, 1897.	do 1.	No heavy ice all winter and lake hardly frozen over outside end of piers.
Percé.	Quebec	Gulf of St. Lawrence.	Dec. 21, 1896.	do 16.	Ferry boats crossed to Lévis daily all winter.
Picton.	Nova Scotia	Lake Superior.	do 1, 1896.	do 19.	
Port Arthur.	Ontario.	Lake Erie.	do 17, 1896.	do 6.	
Port Dover.	do	Lake Ontario.	do 15, 1896.	do 1.	
Port Hope.	do	Lake Erie.			
Port Stanley.	do	Lake Erie.			
Quebec.	Quebec.	River St. Lawrence.			

Department of Public Works

Rimouski. St. Ann's.	do Nova Scotia	Gulf of St. Lawrence. Atlantic Ocean.	Nov. 26, 1896. Jan. 15, 1897.	Apr. 3. do 28.	Generally ice forms here from 15th to 31st January, and never remains after last of April, and some years clears early in April.
St. John.	New Brunswick.	Bay of Fundy.	Dec. 1, 1896.	Apr. 1.	No ice ever forms at this port sufficient to impede navigation.
St. Johns.	Quebec.	River Richelieu.	Jan. 20, 1897.	Mar. 12.	Str. "Richelieu" made last trip 28th Nov., and first 10th April, 1897.
St. Peters, C.B.	Nova Scotia	Atlantic Ocean.			Between these dates ice broke up in harbour to admit vessels to come into Canal Wharf, St. Peter's Canal and Islet; closed to navigation about 6th January, 1897, and opened 20th April.
Sarnia	Ontario.	Lake Huron.	Dec. 25, 1896.	do 25.	Navigation practically opens with arrival of first steamer from Detroit, and closes with its last departure. The ferry steamers have not missed a trip on account of ice for several years. Last winter there was no ice.
Sault Ste. Marie	do	Lake Superior	do 10, 1896.	Apr. 17.	Ferry running from Sault Ste. Marie, Michigan, till 12th January, 1897, ice then formed and broke up again on 7th April, 1897.
Shediac	New Brunswick.	Gulf of St. Lawrence.	do 16, 1896.	do 19.	SS. "Northumberland" made her first trip 30th April, could not get out of Charlottetown earlier, nor into Summerside. Shediac harbour frequently closes up with a few consecutive nights of hard frost, then opens up again and remains so for several weeks. In 1895 navigation closed 10th December, yet on Christmas Day, harbour was as free from ice as in September.
Sorel Summerside	Quebec. P. E. Island.	River Richelieu. Gulf of St. Lawrence.	do 3, 1896. do 18, 1896.	do 17. do 24.	The ice formed on Miscouche Shoals is usually driven by westerly winds into the mouth of Summerside Harbour, in the fall of the year, jamming up the entrance between Indian Point and the opposite side of the port, and forming a barrier which is the last to give away in the spring. Coming through this strip of ice, the experimental steamer "Petrel" carried away the fans of her propeller on entering the harbour in April, 1897, but met with no serious difficulty previous to reaching that locality.
Sydney, C.B. Tadoussac.	Nova Scotia Quebec.	Atlantic Ocean. River St. Lawrence.	Jan. 31, 1897. Nov. 25, 1896.	do 20. do 1.	South Sydney closed to navigation for about 3 months. Winter mild. Harbour never closed as small craft cross at mouth of Saguenay all winter. East winds sometimes block harbour with loose ice which the northerly winds clear out.
Three Rivers Toronto	do Ontario.	do Lake Ontario.	Dec. 8, 1896. do 22, 1896.	do 19. Mar. 17.	First vessel arrived was SS. "Lakeside," on 24th March, 1897. First schooner arrived was the "Zebrun," on 27th March, 1897.
Warton Windsor	do do	Georgian Bay, Lake Huron. Detroit River.	Jan. 15, 1897.	Apr. 14.	Detroit River open all the year round owing to daily crossing of car and public ferries.
Winnipeg York Factory	Manitoba N.-W. Ter.	Lake Winnipeg. Hudson Bay	Nov. 4, 1896. Oct. 17, 1896.	Apr. 14. May 16.	Refers to Red River and Assiniboia River only. The shallow water and numerous shoals about the mouth of this river (Nelson River) prevent the ice there formed from having free passage to the sea. The trend of the currents, and the lay of the coast line, bring a deal of northern ice close in on the coast here; accordingly, ice is almost always to be seen to seaward up to and during a part of July.

FOLLOWING ARE THE DATES AT YORK FACTORY FOR THE YEARS 1894-95 AND 1895-96.

Ports.	Provinces.	Location.	Date of Closing 1896-97.	Date of Opening 1897.	Remarks.
York Factory	N.-W. Ter.	Hudson Bay	Nov. 5, 1894.	June—, 95	The ice in the mouth of the river, in the bay, remains, as a rule, for a month after the river breaks up. The river ice broke up on the 9th of May, after a very backward spring, succeeded by a sudden thaw of 24 hours. The whole country was flooded, the water being some four feet in depth in several of the houses; the river forced a passage across the land into Nelson River, a mile from the mouth, carrying the ice with it, much of which stranded on the land, and lay there for over a month.
do	do	do	Oct. 18, 1895.	May 15, 96	

Department of Public Works.

APPENDIX No. 12.

REPORT ON GOVERNMENT TELEGRAPH LINES

FOR THE

FISCAL YEAR ENDED 30TH JUNE, 1897

Department of Public Works

TELEGRAPH SERVICE OFFICE,
OTTAWA, 20th December, 1897.

SIR,—I beg leave to submit herewith my report on the Government Telegraph Service for the twelve months ended 30th June, 1897.

The report is prefaced by a list (brought up to date) of the land lines and cables in operation; with data of lengths, year of construction, number of offices at present established, and an estimate of the traffic obtaining.

The usual tabular statements giving lists of the offices, operating staff, &c., in the several districts, are appended to the report; and in addition thereto the tariff sheets, giving the rates charged for messages on the different lines.

I have the honour to be, Sir,

Your obedient servant,

D. H. KEELEY,
General Superintendent.

E. F. E. ROY, Esq.,
Secretary Public Works.

GOVERNMENT TELEGRAPH SERVICE.

Location of Lines.	Points connected.	Year.	LENGTHS OF LINES.			Number of Offices.	Yearly Average of Messages Sent.
			Land Lines.	Cables.	*Total.		
			Miles.	Knots.			
Newfoundland..	Port au Basque—Cape Ray	1883	14	.....	14	2	.....
Nova Scotia	North Sydney—Meat Cove (with loops)	1880-95	156½	.....	157½	13	5,700
do	Across Bras d'Or Channel	1880	.....	½			
do	do St. Ann's Harbour	1887	.....	½			
do	do Ingonish Harbour	1887	.....	½			
do	Meat Cove—St. Paul's Island	1890	.....	20	23	2	50
do	On St. Paul's Island	1890	3	.....		
do	Mabou—Cheticamp	1887	63	.....	63	7	2,000
do	Barrington—Cape Sable	1883	16	.....	17½	3	450
do	Across Bear Point Channel	1883	.....	1½			
do	do Lt. House Channel	1883	.....	½			
New Brunswick.	Chatham—Escuminac	1885	42	.....	42	5	750
do	Bay of Fundy System :						
do	Eastport—Campobello	1880	.....	1½	44½	8	600
do	On mainland Eastport	1880	.....	½			
do	On Campobello Island	1880	7½	.....		
do	Campobello—Grand Manan	1880	.....	7½			
do	On Grand Manan Island	1880	25½	.....	44½	8	600
do	Grand Manan—Cheney's Island	1890	.....	½			
do	On Cheney's Island	1890	.....	¾			
do	Cheney's Island—Whitehead Island	1890	.....	¾	92	6	18,400
Quebec	Bay St. Paul—Chicoutimi	1881	92	.....		
do	Murray Bay—Point Esquimaux	1881-87	456½	.....		
do	Across Saguenay River	1883	.....	1½	496	35	18,400
do	Bersimis to Manicouagan	1883	.....	12			
do	Manicouagan to Godbout	1883	.....	26			
do	Quarantine System :						
do	Quebec—L'Ange Gardien	1885	13	.....	52½	7	3,400
do	L'Ange Gardien—Orleans Island	1885	.....	¾			
do	On Orleans Island	1885	29½	.....		
do	Orleans Island—Isle Réaux	1889	.....	2			
do	On Isle Réaux	1889	2½	.....	2	2	2
do	Isle Réaux—Grosse Isle	1889	.....	2			
do	On Grosse Isle (all told)	1885-94	3½	.....		
do	Anticosti System :						
do	Gaspé—L'Anse à Fougère	1881	28	.....	316½	10	500
do	L'Anse à Fougère—Anticosti	1881	.....	44½			
do	On Anticosti Island	1881-90	223½	.....		
do	Anticosti—Long Point, Mingan	1890	.....	21			
do	Meat Cove (C.B.)—Magdalen Islands	1880	.....	55	138½	9	500
do	On Magdalen Islands	1881	83	½			
Ontario	Peelee Island System :						
do	Leamington—Point Peelee	1889	12	.....	32½	7	500
do	Point Peelee—Peelee Island	1889	.....	8½			
do	On Peelee Island	1889	12	.....		
North-west	Qu'Appelle—Edmonton and St. Albert	1883-87	607½	.....	607½	15	4,200
do	Moosejaw—Wood Mountain	1885	90½	.....	90½	2	250
British Columbia	Ashcroft—Barkerville	1878-87	276½	.....	276½	8	2,000
do	Victoria—Cape Beale	1891	118	.....	118	7	250
do	Nanaimo—Comox and Alberni	1893-95	110½	.....	110½	8	2,500
do	Ashcroft—Lillooet	1896	62	.....	62	1	500
Total			2,548½	206½	2,754½	155	42,550

* For convenience in totalling, the knots of cable are regarded as statute miles.

Department of Public Works.

REPORT ON GOVERNMENT TELEGRAPH SERVICE FOR 1896-97.

With few exceptions, the land lines and cables were in good working order throughout the year. Such renewals and general repairs as were called for are hereinafter noted in detail. Where no reference is made to any particular line in this respect, it will be understood to have been free from interruption and satisfactorily operative.

NEWFOUNDLAND.

The line from Port au Basque to Cape Ray continues to be operated as heretofore under agreement with the Anglo-American Telegraph Co. The expenditure and revenue figures for this, and all the other lines, will be found in a tabular statement at the conclusion of this report.

MARITIME PROVINCES.

Mabou-Cheticamp Line.—For the permanent improvement of this line in the section between Margaree and Cheticamp, referred to last year, a delivery of 450 cedar poles was made from Baie des Chaleurs and they are being used in making renewals this season.

The Margaree Harbour office, which had been in charge of Mr. J. P. McFarlane since May, 1896, was removed from the post office on the 20th October following and placed in charge of Mr. H. K. McLean as agent-operator.

Cascapedia Line.—In May, 1897, the telephone line formerly in use between Stanley House and the telegraph office at New Richmond, was restored and put in working order for the use of the Governor General.

Barrington-Cape Sable Line.—An application from the Barrington Telephone Company for the transfer of this line to them, to be operated as part of their system, is being dealt with. It is understood the usefulness of the line will be enhanced if operated in this way.

Bay of Fundy.—The telephone system between Grand Harbour and Ross', Cheney's and Whitehead Islands became inoperative early in October. The trouble was obscure and was judged to be in the cable sections. The SS. "Newfield" being at the time engaged on cable service, visited the locality for the purpose of making repairs. On examination, the cables (laid in 1890) were found in excellent condition, the break-down being due to instrument faults. The system was duly overhauled and again put in good working order on the 29th October, 1896.

The cable between Grand Manan and Campobello became inoperative on the 27th February, 1897. The services of the SS. "Newfield" were brought into requisition as early as was practicable and repair was made on the 18th June. The interruption was found to have been caused by a huge piece of wreckage tossed upon and crushing the shore end of the cable near the beach in Liberty Cove, Campobello.

At Flagg's Cove, the district superintendent's office, a local operator has been again appointed; the requirements of the service having shown an assistant to be indispensable.

The Southern Head (lighthouse) office, which was closed in November, 1889, on the withdrawal of the telegraph operator, was re-opened as a telephone station, on the 24th April, 1897. It is operated from Seal Cove, and is dealt with as part of the Grand Manan system, the same as formerly.

RIVER AND GULF ST. LAWRENCE.

Anticosti Island Lines.—As mentioned in last year's report, the cable between Anticosti and Long Point (Mingan) ceased working on the 28th December, 1895. Communication was however had continuously with Anticosti by the other cable,

from Gaspé to South West Point, so no special requisition was made for the "Newfield" until that vessel could be conveniently detailed for the work. The repair was taken in hand and effected in September, 1896; communication between Anticosti and Long Point being restored on the 30th. The cable on being picked up was found in bad condition off both shores. The armour wires were corroded away and the core parted at a point about $3\frac{1}{2}$ miles off Long Point; and likewise in the deep sea type at a point $1\frac{1}{2}$ miles off the Anticosti shore. In making the repair the decayed portions of the cable approaching those breaks was cut away and $\frac{3}{4}$ knot, all told, of new cable was used; the total length remaining unaltered.

The Beesie River office, closed May, 1896, was re-opened on the 1st November following, with Geo. Cabot as agent-operator.

Magdalen Islands.—About the middle of August, 1896, the cable between Old Harry and the mainland, at Meat Cove, C.B., gave unmistakable signs of a fault having developed somewhere along its course; and though in a leaky condition since that time, it has continued easily and satisfactorily operative. Fearing a breakdown that might perhaps easily be averted, if the trouble happened to be near the shores, the "Newfield" was taken there, after the Anticosti-Long Point cable had been repaired in September, 1896, as above mentioned, to investigate the trouble. The electrical tests made indicated a leak well over towards the islands and in fairly deep water; as no vessel's anchor was likely to have caused damage in such a place, it was concluded the test either gave the resultant of two or more faults, or that the actual fault was due to deterioration of the insulation at that particular spot. In either case the cable might continue in working order for a long time; and as the season was then too far advanced to warrant an attempt to remove the defect, further operations were postponed.

NOTE.—In the course of the present season after some repairs hereinafter mentioned had been made on the St. Paul's cable, an attempt was made to remove this leak in the Magdalen Islands cable; but after several days fruitless grappling (July '97), it was concluded that in event of the cable being caught, the chances were a good deal of it would be lost in picking up because of the depth to which it had apparently sunk in the sandy bottom; and, in places, the occurring rocky ledges under which it may have settled. In consequence of this conclusion, and there not being any very considerable length of cable in the ship's tank, the attempt to remove the leak was definitely abandoned in order to avoid any unwarrantable interruption of communication, pending an actual break-down. Had the cable been readily recoverable, it would have been advantageous to clear out the leak because of the obviously threatening character of such a fault.

Grindstone Island.—In May last ('97), in response to a requisition, an office was re-opened at Leslie's wharf. The office already established in the neighbourhood, in the premises of the district superintendent, is being continued for the convenience of the service, and is designated Grindstone West.

St. Paul's Island Line.—The cable connection between the island and the mainland, at Meat Cove, C.B., gave out on the 10th December 1896. Communication was restored on the 30th June, 1897, by the SS. "Newfield" making the requisite repair. The cable was found to have been crushed and chafed through on rough rocky bottom near the Meat Cove shore. After this break was repaired, a leak was located near St. Paul's Island. At a point one-half mile off shore the cable was found to have been damaged, probably by ice; the outer armour of the shore end was gone, the inner armour disarranged, and the core crushed. A new length of 150 feet of cable was put in here and all made good.

North Shore Lines.—The repeating office formerly located at Manicouagan was removed to Bersimis in September, 1896; and for testing purposes and local requirements, an office was established 1st December, 1896, at Point Outardes, 12 miles west of the isolated site of the former office on Manicouagan peninsula, with H. Tremblay as agent-operator.

At Sault au Cochon, owing to the withdrawal of the agent-operator and the discontinuance of local business, the office was closed in September, 1896, and the lineman formerly stationed there was transferred to Port Neuf.

At St. Etienne the office was closed for the winter on the 14th November, owing to the temporary withdrawal of the operator. It was reopened in March, 1897.

Department of Public Works.

At Long Point of Mingan, the transfer point for the Anticosti cable, Mr. A. Maloney took charge as agent-operator on the 21st September, 1896, as successor to Mr. E. S. Vibert, deceased.

Re-construction.—In consequence of its having been found on examination that a large number of the spruce poles used in the original construction of the line were now decayed at the level of the ground, particularly in dry sandy patches; provision was made last session for renewals during the present season, and this work is now in progress in the section between Seven Islands and Point Esquimaux. Next season the westward section, Seven Islands to Pentecost, will be gone over. The line west of Pentecost was built with cedar and is in first-rate condition. The whole line has been kept in reliable condition throughout the year.

NOTE.—Extension of the North Shore Line beyond Point Esquimaux towards Belle Isle, as provided for last session, is now under construction by contracts with Mr. L. P. Decourval. Piastre Bay, 43 miles below Point Esquimaux, was reached early in July, and a point 43 miles further down, and about 12 miles west of Little Natashquan, was reached in October. Offices were opened for business at Piastre Bay on 1st September, 1897, with Miss M. Tanguay as agent-operator, and at Aguanus, 37 miles below Piastre Bay, on the 2nd October, with Miss Laura Cummings as agent-operator. It is proposed to continue the extension further down the coast next season.

Quarantine Line.—The cable section between Isle Reaux and Grosse Isle developed a fault, making it partially inoperative, in July, 1896. On examination it was found to have been crushed by ice in several places at both ends near the shores, each damaged portion presenting a more or less serious deterioration of the insulation that in the aggregate amounted to an almost complete break down of the cable. By utilizing some good portions of the same type of cable that were taken up off the shores of St. François and Isle Reaux (when the two 600 feet lengths of special locked-armour type were introduced), the connection was, on the 27th July, 1896, again made good. Subsequently, on the 27th March, 1897, another partial interruption of the circuit was experienced, which, upon investigation, proved to be due to another crushing that the same section of cable had sustained just below low water mark at the Isle Reaux end. The damaged part was cut out by the local repairer and the line thus again cleared on the 25th April. It is proposed on the next occasion of similar trouble to put in sections of the locked-armour type which has so far proved reliable and apparently withstands such damage as the ordinary type is subject to.

New Lines.—Under appropriations made last session, two new lines as hereunder are now under construction:

Isle Coudres to the mainland (County of Charlevoix).—Comprising 11 miles of line on the island and $1\frac{1}{2}$ knot of cable, landing at Les Eboulements, with, in all, 6 telephone stations in circuit. An arrangement has been made with Mr. H. Lemieux for the erection, operation and maintenance of this line in conjunction with a local telephone system on the main land.

St. Alexis to l'Anse St. Jean (County Chicoutimi).—Comprising some 40 miles of land line. The poles, cedar, for this line are being got out by Messrs. J. N. Savard, of St. Alexis, and Hilar Tremblay, l'Anse St. Jean. The construction work is being done under contract by Mr. A. Boivin, of Chicoutimi.

ONTARIO.

The Pelee Island cable which was repaired on the 3rd May, 1896, remained in good working order until May, 1897, when an intermittent break gave frequent trouble in operating the circuit. It was found on investigation to be due to a rupture of the conductor in the cable, that had evidently been subjected to a severe strain close to the Point Pelee landing. The faulty section was cut out and reliable communication again established on the 3rd June.

The new apparatus contemplated in last year's report, and which is operated on what is known as the Bridging-Bell plan, was installed on the 14th September, 1896,

and is reported to have made a remarkable improvement and the offices on the island can now talk with adjacent towns through the Leamington exchange. Easy conversation has been had between South Port, the most distant office on the island, and Detroit.

NOTE.—The additional cable required to effect the further improvement contemplated in last report's report was imported in the course of the present season, but owing to operations in hand elsewhere, the proposed overhauling and shifting of the main cable was postponed for another year.

NORTH-WEST.

Fort Macleod Line.—The Dunmore-Lethbridge section (107 miles) of this line, the whole of which had been leased for several years, was sold to the Alberta Railway and Coal Company in July, 1896; and the Lethbridge-Fort Macleod section (29 miles) was taken over by the North-west Mounted Police and equipped for operation by telephone in the interest of that service.

Qu'Appelle Station.—In November, 1896, the hitherto special agent Mr. E. W. Warner, resigned the office at this place and an arrangement was made with the Canadian Pacific Railway Co. whereby his successor in the railway service became joint-agent for the Company's and the Government lines; the salary being shared, the same as at Saskatoon and Edmonton.

Fort Pitt.—In March, 1897, Mr. J. F. Lake, agent-operator, resigned and was succeeded by Mr. Diodore Noel.

BRITISH COLUMBIA.

Victoria-Cape Beale Line—The condition of affairs as stated in last year's report remains unchanged. Information is being obtained as to the practicability of an all year round accessible route for the reliable up-keep of an alternative line via Alberni.

NOTE.—With a view to expediting line repairs, a testing office was opened at the Mission House 5 miles west of Carmanah in September, 1897.

Barkerville Line.—Nothing beyond ordinary general repairs was called for during the past year.

150 Mile House.—Mr. W. Jamieson, agent-operator, transferred to Ashcroft, was succeeded by S. T. Hall in November, 1896.

134 Mile House.—A testing office is located at this point; any business handled is taken into account at 150 Mile House.

TELEGRAPH SERVICE GENERALLY.

For the convenient and expeditious handling of line and office materials, instruments and supplies for the service, a supply store has been provided at Quebec in a portion of a building occupied by the Department of Marine and Fisheries, at the Queen's wharf; and it is proposed in due course to put sufficient quantities of everything needed in stock, in order to meet immediate calls on occasion which has been found impracticable heretofore under conditions of individual purchases.

Department of Public Works.

REVENUE AND EXPENDITURE.

The revenue and expenditure figures for each of the lines in the several districts hereinbefore mentioned are given in the following table:—

	Expenditure.	Revenue.	Remarks.
	\$ cts.	\$ cts.	
Lower St. Lawrence and Maritime Provinces—			
Anticosti Island lines.....	2,244 48	862 81	Signal service messages, Meteorological service messages and reports, and Fisheries bulletins are handled free of tolls.
Bay of Fundy do.....	1,316 00	592 14	
Cape Ray do.....	250 00	.....
Cape Sable do.....	294 46	12 13	
Cheticamp do.....	1,077 81	435 44	
Escuminac do.....	551 09	145 84	
Low Point Agency.....	50 00	.....
Magdalen Island lines.....	2,269 21	567 80	
Meat Cove line (including St. Paul's Island).....	1,979 54	989 60	
North Shore St. Lawrence (East of Bersimis).....	5,408 45	971 24	
do do (West of Bersimis).....	4,627 97	1,023 32	
Quarantine line.....	851 28	299 98	
Cable ship "Newfield," renewals of plant.....	1,808 74	.....
Subsidies, stationery, line and office material and contingencies, chargeable to appropriation for Gulf lines.....	893 78	.....
	23,622 81	5,900 30	
Ontario, Pelee Island line.....	354 92	143 25	
North-west Telegraph lines.....	15,092 87	1,961 63	
British Columbia, Comox (including Alberni line).....	3,779 04	1,366 74	
*Barkerville line.....	2,094 49	.....
*Cape Beale line.....	3,782 76	.....
	48,726 89	.....
Telegraph Service generally (including \$44.89 for Cascapedia line).....	1,723 65	.....
Total.....	50,450 54	9,371 92	

* The C. P. R., operating these two lines, retains the revenue, and the Government reimburses them the excess of expenditure over revenue.

APPENDED TABLES.

The usual tabular statements of the lines and offices, staff, &c., appended to this report, will be found to contain whatever additions or changes have been made up to the 30th June last.

D. H. KEELEY,
General Superintendent.

OTTAWA, 20th December, 1897.

GOVERNMENT TELEGRAPH SERVICE.

NEWFOUNDLAND TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		\$ cts.		
	Port au Basque.....	0	.....	50 00 or com'n.	.....
2	Cap Ray Lighthouse.	14	.....	50 00 do	.....
	Total.....	14		100 00 do		N.B.—The commission is 25 per cent upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.

N.B.—The above short line is constructed in connection with the Signal Service, and connects at Port au Basque with the land line system of the Anglo-American Telegraph Company.

Department of Public Works.

ANTICOSTI TELEGRAPH SYSTEM.

ANTICOSTI ISLAND SERVICE.

No.	Stations.	Intermediate Distances.	Agent and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
1	* Fox Bay.....	Miles. 0	J. Stubbart.....	\$ cts. 50 00 or com'n	Nov. 1, 1888.	The commission is 25 per cent on all business to and from the office in each instance; and commission guaranteed not to be less than at the rate of \$50 per annum. * A special allowance for maintenance of office, \$50 per annum, has been added to the commission for offices marked*, since September, 1887.
2	Heath Point Lighthouse.....	23	T. Gagné.....	50 00	July 20, 1881.	General repairer. Plus \$1 per d. when absent on duty.
3	South Point Lighthouse.....	32½	A. Nadeau.....	50 00	Oct. 1, 1888.	
4	* Shallop Creek.....	17½	B. Bradley.....	50 00	July 7, 1881.	
5	Salt Lake.....	52½	(Z. Beaudin, repairer. A. Beaudin, operator	365 00	May 6, 1896.	Chief operator since 1st August, 1882. Plus \$1 per day when absent on duty.
6	South-west Point Lighthouse.....	15	(Miss G. Pope.....	50 00	do 12, 1896.	
7	Jupiter River.....	7	(H. Pope, D. Supt.....	420 00	Oct. 18, 1880.	
8	Other River.....	17½	200 00	July 21, 1893.	Until July, 1896. The salary was \$50 with the special allowance for maintenance as above.
9	* Beesie River.....	22	(Geo. Cabot.....	50 00	Nov. 1, 1896.	
10	Cape Eagle (Ellis Bay).....	10	.....	50 00	do
11	West Point Lighthouse.....	9	A. Malouin.....	50 00	Aug. 1, 1881.	
12	English Bay.....	3	F. Cabot.....	120 00 and com.	July 1, 1882.	
13	Mechastic Bay.....	14½	.....	.....	.....
	Totals.....	223½	1,605 00	

South-west Point connects with l'Anse à Fougère, Gaspé, by cable 44½ knots; and from Mechastic Bay connection is made with Long Point of Mingan by cable 21 knots.

1	L'Anse à Fougère.....	.....	N. Bernier.....	17 00	.....	Special allowance for the cable terminus. A testing station only.
2	Gaspé Basin.....	28	J. J. Annett.....	240 00	Oct. 16, 1881.	Transfer office. Connection with G.N.W. telegraph system.
		28		257 00		

GOVERNMENT TELEGRAPH SERVICE—Continued.

MAGDALEN ISLANDS SYSTEM.
MAGDALEN ISLANDS SECTION.

No.	Stations.	Intermediate Distances.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		\$ cts.		
1	Amherst.....	0	Miss J. Shea.....	50 00 or com'n.	Oct. 1, 1882	The commission is 25 per cent on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of \$50 per annum.
2	Amherst Lighthouse.....	9	Wm. Cormier.....	50 00 do	June 11, 1881	
3	Etang du Nord village.....	15	{ P. Pelletier, lineman Mrs. A. Binet.....	400 00 do	Dec. 1, 1881	Plus \$20 per annum for rent.
4	Etang du Nord lighthouse.....	1	N. Arsenault.....	50 00 do	do	
5	Grindstone Island.....	5	W. Leslie.....	50 00 do	Sept. 1, 1891	Two-wire loop line.
6	Grindstone West.....		{ A. LeBourdais, D. Spt. M's. E. LeBourdais, op.	Com'n 25 p. c. 600 00	May 20, 1897	Plus \$1 per day when absent on duty.
7	House Harbour (½ knot cable).....	3	P. L. Jocas.....	50 00 or com'n.	Sept. 15, 1893	
8	Wolfe Island.....	28½			June 1, 1888	
9	Grosse Isle.....	11	N. Clark.....	200 00 and com'n.	June 1, 1888	
10	Grand Entry.....	11	Mrs. F. Atkins.....	50 00 or com'n.	Feb. 18, 1882	
	Totals.....	83½		1,550 00		

MAGDALEN ISLANDS TELEGRAPH SYSTEM.

CAPE BRETON SECTION.

Department of Public Works.

Stations.	Intermediate Distances.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
1 Meat Cove (Cable Station) ...	Miles. 0	A. B. McDonald.....	\$ cts. 500 00	Nov. 7, 1880	The commission is 25 per cent on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of \$50 per annum. Closed November, 1895.
2 Aspy Bay	10 $\frac{1}{2}$	I. Y. Nichols.....	50 00 or com'n.	July 1, 1894	
3 White Point (7 $\frac{1}{2}$ miles, loop)...	14 $\frac{3}{4}$	.....	50 00 do	.....
4 Neil's Harbour { loop line	14 $\frac{3}{4}$	.....	50 00 do	April 1, 1887
5 Ingonish, North Bay	9	M. McLeod.....	50 00 do	do 1, 1882	The loop to Baddeck starts from and returns to Englishtown. Construction of this loop line completed June, 1895.
6 South Ingonish.....	10 $\frac{1}{2}$	J. M. Burke.....	50 00 do	Aug. 1, 1891	
7 French River (4 knot cable)....	23	F. C. Brewer.....	50 00 do	April 1, 1889	
8 Englishtown (4 knot cable) ...	11	John McDonald.....	50 00 do	July 19, 1882	
9 South Gut, St. Ann's (on loop)...	5	W. Bingham (agent).....	400 00 do	May 1, 1894	
10 Baddeck (on loop).....	13	W. J. McRitchie (repr.).....	50 00 do	Dec. 1, 1891	
11 Port Bevis (2 $\frac{1}{2}$ miles, looped off Baddeck line).....	18	Miss T. Morrison.....	50 00 do	Jan. 1, 1892	
12 Kelley's Cove (N. Campbellton)	5	D. Dunlop	Commission only.	.....
13 Big Bras d'Or (4 knot cable)...	6	.....	50 00 or com'n.	April 1, 1885
14 North Sydney	2 $\frac{1}{2}$	Miss M. Campbell	50 00 do	Jan. 1, 1889	
Totals.....	157 $\frac{1}{2}$	Mrs. E. Livingston.....	Commission only.	The commission is 50 per cent on local business and 25 per cent on through messages; and covers supervision of line and office accommodation at North Sydney.
		W. U. Tel. Co	1,450 00		

Meat Cove station connects with the Magdalen Islands system by a cable to Old Harry Head, 55 knots, and with St. Paul's Island by a cable of 20 knots. The latter is operated with telephones.

GOVERNMENT TELEGRAPH SERVICE—Continued.

NOVA SCOTIA TELEGRAPH SYSTEM.

CAPE SABLE SECTION.

No.	Section.	Intermediate Distances.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		\$ cts.		
1	Barrington	0	W. U. Tel. Co.'s Agent.	50 00 or commission.	Dec. 18, 1883.	The commission is 25 per cent upon all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of \$50 per annum.
2	Newellton (including 1½ knots cable	11	Miss E. A. Smith	50 00 do ..	April 1, 1889.	
3	Cape Sable Island lighthouse (including 1¼ mile cable) ..	6¾	I. K. Doane	50 00 do ..	Dec. 18, 1883.	
258	Totals	17¾		150 00		

EAST COAST SECTION.

N.B.—In connection with the Signal Service, a land line, 208 miles in length was erected in 1881, between Canso and Halifax, for a bonus of \$16,000, and is maintained and operated by the Western Union Telegraph Company, without further cost to the Government.

GOVERNMENT TELEGRAPH SERVICE—Continued.

MABOU-CHETICAMP, C.B., TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distances.	Agent and Operator.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.				
1	Mabou	0	Mrs. M. McDonald.....	\$120 per annum.....	April 1, 1887..	The commission is 25 p. c. of the Government line tariff receipts, and is guaranteed to amount to not less than \$50 per annum. Where 50 p. c. commission is paid there is no guarantee as to amount.
2	Broad Cove	20	Mrs. Annie McLellan.....	\$50 or commission.....	March 1, 1892.	
3	S. W. Margaree.	12	Angus Collins.	Com'n 50 per cent.	do 3, 1893.	
4	Margaree Harbour.	5	H. K. McLean.	\$50 or commission.....	Oct. 20, 1896.	
5	N. E. Margaree (loop line wire)	10	Miss B. M. Russ.	\$50 do	Jan. 1, 1889.	
6	Grand Etang.....	8	Joseph Doucette.....	Com'n 50 per cent.	April 23, 1893.	The guaranteed commission at Cheticamp was \$50 until July, 1895.
7	Cheticamp.....	8	(Mrs. M. Fiset	\$100 or commission.....	do 1, 1887.	
			(D. C. Dawson, D. Supt.	\$150 per annum.....	do 1, 1887.	
	Totals.....	63		\$520 per annum.		

CHATHAM-ESCUMINAC, N.B., TELEGRAPH SYSTEM.

1	Chatham	0	Great North-western Telegraph Co.....	\$185 00 or com'n.....		This amount is paid for supervision of the line and office accommodation at Chatham. The commission is 25 p. c. of the Government line tariff receipts in each instance, and is guaranteed to amount to not less than \$50 per annum.
3	Black Brook	5½		50 00 do	March 1, 1885.	
3	Baie du Vin.	15	Miss M. Williston.....	50 00 do	Aug. 1, 1891.	
4	Lower Hardwicke.....	6	Mrs. M. Brimmer.....	50 00 do	Sept. 1, 1885.	
5	Escuminac.....	3½	D. Lewis.....	50 00 do	Nov. 1, 1893.	
6	Point Escuminac lighthouse.....	12	K. R. McLennan.....	50 00 do		\$12 per annum allowed for care of main battery at Point Escuminac.
	Totals	42		\$435 00		

GOVERNMENT TELEGRAPH SERVICE—Continued.

GROSSE ISLE QUARANTINE TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		\$ cts.		
1	Quebec.....	0	Great North-western Telegraph Co.	185 00	.....	This amount is paid for supervision of the line, and covers rent of pole line from Quebec to L'Ange Gardien, for which \$35 per annum is charged.
2	L'Ange Gardien.....	13				
3	Orleans Island landing (cable)..	3 $\frac{1}{4}$			Mar. 1, 1885.	This commission is 25 per cent of the Government line tariff in each instance, and is guaranteed to amount to not less than \$50 per annum.
4	St. Pierre.....	4 $\frac{1}{2}$	C. Turcott.....	50 00 or com'n.....	April 7, 1896.	
5	St. Pétronille.....	6 $\frac{1}{2}$	M. Plante.....	50 00 do	Sept. 15, 1888.	
6	St. Laurent.....	7	M. Gobeil.....	120 00 and 25 p.c. commission.....	July 1, 1888.	
7	St. Jean.....	6 $\frac{1}{2}$	P. Pouliot.....	120 00 and 25 p.c. commission.....	Mar. 1, 1895	
8	St. François.....	3 $\frac{1}{2}$	M. Emond.....	50 00 or com'n.....	Sept. 1, 1885.	\$12 per annum allowed for care of main battery at Grosse Isle.
	Isle Réaux (including 2 knots cable).....	3 $\frac{1}{2}$		50 00 do		
	Isle Réaux (land line).....	2 $\frac{1}{2}$				
	Grosse Isle quarantine office (including 2 knots cable).....	3 $\frac{1}{2}$	M. Langlois.....			
	Quarantine telephone system 2-wire line.....	1 $\frac{1}{2}$				
		52 $\frac{1}{2}$		625 00		NOTE.—The telephone system on Grosse Isle since May, 1893, has comprised 1 $\frac{1}{2}$ mile of 2-wire line, with 11 connections or stations.

BAY OF FUNDY, N.B., TELEGRAPH SYSTEM.

GRAND MANAN SECTION.

No.	Sections.	Intermediate Distances.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
	<i>Long Eddy Cable Hut, to</i>	Miles.		\$ cts.		
1	Flagg's Cove.....	3	Mrs. C. C. Seely (D. Supt.).....	420 00	Nov. 18, 1880	The commission is 25 p. c., upon all business to and from the office in each instance; said commission guaranteed not to be less than at the rate of \$50 per annum. When 50 p. c. commission is paid there is no guarantee as to amount.
	do		Miss A. G. Watt.....	50 00 or com'n....	Jan. 1, 1895	
	do		A. Gilmour, repairer.....	\$50 00	Dec. 1, 1894.	
2	Woodward's Cove.....	6	W. A. Fraser.....	Com'n 50 per cent.	Feb. 28, 1893	\$25 per annum is included for repeating White-head br. Southern Head office is now operated by telephone from Seal Cove.
3	Grand Harbour.....	2	F. A. Newton.....	\$75 00 or com'n....	Apr. 1, 1887.	
4	Seal Cove	4½	P. Russell.....	50 00 do	May 1, 1891.	
5	Southern Head Lighthouse	5½	O. McLaughlin.....	Com'n 25 per cent.	Apr. 24, 1887.	
	<i>Branch Line.</i>					
6	Grand Harbour.....	0	W. Cheney.....	Com'n 25 per cent.	Feb. 1, 1891.	
	Cheney's Island (¼ knot cable).....	4½	E. Carroll.....	\$ 50 00 or com'n..	Dec. 1, 1890.	
7	Whitehead Island (¾ do).....	1½				
	Totals.....	27½		\$705 00		

CAMPOBELLO SECTION.

	<i>Liberty Cove Cable Hut, to</i>					
1	Welchpool.....	7½	Miss E. G. Vennell.....	100 00 and com'n.	Sept. 1, 1895.	A cable of 1¼ knots connects Welchpool with the landing ¾ mile from Eastport; and a cable of 7¼ knots is laid from Long Eddy, Grand Manan, to Liberty Cove, Campobello.
2	Eastport, Maine, U.S.A.	¾	J. Cushing.....	100 00	Dec. 26, 1881.	
	Totals.....	8		200 00		

GOVERNMENT TELEGRAPH SERVICE—Continued.

CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM.

CHICOUTIMI SECTION.

No.	Stations.	Inter- mediate Distances.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		\$ cts.		
1	Bay St. Paul.....	0	F. Boivin.....	180 00 per ann.	Previous to April 1, 1885	*The commission upon business is 25 per cent of the Government tolls of the line; the amount guaranteed to be not less than \$50 per annum. Until June 1, 1897, when a second repairer was appointed, the salary paid was \$420 per annum. Plus \$12 per annum for care of main battery.
2	St. Urbain.....	9	A. Boivin.....	25 p. c. commission 50 00 or comm'n* ..	do	
3	La Cruche.....	37	A. Gauthier (repairer).....	50 00 do ..	May 15, 1887	
4	St. Alexis.....	31½	O. Pelletier.....	210 00 ..	Jan. 1, 1889	
5	St. Alphonse de Bagotville.....	3	A. Simard.....	50 00 or comm'n ..	April 1, 1885	
6	Chicoutimi.....	11½	G. N. W. Tel. Co.	25 p. c. commission. 210 00 per annum.....	Nov. 1, 1893 June 1, 1897	
	*Totals	92	J. Fortin (repairer).....	800 00		

NORTH SHORE (West of Bersimis.)

1	Murray Bay.....	0	Mrs. F. Vincent.....	50 00 or comm'n.	Previous to April 1, 1885	Mr. Bouillenne at River Canard has acted as repeating operator for the St. Etienne branch since August, 1889. †Until 1st June, 1897, when an additional repairer was appointed, the salary paid N. Caron was \$420 per annum.
2	Cap à L'Aigle.....	4	N. Duchesne.....	50 00 do ..	June 1, 1888	
3	St. Fidele.....	6	A. N. Parent.....	50 00 do ..	April 1, 1890	
4	Port au Persil.....	7	A. Brassard.....	50 00 do ..	May 1, 1889	
5	St. Siméon.....	4	A. Brassard (repairer).....	210 00 do ..	June 1, 1887	
6	Baie des Rochers.....	12	D. Gaudin.....	50 00 do ..	Dec. 1, 1887	
7	Riv. aux Canards.....	4	G. Savard.....	50 00 do ..	June 1, 1887	
8	St. Etienne.....	17	G. Bouillenne.....	100 00 do ..	Nov. 1, 1886	
	Branch Line.....		†N. Caron (repairer).....	210 00 ..	Sept. 1, 1890	

Department of Public Works.

9 Tadoussac (1½ knot cable).....	13	J. E. Caron	50 00 or comm'n ..	Nov. 1, 1888	Commission, at 25 per cent, without guarantee at Baie Bacons. Closed November, 1895.
10 Bergeronnes	15	M. Savard	50 00 do ..	April ..	
11 Escoumains	12	J. H. Topping	50 00 do ..	May 6, 1892	
12 Baie des Bacons	8	P. Bouchard	50 00 or comm'n ..	April 1, 1885	
13 Mille Vaches	8	J. A. Puise	50 00 or comm'n ..	July 1, 1890	
14 Portneuf Mills	11½	(S. Bouchard	50 00 or comm'n ..	April 1, 1888	Sault au Cochon closed 30th September, 1896. Formerly located at Manicouagan ; Bersimis is now the repeating office.
15 Portneuf light	6	(E. Courbron (repairer) ..	420 00 ..	Dec. 1, 1896	
16 Sault au Cochon	7	J. Forrest	50 00 or comm'n ..	Sept. 1, 1885	
17 Betsiamits	31	A. Lausier (agt. and opt.) ..	500 00 ..	April ..	
		E. Pope, dist. supt.	600 00 ..		
*Totals	161½		2,640 00		

*Note. — In the estimates the maintenance of the Chicoutimi and North Shore lines is provided under head of North Shore Line. They are operated conjointly.

NORTH SHORE (East of Bersimis).

1 Pointe aux Outardes (cable)	12	X. Tremblay	*50 00 or comm'n ..	Dec. 1, 1896	The repeating office formerly at Manicouagan was removed to Bersimis in September, 1896.
2 Pointe Paradis, Manicouagan	18	N. A. Comeau	50 00 do ..	Oct. 15, 1883	
3 River Godbout (cable)	26	L. F. Faffard	50 00 do ..	Dec. 28, 1883	
4 Pointe des Monts	18½	Z. Poulin	50 00 do ..	May 16, 1884	
5 Trinity Bay West	5½	A. Bilodeau	Commission only ..	do 1, 1883	
6 Trinity Bay East	2½	I. Comeau	do ..	Sept. 1, 1889	No commission is paid at this office.
7 Caribou Islands	7	Paul Côté	Accommodat'n office, Jan. 10, 1895		
8 Point aux Anglais	10½	E. H. Têtu, D. Supt.	1,080 00 per annum ..	Nov. 1, 1891	
9 Pentecost River	6½	A. Theriault	180 00 do ..	July 1, 1888	
10 Ste. Marguerite	47½	(P. E. Vignault, Opr.	180 00 ..	Jan. 2, 1884	
11 Seven Islands	22½	(F. Gallienne, Lineman ..	540 00 ..	April 22, 1890	Plus 50 cents per day when absent on duty.
12 River Moisie	15½	J. Porlier	50 00 ..	June 1, 1896	
13 Shelfdrake	72	Mrs. H. Gody	50 00 or comm'n ..	Closed Jan. '96	
14 Thunder River	6½	Geo. Molloy	50 00 do ..	Feb. 1, 1890	
15 Magpie	14	B. Chambers	50 00 do ..	Oct. 1, 1889	
16 St. John's River	9	A. Maloney	360 00 ..	do 1, 1889	Long Point is the repeating office for the Anticosti cable in operation since September 1, 1891. The commission at Point aux Esquimaux is 50 per cent, without guarantee as to amount.
17 Long Point	10	M. J. Maloney	50 00 or comm'n ..	Sept. 21, 1896	
18 Mingan	7	D. Cormier	50 00 or comm'n ..	Oct. 1, 1893	
+Pointe aux Esquimaux	24		Commission only ..	May 21, 1893	
Total	334½		2,840 00		

*Notes. — The commission, except where otherwise stated, is 25 per cent of the Government line tolls on business handled. †This line is being further extended beyond Point aux Esquimaux towards Belle Isle.

GOVERNMENT TELEGRAPH SERVICE—Continued.

ONTARIO—PELEE ISLAND TELEGRAPH SYSTEM.

No.	Stations.	Inter- mediate Distances.	Agents.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		\$ cts.		
1	Leamington.....	.....	J. McR. Selkirk, D. Supt.	50 00	Nov. 1, 1888	
2	Leamington Dock ..	2	F. Deslaurier.....	Accommodat'n office.	do 1, 1885	
3	Club House	5	C. Harrison.....	Commission 25 p.c.	April 1, 1889	The commission is on the tolls for the Government line.
4	Point Pelee.....	5		do	Nov. 1, 1888	
5	Cable to Island North Point Lighthouse (½ mile loop).....	8½	W. A. Grubb.....			
6	North Dock.....	1	J. E. Quick.....	50 00 and comm'n Dec.	1, 1890	North Point Lighthouse is the repeating office for the system.
7	McIntyre's Corners ..	1½	C. B. Quick.....	Commission 25 p.c.	Nov. 1, 1888	
8	West Dock.....	2½	Mrs. A. McIntyre.....	do	do 1, 1896	
9	South Dock.....	2½	A. M. McCormick.....	do	do 9, 1888	
		4½	F. B. McCormick.....	do	do 1, 1888	
	Total.....	32¾		100 00		

NOTE.—This line is operated with telephones.

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LINES IN THE NORTH-WEST TERRITORY.

No.	Stations.	Inter- mediate Distances.	Agents.	Salaries per Annum.	Date of Appointment.	Memo.
	<i>Qu'Appelle-Edmonton Section.</i>	Miles.		\$ cts.		
1	Qu'Appelle	0	{ H. Gisborne, Dist. Supt.	1,500 00	Oct. 1, 1882.	The Agt.-Opr. at Qu'Appelle is joint with the C.P.R.
2	Fort Qu'Appelle	17	{ C.P.R. Tel. Co. s.	420 00	Dec. 1, 1886	
3	Touchwood	46	{ Miss E. Johnston.	600 00	Mar. 1, 1885	
4	Humboldt	78	{ A. Von Lindeburgh	600 00	Nov. 1, 1883.	
5	Saskatoon (14 miles loop)	69	{ C.P.R. Tel. Co. s.	300 00	Jan. 1, 1892.	Humboldt office was closed 20th August, 1893.
6	Henrietta	52	{ J. Harrington, repairer	600 00	do 1, 1888	The Agt.-Opr. at Saskatoon is joint with the C.P.R.
7	Battleford	47	{ W. Salsbury	720 00	Oct. 1, 1886	
8	Wesley	27	{ L. P. O. Noel	720 00	April 15, 1890.	
9	Fort Pitt	62	{ H. McClenaghan	480 00	Sept. 19, 1895.	
10	Onion Lake	13	{ D. Noel	600 00	Mar. 1, 1897.	The repairer, formerly stationed at Battleford, was transferred to Humboldt, in November, 1892, and thence to Moosejaw, in May, 1893.
11	Moose	32½	{ G. G. Mann, operator & agent	240 00	Jan. 1, 1892.	
12	Saddle Lake	45	{ A. W. Campbell	600 00	June 26, 1896	
13	Victoria	37	{ L. Picard	600 00	July 1, 1891.	
14	{ Fort Saskatchewan.	49	{ W. C. Gillis.	720 00	Jan. —, 1887.	Special connection for Mounted Police. The office at Edmonton has been operated jointly with the C.P.R. Tel. Co. since 1st January, 1892.
	do		{ W. G. Ross.	Com. 25 p. c.	Dec. —, 1886.	
15	Edmonton.	24	{ G. M. Graham.	120 00	Jan. —, 1896.	
	Branch Line— Edmonton St. Albert	0	{ G. Voyer	300 00	Mar. 1, 1893	
		9	{ W. McKay, repairer	720 00	May 1, 1886.	The St. Albert branch line is operated with telephones. It was leased to the Edmonton District Telephone Co., from 24th October, 1895.
	<i>Wood Mountain Section.</i>					
1	Moosejaw	0	{ A. Wilcox, agent	240 00	Dec. 1, 1891	Moosejaw office is operated jointly with the Canadian Pacific Telegraph Co.
2	Wood Mountain	90½	{ H. Sikes, repairer.	600 00	do 1, 1893.	
			{ J. H. Thompson, agent.	180 00	do 1, 1890.	
	Total	698		10,860 00		

GOVERNMENT TELEGRAPH SERVICE—Continued.

GOVERNMENT TELEGRAPH SERVICE IN BRITISH COLUMBIA.

No.	Stations.	Inter- mediate Distances.	Agents.	Salaries per Annum.	Date of Appointment.	Memo.
	<i>Ashcroft—Barkerville.†</i>	Miles.		\$ cts.		
1	Ashcroft Station.....	•	Jas. Wilson (Kamloops), joint dist. supt. Govt. & C.P. lines	180 00	Jan. 1, 1896.	Proportion of salary pertaining to this line.
2	Clinton.....	30	Can. Pac. Ry. Co., joint agent	240 00	Feb. 16, 1883.	do
3	Bridge Creek.....	53	A. LeBourdais, agt. & rep.	600 00	Prior to 1891.	do
4	150-Mile House*.....	40	C. H. Tingley, do	720 00	April 13, 1894.	
5	Soda Creek.....	38	W. Jamieson, agt. & operator	456 00	Mar. 1, 1896.	
6	Quesnelle.....	54½	G. H. Smith, agt. & repairer.	900 00	Prior to 1891.	
7	Stanley.....	48	J. E. Bowron, do	564 00	Feb. 17, 1873.	*There is a testing office at 134-Mile House. The business done there is accounted at 150-Mile House office.
8	Barkerville.....	13	Accommodation Com. office.	1,000 00		
	Total	276½	J. Stone, agent and repairer.	4,660 00		
	<i>Ashcroft—Lillooet.†</i>					
	Ashcroft Station	0	Jas. Wilson (Kamloops), joint dist. supt. Govt. & C.P. lines	120 00	Jan. 1, 1896.	Proportion of salary pertaining to this line.
1	Pavillion.....	40	Can. Pac. Ry. Co., joint agt.	240 00	Dec. 1, 1896.	do
2	Lillooet.....	22	Accommodation office, com.	600 00	Jan. 3, 1896.	
	Total	62	S. A. Macfarlane, agt. & op.	960 00		
	<i>Victoria—Cape Beale.†</i>					
1	Victoria.....	0	Jas. Wilson (Kamloops), joint dist. supt. Govt. & C.P. lines	120 00	Nov. 1, 1891.	Proportion of salary pertaining to this line.
2	Sooke.....	18	Can. Pac. Ry. Co., joint agent	240 00	April 21, 1896.	Proportion of salary.
3	Otter Point.....	8	M. Milne, commission office.	720 00	do 1, 1897.	
4	Jordan River.....	10	A. H. Floyer, agt. & operator	660 00	Nov. 1, 1891.	
5	Port San Juan.....	30	L. Desbriens, do	720 00	Oct. 25, 1892.	
			J. W. Williams, do	240 00	Nov. 1, 1891.	
6	Carmenagh Lighthouse.....	24	W. P. Daykin, agt. & operator	540 00	do 1, 1891.	+ These three lines are operated by the Canadian Pacific Railway Co. for the Government, the arrange- ment being terminable at any time.
			E. B. Daykin, repairer.	540 00	Sept. 1, 1894.	
7	Cape Beale	28	R. McDonald, do	120 00	do 1, 1895.	
	Total	118	M. Patterson, agt. & operator	3,900 00		

GOVERNMENT TELEGRAPH SERVICE IN BRITISH COLUMBIA.

NANAIMO, COMOX AND ALBERNI.

No.	Office.	Inter- mediate Distances.	Agents, etc.	Positions.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.			\$ cts.		
1	Nanaimo.	0	Joint with C. P. R.	Agent and operator.	120 00	March 1, 1896.	NOTE.—These two lines are operated by the Gov- ernment through the office of the resident engineer at Victoria. Courtney and Fanny Bay are communicated with by telephone at prearranged intervals.
2	Wellington.	5	R. & N. Ry. Co.	do	Commission.	April 1, 1893.	
3	Parksville.	23	A. McMillan.	do	240 00	June 26, 1895.	
4	Fanny Bay.	23	D. A. McMillan.	Repairer ..	570 00	Oct. 18, 1895.	
5	Union (wharf).	9½	D. R. O'Hanley.	do	780 00	May 22, 1896.	
6	do (mines).	10	J. Dunsmuir.	Agent.	Commission.	April 1, 1893.	
7	Courtney.	7	do	do	do	do 1, 1893.	
8	Comox.	3¾	M. McDonald.	Agent and operator.	120 00	Nov. 1, 1895.	
	Branch.	81					
9	{ Parksville. } { Alberni. }	29½	C. T. Haslam.	Agent and operator.	600 00	June 27, 1895.	
	Total.	110½			2,430 00		

GOVERNMENT TELEGRAPH LINES.

SPECIAL TARIFF.

Cable messages.—The rate for transatlantic messages passing over the Government lines is the same as for ordinary through messages, excepting where the ordinary tariff is more than 25 cts.; in such cases the Government line rate is 4 cts. per word, with a minimum charge of 25 cts. For example:—

For a message of 6 words or less the charge is 25 cts. for Government line.	
“ “ 7 “ the charge is (7 x 4 c.) 28c.	“ “
“ “ 12 “ “ “ (12 x 4 c.) 48c.	“ “

In every case the counting of words includes the address and signature in the same way as for transatlantic cable tolls.

Press despatches.—The rate for press despatches on the Government lines is a quarter cent per word, but no single message less than 15 cts., where that is the regular rate; or less than 25 cts., where the regular rate is 25 cts., or over.

REGULAR TARIFF.

NOVA SCOTIA.

Line from North Sydney to Meat Cove—Local rate 25-1. (13 offices).

Big Bras d'Or.....	Through rate 25-1 from North Sydney, W. U. Office.	
New Campbellton (Kelly's Cove)	do	do
Port Bevis.....	do	do
Englishtown.....	do	do
Baddeck.....	do	do
St. Anne, South Gut.....	do	do
French River.....	do	do
South Ingonish.....	do	do
Ingonish.....	do	do
Neil's Harbour.....	do	do
White Point.....	do	do
Aspy Bay.....	do	do
Meat Cove.....	do	do

Line from Mabou to Cheticamp—Local rate 25-2. (6 offices).

Board Cove.....	Through rate 15-1 from Mabou, W. U. Office.	
S. W. Margaree.....	do	do
Margaree Harbour.....	do	do
North East Margaree.....	do	do
Grand Etang.....	do	do
Cheticamp.....	do	do

Line from Barrington to Cape Sable—Local rate 12-1. (2 offices).

Newellton.....	Through rate 12-1 from Barrington, W. U. Office.	
Cape Sable Lt. House.....	do	do

Department of Public Works.

NEW BRUNSWICK.

Line from Chatham to Point Escuminac—Local rate 25-1 (4 offices)

Bay du Vin.....	Through rate 15-1 from Chatham, G. N. W. Office.
Lower Hardwicke.....	do do
Escuminac.....	do do
Pt. Escuminac Lt. House.....	do do

Line from Eastport, Me., to Campobello, Grand Manan, and Whitehead Islands (8 offices).—Local rates between offices on Grand Manan, and Whitehead Islands 15-1: Grand Manan and Campobello Island 25-2: The Islands and Eastport, Me. 25-2. W.U.O.

Welchpool, Campobello.....	Through rate 25-2 from Eastport, Me., W. U. Office.
Flagg's Cove, Grand Manan.....	do do
Woodward's Cove.....	do do
Grand Harbour.....	do do
Seal Cove.....	do do
Southern Head.....	do do
Cheney's Island.....	do do
Whitehead Island.....	do do

QUEBEC.

Line from Gaspé to Anticosti Island, Q. (9 offices)—Local rates between offices on the Island 25-1: Gaspé and the Island offices 50-2.

South-west Point.....	Through rate 50-2 from Gaspé, G. N. W. Office.
Salt Lake.....	do do
Shallop Creek.....	do do
South Point.....	do do
Heath Point.....	do do
Fox Bay.....	do do
Becscie River.....	do do
West Point.....	do do
English Bay.....	do do

Line from Meat Cove, C.B., N.S., to Magdalen Islands, Q. (8 offices)—Local rates between offices on the Islands 25-1: Meat Cove and the Islands 50-2; Offices on the Meat Cove Line and the Islands 50-2.

Amherst Island.....	Through rate 50-2 from N. Sydney, N.S., W.U. Office.
Amherst Lt. House.....	do do
Etang du Nord Village.....	do do
Etang du Nord Lt. House.....	do do
Cap aux Meules, (Grindstone)... ..	do do
House Harbour.....	do do
Grosse Isle.....	do do
Grand Entry.....	do do

Line from Meat Cove, C.B., N.S., to St. Paul's Island, Q.—Local rate between offices on Meat Cove Line and St. Paul's 50-2 (1 office.)

St. Paul's Island Lt. House.....from North Sydney, N.S., W.U. Office.

Line from Quebec to Grosse Isle Quarantine station (7 offices)—Local rates between offices on Orleans Island and Isle Réaux 15-1; on Orleans Island, Isle Réaux and Quebec 15-1; on Orleans Island and Grosse Isle 25-1; on Isle Réaux and Grosse Isle 15-1.

St. Pierre, Orleans Island	Through rate 15-1 from Quebec, G. N. W. Office.	
Ste. Pétronille	do	do
St. Laurent.....	do	do
St. Jean.....	do	do
St. François.....	do	do
Isle Réaux.....	do	do
Grosse Isle.....	do	25-1 do

Line from Baie St. Paul to Chicoutimi (5 offices).

For business with offices west of Baie St. Paul, and terminating at Quebec, add 15c. and 1c. to the Government line tariff.

For business with offices west of Baie St. Paul, beyond Quebec, add the full rate of the Great North-western Telegraph Company to the Government line tariff.

Line from Murray Bay to Point Esquimaux (34 offices) with branch to Anticosti.

For business with offices west of Murray Bay and terminating at Quebec, add 15c. and 1c. to the Government line tariff.

For business with offices west of Murray Bay beyond Quebec, add the full rate of the Great North-western Telegraph Company to the Government line tariff.

Local rates between offices not more than 100 miles apart 15-1; more than 100 miles apart 25-1; on main land and Anticosti 50-2.

St. Urbain.....	15-1 from Baie St. Paul (Ck. Que.) G. N. W. Office.	
Lacruche.....	do	do
St. Alexis.....	do	do
St. Alphonse de Bagotville.....	do	do
Chicoutimi	do	do
Cap à l'Aigle.....	15-1 from Murray Bay (Ck. Que.) G.N.W. Office.	
Ste. Fidèle.....	do	do
Port au Persil....	do	do
St. Siméon	do	do
Baie des Rochers.....	do	do
Rivière aux Canards	do	do
St. Etienne.....	do	do
Tadoussac.....	do	do
Bergeronnes	do	do
Escoumains.....	do	do
Baie des Bacons	do	do
Mille Vaches....	25-1 do	do
Portneuf Mills.....	do	do
Port Neuf Light.....	do	do
Sault au Cochon.....	do	do
Betsiamits (Bersimis)	do	do
Manicouagan (Point Outardes)	do	do
River Godbout.....	do	do
Pointe de Monts.....	do	do
Trinity Bay, West	do	do
Trinity Bay, East.....	do	do

Department of Public Works.

Caribou Islands.....	25-1	from Murray Bay (Ck. Que.)	G. N. W. Office.
English Point.....	do	do	
Pentecost	do	do	
Ste. Marguerite... .	do	do	
Seven Islands.....	do	do	
River Moisie.....	do	do	
Sheldrake.....	do	do	
Thunder River.....	do	do	
Magpie.....	do	do	
St. John's River.....	do	do	
Long Point.....	do	do	
Mingan... ..	do	do	
Point Esquimaux.....	do	do	
Anticosti Island, via Long Point	50-2	do	do

ONTARIO.

Line from Leamington to Pelee Island (Telephone Circuit—Local rates between Leamington and Point Pelee 15-1; Mainland and Island Office, 25-1: Offices on the Island, 15-1. (6 offices.)

Gun Club House, Mainland.....	15-1	(thro' business) from Leamington.	G.N.W.
Point Pelee do	do	do	
North Point Lt. Hse. Pelee Island	do	do	
North Dock, Pelee Island.....	do	do	
West Dock do	do	do	
South Dock do	do	do	

NORTH-WEST TERRITORY.

Line from Qu'Appelle (C.P.R. Stn.) to Edmonton, Alberta—Local rates 15-1, 25-2 and 50-3 for distances 10 to 600 miles. (13 offices.)

Fort Qu'Appelle.....	25-2	Qu'Appelle or Saskatoon	
Touchwood	do	do	
Saskatoon (Trans. Office C.P.R. Tel.)	do	do	
Henrietta.....	do	do	
Battleford	do	do	
Bresaylor.....	25-2	Saskatoon; 50-3 Qu'Appelle or Edmonton.	
Pitt.....	do	do	
Onion Lake.....	do	do	
Moose	50-3	Saskatoon, Qu'Appelle or Edmonton.	
Saddle Lake.....	do	do	
Victoria.....	25-2	Edmonton; 50-3 Qu'Appelle or Saskatoon	
Fort Saskatchewan	do	do	
Edmonton (Trans. office C.P.R. Tel.).....	do	do	

Line from Moosejaw (C.P.R. Stn.) to Wood Mountain—Local rates 25-2 (1 office).

Wood Mountain.....	25-2	from Moosejaw.
--------------------	------	----------------

BRITISH COLUMBIA.

Line from Ashcroft (C.P.R. Stn.) to Barkerville—Local rates 25, 50, 75 (9 offices).

Clinton.....	25-2	from Ashcroft C.P.R. Tel. Office
Bridge Creek.....	do	do
150-Mile House.....	50-3	do
Soda Creek.....	do	do
Quesnelle..	do	do
Stanley.....	75-5	do
Barkerville.....	75-5	do
Lillooet (branch).....	50-3	do
Pavillion (on Lillooet Branch).....	do	do

Line from Victoria to Cape Beale—Local rate 50-3 (6 offices).

Sooke	50-3	from Victoria, C.P.R. Tel. Office
Otter Point.....	do	do
Jordan River	do	do
Port San Juan	do	do
Carmanah Lt. House.....	do	do
Cape Beale.	do	do

Line from Nanaimo to Comox—Local rate 25-2 (8 offices)

Wellington (C.P.R. & E. & N. Ry)....	25-2	from Nanaimo.
Parksville.....	do	or Wellington.
Fanny Bay.....	do	do
Union (wharf).....	do	do
Union mines.....	do	do
Courtney	do	do
Comox.....	do	do
Alberni (branch).....	do	do

Offices on Government lines as listed.....	141
Offices at transfer points with connecting lines.....	15

Total number embraced by the Service 156

N.B.—When the tariff rate is entered as 25-1 or 50-2, etc., the meaning is that the rate is 25 cents or 50 cents for ten words and 1 cent or 2 cents for each additional word.

APPENDIX No. 13.

NATIONAL ART GALLERY

CURATOR'S REPORT

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1897

Department of Public Works.

NATIONAL GALLERY.

CHIEF ARCHITECT'S OFFICE.

OTTAWA, December 11, 1897.

SIR,—I have the honour to report that the following additions have been made to the Gallery, during the fiscal year ended 30th June, 1897:—

Oil painting by E. Wyly Grier, Esq., R.C.A.

“ J. C. Pinhey “

These paintings have been presented to the Gallery by the Royal Canadian Academy, in accordance with the Act of Incorporation requiring diploma pictures to be deposited in the National Gallery.

Nineteen thousand three hundred visitors have registered their names, being a decrease of 3,361 from the preceding year.

I have the honour to be, Sir,

Your obedient servant,

L. FENNINGS TAYLOR,

Curator.

E. F. E. ROY, Esq., Secretary,
Department of Public Works.

Department of Public Works.

APPENDIX No. 14.

OFFICIAL CORRESPONDENCE

DEPARTMENT OF PUBLIC WORKS

FROM 1ST JULY, 1867, TO 30TH JUNE, 1897

Department of Public Works.

OFFICIAL CORRESPONDENCE.

LETTERS Received and Sent from 1st July, 1867, to 30th June, 1897.

Years.				Received.	Sent.
1867—	From 1st July to 31st December.....			2,075	1,511
1868	do	1st January to 31st December.....	do	3,498	2,317
1869	do	do	do	3,448	2,171
1870	do	do	do	4,961	3,185
1871	do	do	do	6,268	3,983
1872	do	do	do	8,333	4,428
1873	do	do	do	10,072	5,707
1874	do	do	do	9,800	5,043
1875	do	do	do	9,006	5,006
1876	do	do	do	7,971	4,773
1877	do	do	do	7,517	4,425
1878	do	do	do	6,886	4,021
1879	do	do	to 6th October.....	7,186	4,547
1879	do	7th October to 31st December.....	do	2,033	810
1880	do	1st January	do	8,451	4,410
1881	do	do	do	9,599	5,529
1882	do	do	do	10,505	5,699
1883	do	do	do	11,633	6,227
1884	do	do	do	13,114	6,903
1885	do	do	do	8,977	5,321
1886	do	do	do	9,644	5,352
1887	do	do	to 30th June.....	4,866	2,735
1887	do	1st July	do 1888.....	10,493	6,343
1888	do	do	do 1889.....	10,522	7,042
1889	do	do	do 1890.....	10,098	7,448
1890	do	do	do 1891.....	10,576	7,286
1891	do	do	do 1892.....	11,637	6,700
1892	do	do	do 1893.....	11,720	6,220
1893	do	do	do 1894.....	9,517	6,028
1894	do	do	do 1895.....	10,190	5,148
1895	do	do	do 1896.....	10,223	5,573
1896	do	do	do 1897.....	11,404	5,033

NUMBER of Cheques sent by Accountant to Secretary's Branch and mailed through the latter, from 1882 to 1897.

Year.					No.
1882.....	From 22nd September to 30th June, 1883.....				1,566
1883.....	do	1st July	do	1884.....	3,366
1884.....	do	do	do	1885.....	3,298
1885.....	do	do	do	1886.....	3,466
1886.....	do	do	do	1887.....	4,198
1887.....	do	do	do	1888.....	4,692
1888.....	do	do	do	1889.....	4,960
1889.....	do	do	do	1890.....	4,819
1890.....	do	do	do	1891.....	5,376
1891.....	do	do	do	1892.....	5,400
1892.....	do	do	do	1893.....	7,174
1893.....	do	do	do	1894.....	7,792
1894.....	do	do	do	1895.....	8,745
1895.....	do	do	do	1896.....	9,849
1896-7	Records incomplete ; partially destroyed by fire, 11th February, 1897				

CHEQUES issued by Finance Department and mailed from Secretary's Branch.

Year.		No.
1885.....	From 1st April to 30th June, 1885.....	245
1885.....	do 1st July do 1886.....	954
1886.....	do do do 1887.....	1,158
1887.....	do do do 1888.....	918
1888.....	do do do 1889.....	887
1889.....	do do do 1890.....	908
1890.....	do do do 1891.....	790
1891.....	do do do 1892.....	820
1892.....	do do do 1893.....	822
1893.....	do do do 1894.....	868
1894.....	do do do 1895.....	594
1895.....	do do do 1896.....	267
1896-7.....	Records incomplete; partially destroyed by fire, 11th February, 1897.....	

LETTERS Received and Sent, Chief Architect's Office, from 1st January, 1880, to 30th June, 1897.

Years.	Received.	Sent.
1880—From 1st January to 30th June.....		1,273
1880 do 1st July do 1881.....		2,943
1881 do do do 1882.....		2,859
1882 do do do 1883.....	3,538	4,600
1883 do do do 1884.....	3,860	6,004
1884 do do do 1885.....	4,500	6,718
1885 do do do 1886.....	6,075	6,450
1886 do do do 1887.....	6,816	6,380
1887 do do do 1888.....	6,947	6,870
1888 do do do 1889.....	6,484	7,667
1889 do do do 1890.....	7,448	6,578
1890 do do do 1891.....		7,751
1891 do do do 1892.....	6,113	4,260
1892 do do do 1893.....	7,428	6,453
1893 do do do 1894.....	6,900	*4,517
1894 do do do 1895.....	7,538	†5,327
1895 do do do 1896.....	7,843	5,783
1896 do do do 1897.....	10,700	8,200

* The exact number of letters received cannot be accurately given, but would bear about the same proportion to letters sent as last year.

† The decrease in the number of letters sent, is due to a change made on 1st January, 1894, in the manner of transmitting accounts to the secretary. Previous to that date a letter accompanied each account, but now a bundle of accounts goes with each letter.

LETTERS Sent from Chief Engineer's Office, from January, 1880, to 30th June, 1897.

Year.	—				No.
1880.....	From 10th January to 30th June.....				418
1880.....	do	1st July	do	1881.....	1,795
1881.....	do	do	do	1882.....	2,352
1882.....	do	do	do	1883.....	2,651
1883.....	do	do	do	1884.....	3,611
1884.....	do	do	do	1885.....	3,119
1885.....	do	do	do	1886.....	2,867
1886.....	do	do	do	1887.....	3,281
1887.....	do	do	do	1888.....	3,552
1888.....	do	do	do	1889.....	4,229
1889.....	do	do	do	1890.....	3,374
1890.....	do	do	do	1891.....	3,948
1891.....	do	do	do	1892.....	4,009
1892.....	do	do	do	1893.....	4,232
1893.....	do	do	do	1894.....	3,966
1894.....	do	do	do	1895.....	4,603
1895.....	do	do	do	1896.....	4,239
1896.....	do	do	do	1897.....	4,994

NOTE.—The letters, including returns, received in the Chief Engineer's Office may be estimated at the rate of two received to one sent.

61 Victoria.

Sessional Papers (No. 10.)

A. 1898

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE PAST FISCAL YEAR

FROM 1ST JULY, 1896, TO 30TH JUNE, 1897

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

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY

1898

[No. 10—1898.]

Department of Railways and Canals.

To His Excellency the Right Honourable Sir John Campbell Hamilton Gordon, Earl of Aberdeen, &c., &c., &c., Governor General of Canada, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY :

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year, from the 1st of July, 1896, to the 30th of June, 1897.

All of which is respectfully submitted.

ANDREW G. BLAIR,
Minister of Railways and Canals.

OTTAWA, 25th February, 1898.

Department of Railways and Canals

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Department of Railways and Canals.

MAPS

ACCOMPANYING REPORT OF THE DEPUTY MINISTER.

RAILWAY SYSTEM.

1. General map of the Dominion.
2. Nova Scotia, Cape Breton, Prince Edward Island and part of New Brunswick.
3. New Brunswick and parts of Maine and Quebec.
4. do do do taking in Montreal.
5. Eastern Ontario and part of Quebec.
6. Western Ontario.
7. North of Lake Superior.
8. Lake Superior to Manitoba.
9. Manitoba and Assiniboia.
10. Assiniboia and Saskatchewan.
11. Assiniboia and Alberta to the Rocky Mountains.
12. British Columbia.

CANAL SYSTEM.

13. St. Lawrence, Ottawa, Rideau and Richelieu Canals.
14. Welland Canal.
15. Trent Navigation and Murray Canal.
16. Sault Ste. Marie Ship Canal, also St. Mary's Falls Canal, Michigan.

Department of Railways and Canals.

REPORT OF THE DEPUTY MINISTER.

To the Honourable

ANDREW G. BLAIR,

Minister of Railways and Canals.

SIR,— I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal year ended on the 30th of June, 1897.

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

Attached hereto (Part No. II.) will be found statements showing the amounts expended during the past fiscal year in construction, repairs, and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, on each of the Government railways, and on the Canadian Pacific Railway so far as the Government is concerned; also a statement showing the payments made, year by year, to subsidized railways, with the aggregates of such payments.

RAILWAYS.

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

In an appendix (Part VI.) will be found a special statistical report, embodying returns for the fiscal year ended on the 30th June, 1896, made by Canadian railway companies, as required by statute. This report gives information as to railroad operations in Canada, including the Government roads.

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

The number of railways in actual operation, including the two Government roads, the Intercolonial and the Prince Edward Island Railways, was 141: some of these, however, are amalgamated or leased; making the total number of controlling companies 81, not including the Government railways. The number of companies absorbed by amalgamation is 27, and the number of leased lines is 31.

* It should be observed that while the usual reports furnished by the superintending officers, and to be found in the appendices hereto, deal with the fiscal year only, the report of the Chief Engineer of the Department covers works of construction up to the 1st of November, 1897. Information on points relating to subsidized lines of railway, has, in previous years, been brought down in the general report to the end of December, thus giving the results of the season's work. This year, however, it has been found necessary to confine statements to the operations of the fiscal year.

The number of miles of completed railway was 16,687, an increase of 300 miles, besides 2,218 miles of sidings. The number of miles laid with steel rails was 16,477. The number of miles in operation was 16,550.

The paid-up capital amounted to \$921,858,232, an increase of \$22,040,332. The gross earnings amounted to \$52,353,276, an increase of \$1,807,707, and the working expenses aggregated \$35,168,665, an increase of \$126,010 compared with those of the previous year, leaving the net earnings \$17,184,611, an increase of \$1,681,697. The number of passengers carried was \$16,171,338, an increase of \$1,360,031, and the freight traffic amounted to 25,300,331 tons, an increase of 1,033,506 tons. The total number of miles run by trains was 45,780,851, an increase of 1,280,249. The accident returns show 7 passengers killed.

The Government expenditure on railways prior to and since the date of confederation (1867) amounts, on capital account, to \$122,944,518.33 (including a payment of \$25,000,000 to the Canadian Pacific Railway Co.) and for railway subsidies, charged against the Consolidated Fund, the further sum of \$16,390,387.33, making a total expenditure of \$139,335,405.66. In addition, there has been an expenditure since confederation for working expenses of \$69,522,382.86, covering the maintenance and operation of the Government roads, or a grand total of \$208,857,788.52,* all of which, with the exception of \$13,881,460.65, has been expended on railways during the past thirty years. The revenue derived from the Government roads during the same period amounts to \$61,196,803.08.

CANADIAN PACIFIC RAILWAY.†

Of the total amount, \$579,255.20, awarded to the Canadian Pacific Railway Company in 1891 by the special arbitrators in respect of transferred works in British Columbia, and to be expended by the company under Government supervision, in certain specified directions, the total value of the work executed up to the end of August, 1897, is \$572,445.70, which includes the expenditure, \$202,675.20, prior to the date of the award, leaving still to be expended the sum of \$6,809.50. A report from the Chief Engineer on the work executed will be found in Part I., p. 28.

It should be noted that for the year ended on the 30th June, 1897, the Company had under traffic, in Canada, 6,314 miles of railway, including leased lines—and that its gross earnings were \$21,242,638.75 (as against 6,211 miles of railway and earnings \$20,175,384.99 the previous year). The total expenditure for working expenses was \$12,576,800.42, making the net earnings \$8,665,838.33, an increase of \$317,860.44 over the net earnings of the previous year. The company carried 2,987,163 passengers and 4,640,578 tons of freight. These figures, *which apply only to the traffic in Canada*, are taken from the sworn statements of the company, furnished in accordance with the Railway Act. (See Railway Statistics, Part VI.)

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

† A summarized statement showing the transactions of the government with the company will be found in the Annual Reports of this Department for the years 1887 and 1896, the road having been opened for through traffic in June, 1886.

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GOVERNMENT RAILWAYS IN OPERATION.

The several lines maintained by the Government are: The Intercolonial, the Windsor Branch (maintained only), and the Prince Edward Island Railways, making a total of 1,388 miles.

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

The general revenue accounts for 1896-97 show the following as the financial position of these roads for the fiscal year :

The Intercolonial Railway, 1,145 miles in operation, earned \$2,866,028.02, and the working expenses aggregated \$2,925,968.67, the loss on the year's operations being \$59,940.65.

The Windsor Branch is maintained but not operated by the Government, which takes one-third of the entire receipts. Its length is 32 miles. The Government earnings amounted to \$40,603.23, and the expenditure on maintenance was \$10,821.04, leaving a profit of \$29,782.19.

The Prince Edward Island Railway is 211 miles long. Its earnings amounted to \$153,443.13, and the working expenses were \$240,489.90 ; the loss on the year's operation being \$87,046.77.

The gross earnings of all the Government roads for the past fiscal year amounted to \$3,060,074.35, and compared with those of the preceding year show a decrease of \$80,604.12. The gross working expenses amounted to \$3,177,269.61, a decrease of \$77,173.03.

The net loss on the operations of the year was \$117,205.23.

INTERCOLONIAL RAILWAY.

CAPITAL ACCOUNT.

During the fiscal year there was an addition of \$149,112.52 to the Capital Account expenditure, making the total expenditure chargeable to "Capital," on the whole road as amalgamated under the Act 54-55 Vic., ch. 50 (1891), up to the 30th June, 1897, \$55,416,157.15.

The additions made during the year included \$22,274.97 for increased accommodation at Halifax, \$37,206.44 on the construction of the branch line from Windsor Junction to Dartmouth, \$29,877.32 for increased accommodation at Moncton, and \$14,996.04 on rolling stock.

REVENUE ACCOUNT.

The gross earnings of the year amounted to \$2,866,028.02, and the working expenses to \$2,925,968.67, making the excess of expenditure \$59,940.65. The expenditure was less than that of the previous year by \$86,858.95, and the gross earnings were less by \$91,612.08. The net loss on this year's operations was \$59,940.65.

Comparing the earnings with those of the previous year, the passenger traffic produced \$979,005.57, an increase of \$7,579.31; the freight traffic amounted to \$1,687,050.42, a decrease of \$101,762.76, and the carriage of mails and express freight produced \$199,972.03, an increase of \$2,571.37. The earnings per mile were \$2,503.08, a decrease of \$86.80.

GENERAL OBSERVATIONS.

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

The number of passengers carried was 1,501,690, an increase of 29,824, all local traffic, and 1,296,028 tons of freight were carried, a decrease of 83,590 tons. The through freight increased by 470 tons, and the local freight decreased by 84,060 tons.

Of flour 847,701 barrels were carried, an increase of 25,604. Of grain 1,093,499 bushels were carried, an increase of 29,114. Again, as in the two previous years, no portion of this was for shipment at Halifax. Lumber showed an increase of 17,023,010 superficial feet, the total quantity carried being 243,355,725 feet. There was an increase of 8,031 in the number of live stock, of which 72,082 head were carried. 383,362 tons of coal, a decrease of 49,151 tons, were carried. Of raw sugar, 4,925 tons were carried, all for local stations, a decrease of 4,899 tons. Of refined sugar, 20,720 tons, a decrease of 19,461, were carried, all of which, except 6,957 tons, was for points west of the road. A total of 7,708 tons of fresh fish, an increase of 1,364 tons, and a total of 5,880 tons of salt fish, an increase of 139 tons, were carried.

Of ocean borne goods to and from Europe via Halifax, the aggregate was 20,156 tons, a decrease of 773 tons. Of this, 17,239 tons was local traffic.

The winter of 1896-97 was not severe, and the removal of snow and ice entailed an expenditure of only \$33,570.36, about \$19,000 less than the average cost.

All necessary repairs have been carried out, and the railway is in good order.

The train mileage (or number of miles run by trains) of the year was 4,714,661, an increase of 59,490 miles. The cost per train mile was 77.42 cents; 0.99 cent lower than in the previous year.

The working expenses per mile of railway amounted to \$2,555.43, a decrease of \$82.77 per mile.

The value of stores on hand at the close of the fiscal year, including fuel, rails and old material, was \$638,832.89.

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

WINDSOR BRANCH.

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

This railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection

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

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

The gross earnings of the Government (one-third of gross receipts) amounted to \$40,603.23, an increase of \$4,041.40. The expenses of maintenance amounted to \$10,821.04, a decrease of \$5,655.42, leaving the profit to the Government \$29,782.19.

The road has been maintained in good order. Details will be found in the appendices. (*See Part I., p. 95.*)

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

The total cost of the road and equipment chargeable to capital account at the close of the fiscal year was \$3,750,565.38. There was no addition during the year.

REVENUE ACCOUNT.

The gross earnings amounted to \$153,443.13, and the working expenses to \$240,489.90; the over-expenditure being \$87,046.77.

Compared with the previous year, the gross earnings show an increase of \$6,966.59. The railway carried 121,498 passengers, a decrease of 1,088, producing \$62,695.07, a decrease of \$336.95. Of freight there was carried 52,151 tons, an increase of 5,756 tons, producing \$69,872.66, an increase of \$4,480.74, while the earnings from mails and sundries amounted to \$20,875.40, an increase of \$2,148.90.

Compared with the previous year, the expenditure was greater by the sum of \$15,351.34

The train mileage (the number of miles run by trains) was 254,029, an increase of 8,263 miles.

The cost per mile run by trains was 94.67 cents, an increase of 3.07 cents; and per mile of railway, \$1,145.19, an increase of 73.10 per mile

The value of stores on hand at the close of the fiscal year was \$97,160.79.

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

A destructive fire at Tignish which occurred in August, 1896, entailed heavy expenditure.

Details of operations will be found in the Appendices Part I., p. 100, and in those of the general manager and other officers.

BAIE DES CHALEURS RAILWAY.

In view of a proposition made by the company owning this railway that the government should purchase their road, and, further, desiring to meet the urgent needs of a considerable section of country traversed by this railway, whose interests were seriously affected by its non-operation, the government consented to try the experiment of putting it, to some extent, in order, and operating it during the winter in connection with the Intercolonial. The results from the end of December to the end of May show an expenditure of \$18,679.97 for working, while the gross earnings amounted to only \$6,725.08, a loss of \$11,954.89. The road was transferred back to the company on the 31st of May, 1897.

GOVERNMENT ACTION AS TO SUBSIDIZED RAILWAYS.

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

With regard to the several lines of railway subsidized by the Dominion, the following represents the action taken and the progress made, in so far as the Dominion Government is concerned; only those lines and companies being mentioned as to which definite steps, other than merely preliminary, have been taken towards securing the subsidy. Information has been brought down to the end of the fiscal year, the 30th of June, 1897, only.

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

For the fiscal year 1883-84, ended on June 30, 1894	\$	208,000	00
do 1884-85	do	1885	403,245 00
do 1885-86	do	1886	2,171,249 00
do 1886-87	do	1887	1,406,533 00
do 1887-88	do	1888	1,027,071 92
do 1888-89	do	1889	846,721 83
do 1889-90	do	1890	1,491,595 72
do 1890-91	do	1891	1,079,105 87
do 1891-92	do	1892	1,061,615 93
do 1892-93	do	1893	624,794 07
do 1893-94	do	1894	1,043,285 10
do 1894-95	do	1895	1,123,949 10
do 1895-96	do	1896	648,145 49
do 1896-97	do	1897	230,355 30
			<hr/>
		\$13,365,637	33

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

Canada Central Railway	\$	1,525,250	00
Canadian Pacific Railway		25,000,000	00
“ “ extension		1,500,000	00
Western Counties Railway (Digby Annapolis section)		500,000	00

Total subsidies paid up to the 30th of June, 1897. \$41,890,887 33

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The above does not include the annual subsidy payable to the Atlantic and North-west Railway Company, nor the amount due to the province of Quebec for the railway between Ottawa and Quebec which has now been transferred to the public debt. (See note on page 43, of the accountant's statement part II.)

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the Government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been fully earned and paid prior to the 1st of July, 1896.

A tabulated statement of payments will be found in Part II., page 44, and a list of subsidy agreements entered into during the fiscal year in Part IV.

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

Albert Southern Railway Company.

(See Annual Report of 1891-92.)

Atlantic and North-west Railway Company.

(See Annual Report of 1889-90.)

Baie des Chaleurs Railway Company.

(See Annual Report of 1895-96.)

Beauharnois Junction Railway Company.

(See Annual Report of 1895-96.)

Belleville and North Hastings Railway Company.

(See Annual Report of 1888-89.)

Boston and Nova Scotia Coal Company.

(See Annual Report of 1895-96.)

Brockville, Westport and Sault Ste. Marie Railway Company.

(See Nos. 48, 181, 193, 240, 267 and 316.)

By the Act 48-49 Vic., ch. 59 (1885), aid was granted to an extent not exceeding \$128,000 towards the construction of the portion between Brockville and Westport, about 40 miles, of the line of the Brockville, Westport and Sault Ste. Marie Railway.

Under the authority of an Order in Council of the 28th of April, 1886, a contract was made with the company on the 16th of July, 1886, the subsidized road to be finished by the 1st of August, 1889.

Under an Order in Council of the 26th of November, 1888, the sum of \$45,000 was paid. The balance of the subsidy lapsed on the 1st of August, 1889, but was revoked by the Act 53 Vic., ch. 2 (1890).

By the Act 53 Vic., ch. 2 (1890), the grant of a subsidy to the extent of \$64,000 was authorized for 20 miles of railway from Newboro' towards Palmer's Rapids. For this subsidy there was substituted, by Act 54-55 Vic., ch. 8, one for the same amount, and for the same distance, 20 miles, but from a point "at or near Newboro' towards Palmer's Rapids," payment to be made on completion of each section of the railway as follows:—from, at, or near Newboro' to Westport, 4 miles, and from Westport towards Palmer's Rapids, 16 miles.

By the subsidy Act 55-56 Vic., ch. 5 (1892), the unpaid balances granted by 52 Vic. and 53 Vic., were revoked, and were further revoked by the Act 57-58 Vic., ch. 4 (1894), the amount not to exceed \$86,800.

Up to the close of the fiscal year, 1891-92, payment has been made to the extent of \$105,200. Nothing further has been paid up to the 30th of June, 1897.

Brantford, Waterloo and Lake Erie Railway Company.

(See Annual Report for 1895-96.)

Buctouche and Moncton Railway Company.

(See Annual Report for 1893-94.)

Canada Atlantic Railway Company,

(See Annual Report for 1888-89.)

Canada Eastern Railway Company.

(See Annual Report for 1894-95.)

Canadian Pacific Railway Company.

(See No. 243.)

By the Subsidy Act 55-56 Vic., ch. 5 (1892), the grant of a subsidy limited to \$80,000 was authorized for 25 miles of a railway from a point on the Canadian Pacific Railway at or near Revelstoke to the head of Arrow Lake.

Under date the 24th of October, 1893, a contract has been made with the Canadian Pacific Railway Company for this work, the date for completion being the 1st of August, 1896. In the fiscal year 1894-95 the sum of \$28,000, covering the first 10 miles from Revelstoke, was paid, and during the past fiscal year the balance of the subsidy has been paid—making the total \$80,000.

Cap de la Madeleine Railway Company.

(See No. 369.)

This company, was incorporated by the Quebec Act, 58 Vic., ch. 63 (1895) with powers to build a railway from some point on the Canadian Pacific Railway in the parish of St. Marie Madeleine to the River St. Lawrence in that parish.

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By the Dominion Subsidy Act 57-58 Vic., ch. 4 (1894) authority was given for the grant of aid to the extent of \$9,600 for three miles of railway from Cap de la Madeleine to connect with the Piles Branch of the Canadian Pacific Railway.

The above company applied and were admitted to contract for the work on the 26th June, 1896.

During the fiscal year the sum of \$7,424 was paid for the actual distance 2.32 miles.

Cape Breton Railway Extension Company.

(See Annual Report of 1895-96.)

Caraquet Railway Company.

(See Annual Report of 1888-89.)

Central Railway Company of New Brunswick.

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

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

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

On the 1st of December, 1890, a new contract was made with the company for this work under the Subsidy Act of 1889, the limit of subsidy being \$128,000: this contract covering also a subsidy for $4\frac{1}{2}$ miles, the limit of which was \$14,400, authorized by the Act, 53 Vic., ch. 2, making a total subsidy of \$142,400; the total length of road subsidized being $44\frac{1}{2}$ miles. The date for completion was fixed as the 1st of December, 1891.

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

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

Up to the end of the fiscal year 1891-92, there had been paid, including the value of the said rails, the sum of \$159,251.54; no payments have since been made up to the 30th of June, 1897.

Chatham Branch Railway Company.

(See Annual Report of 1893-94.)

Chignecto Marine Transport Company.

(See Annual Report for 1894-95.)

Cobourg, Northumberland and Pacific Railway Company.

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

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

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

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

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

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

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

No payments have been made up to the 30th of June, 1897.

Columbia and Kootenay Railway and Navigation Company.*(Leased to the Canadian Pacific Railway Company.)*

(See Annual Report for 1891-92.)

Cornwallis Valley Railway Company.

(See Annual Report for 1891-92.)

Cumberland Railway and Coal Company.

(See Annual Report for 1894-95.)

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Dominion Atlantic Railway Company.

(See Western Counties Railway Company.)

Dominion Lime Company.

(See Annual Report for 1888-89.)

Dominion Coal Company.

(See Annual Report for 1895-96.)

Drummond County Railway Company.

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

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

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

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

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

By the Subsidy Act 53 Vic., ch. 2 (1890), authority was given for the grant of a subsidy, the limit of which was \$76,000, for 24 miles of the railway of the company from Drummondville to Ste. Rosalie. Under date the 2nd of February, 1891, the company were admitted to contract for this work.

By the Subsidy Act 55-56 Vic., ch. 5 (1892), authority was given for the grant of a subsidy to the company, for 4½ miles from Ball's wharf, to Ste. Rosalie Junction, not exceeding \$14,720.

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

Up to the close of the fiscal year 1892-93, there had been paid to the company the sum of \$195,840, and during the fiscal year 1894-95 the further sum of \$92,096 was paid, making the total payments \$287,936 up to the 30th of June, 1895. No payments were made during the past fiscal year.

Elgin, Petitecodiac and Havelock Railway Company.

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

Errie and Huron Railway Company.

(See Annual Report for 1886-87.)

Esquimalt and Nanaimo Railway Company.

(See Annual Report for 1886-87.)

Fredericton and St. Mary's Bridge Company.

(See Annual Report for 1888-89.)

Grand Trunk, Georgian Bay and Lake Erie Railway Company.

(See Annual Report for 1893-94.)

Great Eastern Railway Company.

(See Nos. 88, 114, 174, 213, 235 and 296.)

By the Act 49 Vic., ch. 10, authority was given for the grant of a subsidy to an extent not exceeding \$32,000, on an estimated distance of 10 miles, towards the construction of a line from Yamaska to the River St. Francis, Que.; and the Great Eastern Railway Company having applied, a contract was made with them on the 12th of October, 1886, under the authority of an Order in Council of the 9th of that month, the time of completion being fixed as the 1st October, 1887.

The road having been completed and inspected, the whole of the subsidy due for its actual distance, 6 miles, namely, \$19,200, was paid under an Order in Council of the 27th of March, 1887.

By the Act 50-51 Vic., ch. 24, authority was given for the grant of a subsidy to the company to an extent not exceeding \$96,000, for 30 miles of their railway from the River St. Francis to the Arthabaska (Grand Trunk) Railway at St. Grégoire, and under an Order in Council an agreement was entered into with them for the work, the date being 16th March, 1888. During the fiscal year 1890-91 the sum of \$16,300 was paid from this subsidy for 666 miles from the east bank of the River Nicolet to the Grand Trunk Railway at St. Grégoire.

By the Act 52 Vic., ch. 3, a subsidy was authorized to the extent of \$64,000 for a further distance of 20 miles from St. Grégoire. This subsidy was, in effect, revoked by the Act 56 Vic., ch. 2 (1893).

Authority has been given for entry into contract for this work, but the contract has not yet been signed.

By the Act 53 Vic., ch. 2 (1890), a subsidy of 15 per cent on the value of two bridges, one over the River Nicolet, the other over the River St. Francis, not exceeding \$37,500, was authorized. On the 20th of June, 1891, a contract was entered into with the company for the work. During that fiscal year there was paid the sum of \$4,845 for work on the Nicolet bridge.

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By the Subsidy Act 54-55 Vic., ch. 8, there was revoted the balance unpaid, \$79,700, of the subsidy granted by the Act 50-51 Vic., ch. 26, which had lapsed, for a railway from the River St. Francis to the Arthabaska Railway at St. Grégoire.

Under an agreement dated the 16th of April, 1894, confirmed by 57-58 Vic., ch. 63 (1894), the railway between Yamaska and St. Grégoire has been acquired by the Atlantic and Lake Superior Railway Company.

The total amount paid the company up to the 30th of June, 1892, is \$40,345. There has been no further payment up to the 30th June, 1897.

Great Northern Railway Company.

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

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

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

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

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

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

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

By the Act 54-55 Vic., ch. 8 (1891), the unpaid balance, \$28,100, of the subsidy granted in 1886 was revoted.

By the Act 56 Vic., ch. 2 (1893), the unpaid balance, \$25,600 of the subsidy granted in 1891, was revoted, and a new contract for this work was entered into with the company on the 16th of June, 1894.

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

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

By the Subsidy Act 60-61 Vic., ch. 4 (1897), payment was authorized of unpaid balances for 64 miles of railway, between Montcalm and the junction with the Lower Laurentian Railway near Ste. Tite, not exceeding \$182,400. Also, for 9 miles shortage in distance between Montcalm and Ste. Tite; also, for 35 miles from St. Jérôme to Hawkesbury; the last two being subsidies of \$3,200 per mile with 50 per cent of expenditure in excess of \$15,000 per mile. The total not to exceed \$6,400 per mile.

During the fiscal year 1894-95 there was paid the sum of \$32,000 for a ten mile section between the 18th and 28th mile from St. Jérôme, and during the fiscal year 1895-96 \$32,000 was paid for 10 miles westwards from Ste. Tite, making the total payments to this company \$142,688. No further payments have been made up to the 30th of June, 1897.

Gulf Shore Railway Company of New Brunswick.

(See No. 374 and 382.)

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

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

The above company having applied they were admitted to contract for the work on the 22nd of April, 1896. During the past fiscal year payment has been made to the extent of \$28,635.05 up to the 30th of June, 1897.

Guelph Junction Railway Company.

(See Annual Report of 1888-89.)

Harvey Branch Railway Company.

(See Annual Report of 1889-90.)

Hereford Railway Company (formerly Hereford Branch Railway Company.)

(See Annual Report of 1891-92.)

International Railway Company.

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

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Inverness and Richmond Railway Company.

(See Nos. 208 and 357.)

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

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

No payments have been made up to the 30th of June, 1897.

Irondale, Bancroft and Ottawa Railway Company.

(See Nos. 24, 159 and 301.)

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

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

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

During the fiscal year the sum of \$48,000 was paid, making the total payments \$144,000 up to the 30th June, 1897.

Joggins Railway Company.

(See Annual Report for 1891-92.)

Kingston, Napanee and Western Railway Company.

(See Napanee, Tamworth and Quebec Railway.)

Kingston and Pembroke Railway Company.

(See Annual Report for 1884-85.)

Lake Erie and Detroit River Railway Company.

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

(See Annual Report for 1893-94.)

L'Assomption Railway Company.

(See Annual Report of 1886-87.)

Leamington and St. Clair Railway Company.

(See Annual Report of 1888-89.)

Lake Temiscamingue Colonization Railway Company.

(See Nos. 55, 84, 119, 122, 169, 216, 278, 282 and 324.)

By the Act 48-49 Vic., ch. 59, a subsidy was authorized in aid of the construction of a line of railway from Long Sault to the foot of Lake Temiscamingue, surmounting certain rapids on the Ottawa River. The limit of the amount was \$25,600, covering a total distance of 8 miles. A contract was entered into on the 25th of November, 1885, for the construction of 6 miles, to be completed by the 1st of January, 1887.

In conformity with an express provision to that effect in clause 2 of the Act 49 Vic., ch. 10, letters patent were issued under an Order in Council of the 20th of July, 1886, published in the *Canada Gazette* of the 24th, granting a charter for the construction of this railway to the "Lake Temiscamingue Colonization Railway Company."

By the Subsidy Act 49 Vic., ch. 10, a further subsidy of \$6,000 was authorized for the building of wharfs and landing stages in connection with this line. This was subsequently cancelled, and by the Act 50-51 Vic., ch. 24 (1887), the definition of portions of the road to which the preceding Acts had granted subsidies was corrected, the amount of the subsidy, however, remaining the same, namely, a total of \$31,600.

By the Act 50-51 Vic., ch. 24, the grant of subsidy to the extent of \$33,600, was authorized for 10½ miles of this company's line from Long Sault to Lake Kippewa. The contract for this subsidy was entered into on the 28th of June, 1888.

By the Act 52 Vic., ch. 3 (1889), a subsidy was authorized, not exceeding \$48,000, for 15 miles from Mattawa station, C.P.R., towards the Long Sault, or *vice versa*.

By the Act 53 Vic., ch. 2 (1890), a subsidy was authorized, not exceeding \$64,000 for 20 miles from the northern end of the line subsidized by 52 Vic., ch. 3.

By the Act 55-56 Vic., ch. 5 (1892), in lieu of the above named subsidies of 1889 and 1890, a subsidy was authorized to this company not exceeding \$112,000 for 35 miles of their railway from Mattawa to the Long Sault.

By the same Act a subsidy was granted to the company, namely, for 15 miles of their railway from the Long Sault to the crossing of the Kippewa River, and 15 per cent on the value of a wooden truss bridge over the Ottawa River, near Mattawa, not exceeding \$15,000, and not exceeding in all \$63,000.

Under date the 31st of August, 1893, a contract was entered into with the company for the construction of the section between Mattawa and the Long Sault Rapids under the subsidy granted in 1892.

By the special Act 54-55 Vic., ch. 94 (1891), the company were empowered to convey or lease their road to the Canadian Pacific Railway Company, and also to extend the

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railway to the head of Lake Temiscamingue ; the company's works to be completed by the 10th of July, 1896. The road is now controlled by the Canadian Pacific Railway Company.

By the Subsidy Act 57-58 Vic., ch. 4 (1894), the subsidies previously granted were revised, balances unpaid were revoked, and additional subsidy was granted ; the whole of the subsidies not to exceed \$274,940. Under date the 12th of September, 1894, a new contract was entered into with the company for the work, embracing the distance between Mattawa and Lake Kippewa.

By a separate contract, dated the 1st of June, 1894, the company undertook to build a truss bridge over the Ottawa, at Mattawa.

Up to the end of the fiscal year of 1888-89, the sum of \$52,760 had been paid. No further payment was made until the fiscal year 1894-95, when \$233,198.95 was paid. During the fiscal year 1895-96 the payments aggregated \$17,900.85, making the total \$303,859.70 up to the 30th June, 1896, and leaving a balance of subsidy available of \$6,476.25. This balance was paid during the past fiscal year. The total subsidy paid is \$310,335.95.

Lotbinière and Mégantic Railway Company.

(See Nos. 253 and 338.)

This company was incorporated by the Quebec Act, 52 Vic., ch. 89 (1889), for the construction of a railway from some point at or near the parish church of St. Jean Deschaillons, in the county of Lotbinière, to a point at or near Glen Lloyd, in the county of Mégantic.

By the Subsidy Act 55-56 Vic., ch. 5 (1892), a subsidy to the extent of \$48,000 was authorized for 15 miles of railway from a point at or near St. Jean Deschaillons toward Glen Lloyd.

On the 17th of July, 1893, a contract was entered into with the company for the work so subsidized, for which was substituted one dated the 27th of February, 1894, covering the distance from St. Jean Deschaillons to Lyster station on the Grand Trunk Railway.

By the Subsidy Act 57-58 Vic., ch. 4 (1894), a subsidy for a further distance of 15 miles was authorized, the limit being \$48,000.

A contract was entered into with the company on the 19th of November, 1894, covering the distance from Lyster station to Lyster, $2\frac{1}{2}$ miles, and $12\frac{1}{2}$ miles from the end of the 15 miles built. This contract was amended by one dated the 3rd of July, 1896, which substituted $2\frac{1}{2}$ miles on the northern end of the line for $2\frac{1}{2}$ miles from Lyster station to Lyster.

During the past fiscal year, the sum of \$22,400 was paid, making a total of \$96,000 the full amount of the subsidies to this company.

Midland Railway Company.

(No. 336.)

This company was incorporated by the Act of the province of Nova Scotia, 59 Vic., ch. 85 (1896), with powers to build a railway from Windsor to a point at or near Maitland, thence via Clifton to a point between Truro and Stewiacke, on the Intercolonial; thence to Eastville; with extensions and branches to coal and iron fields, and shipping ports.

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

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

No payments have been made up to the 30th of June, 1897.

Montfort Colonization Railway Company.

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

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

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

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

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

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

Up to the 30th June, 1895, the sum of \$67,200 had been paid; no further payments have been made up to the 30th of June, 1897.

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Montreal and Champlain Junction Railway Company.

(See Annual Report for 1892-93.)

Montreal and Lake Maskinongé Railway Company.

(See Annual Report for 1890-91.)

Montreal and Sorel Railway Company.

(See Annual Report for 1892-93.)

Montreal and Western Railway Company.

(See Annual Report for 1893-94.)

Montreal and Ottawa Railway Company.

(Formerly the Vaudreuil and Prescott Railway Company.)

Name changed by 53 Vic. ch. 58.

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

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

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

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

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

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

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

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

During the past fiscal year the sum of \$32,000 was paid, making the total payments up to the 30th of June, 1897, \$105,600.

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

Napanea, Tamworth and Quebec Railway Company.

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

(See Annual Report of 1895-96.)

Nakusp and Slocan Railway Company.

(See Annual Report for 1894-95.)

New Brunswick and Prince Edward Island Railway Company.

(See Annual Report for 1888-89.)

New Glasgow Iron, Coal and Railway Company.

(See Annual Report for 1895-96.)

Northern and Pacific Junction Railway Company.

(See Annual Report of 1890-91.)

Northern and Western Railway Company.

(See Annual Report of 1889-90.)

Also under head "Canada Eastern Railway."

Nova Scotia Central Railway Company.

(See Nos. 129, 135 and 307.)

By the Subsidy Act of 1887, 50-51 Vic., ch. 24, the Nova Scotia Central Railway Company were subsidized for 34 miles of their railway, to an extent not exceeding \$108,800. Under an Order in Council of the 16th of September, 1887, the company were admitted to contract on the 17th of October, 1887, the works to be executed being a line of railway from Lunenburg, on the east coast of Nova Scotia, westward to a point in the district of New Germany, together with a spur, about $\frac{3}{4}$ mile long, to Bridgewater Railway wharf, the whole to be completed by the 31st of December, 1889.

By the Act 51 Vic., ch. 3 (1888), the grant of further subsidy, not exceeding \$147,200, was authorized for 46 miles of the company's railway, and under an Order in Council of the 9th of October, 1888, a contract, dated the 15th of October, 1888, was executed, covering a line of railway, $39\frac{1}{2}$ miles, starting from a point $33\frac{1}{2}$ miles from Lunenburg, and running to Middleton, on the Windsor and Annapolis Railway; the work to be completed by the 31st of December, 1890.

By the Subsidy Act 56 Vic., ch. 2 (1893), the unpaid balance, \$4,500, was revoted. Up to the close of the fiscal year 1891-92, the total payments to this company amounted to \$230,700, covering the distance from Lunenburg to Middleton and the spur to Bridgewater, a total of $73\frac{1}{2}$ miles. Authority for payment of the said balance of \$4,500

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has been given by an Order in Council dated the 2nd of July, 1894, but no further payment has been made up to the 30th of June, 1897, pending decision on certain matters in litigation.

Nova Scotia Southern Railway Company.

(See Nos. 207 and 272.)

This company was incorporated by the Nova Scotia Act, 51 Vic., ch. 82, as the "Annapolis and Atlantic Railway Company." The name was changed as above by the Act 57 Vic., ch. 65.

By the Dominion Subsidy Act 55-56 Vic., ch. 5 (1892), a subsidy (taking the place of one previously granted), was authorized for 75 miles of railway from Sand Point, Shelburne Harbour, N.S., to Annapolis Royal, and to a point of junction with the Nova Scotia Central Railway, at or near New Germany, the subsidy limit being \$240,000.

The above company having applied for the subsidy, a contract, dated the 12th of January, 1894, has been entered into with them for the work of building a line from Sand Point towards New Germany, and approval has been given by an Order in Council dated the 25th of August, 1894, to the location of the railway for the whole distance, 75 miles.

No payment has been made up to the 30th of June, 1897.

Ontario and Pacific Railway Company.

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

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

By the Act 47 Vic., ch. 8 (1884), the grant of a subsidy to the Ontario and Pacific Railway Company was authorized, namely, to the extent of \$262,400, on an estimated distance of 82 miles, for a line from Cornwall to Perth, and on the 27th of July, 1886, a contract was made with the company, under the authority of an Order in Council of the first day of that month, for the construction of such line, via Newington, Chrysler, Manotick and Franktown, the road to be completed by the 1st of July, 1888. This subsidy lapsed on the 1st of July, 1888.

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

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

By the Subsidy Act of 1892, 55-56 Vic., ch. 5, the subsidy granted in 1889 was revoked, the length being set down as $53\frac{87}{100}$ miles. Under date the 1st of June, 1895, a contract was entered into with the company for the construction of this line from Cornwall to Ottawa, 53.87 miles, the work to be completed by the 1st of August, 1896.

By the special Act 60-61 Vic., ch. 57, the name of the company was changed to "The Ottawa and New York Railway Company," and its construction powers were extended to the 1st of July, 1891.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), in lieu of the subsidy voted in 1892, a subsidy was authorized of \$3,200 a mile, for 53.87 miles from Cornwall to Ottawa, with a further subsidy for expenditure in excess of \$15,000 a mile, to an extent of 50 per cent of such expenditure, the total subsidies not to exceed \$6,400 per mile.

No payment has been made up to the 30th of June, 1897.

Ontario and Quebec Railway Company.

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

Ontario, Belmont and Northern Company.

(See No. 246 and 298.)

This company was incorporated by the Ontario Act, 54 Vic., ch. 90 (1891), for the construction of a railway from the Midland Railway of Canada at either Hastings or Campbellford to some point on the Central Ontario Railway within the township of Marmora, county of Hastings.

By the Subsidy Act 55-56 Vic., ch. 5 (1892), the grant of a subsidy to this company to the extent of \$32,000, was authorized for 10 miles of railway from the Belmont iron mines to the Canadian Pacific and the Central Ontario Railways.

On the 9th of March, 1893, a contract was entered into with the company for this work, namely, from the Belmont mines to the junction of the two railways named. This contract was superseded by one, dated the 23rd of April, 1896, under the subsidy granted by 56 Vic., ch. 2 (1893), for the same amount, but payable on two sections, from the Belmont iron mines to Marmora, and from Marmora to the Ontario Central Railway.

During the past fiscal year payment has been made of the sum of \$30,720, the full amount due for the actual distance, 9.60 miles.

Orford Mountain Railway Company.

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

Ottawa and New York Railway Company.

(See Ontario Pacific Railway Company.)

Ottawa, Arnprior and Parry Sound Railway Company.

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

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

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

- (a.) For 22 miles of railway from a point on the Canadian Pacific Railway to Eganville, a subsidy limited to \$70,400.
- (b.) For 30 miles of railway from Eganville to Barry's Bay, a subsidy limited to \$96,000.
- (c.) For 55 miles of railway from Barry's Bay towards the Northern Pacific Junction Railway, a subsidy limited to \$6,400 a mile on the first half of that division, and to \$3,200 a mile on the second half, not exceeding in the whole \$264,000.

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

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

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

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

A portion, the westerly $47\frac{3}{4}$ miles of the amalgamated company's railway, namely between the crossing of the Northern Pacific Junction Railway and Parry Sound, had been subsidized under the name of the Parry Sound Colonization Railway Company, and at the close of the fiscal year 1895-96, there had been paid to that company a total of \$152,800.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), a subsidy was authorized for the portion, 52 miles, of the company's railway from the crossing of the Northern Pacific Junction Railway (at Scotia) to the point, 55 miles west of Barry's Bay, up to which previous subsidies had been granted; also for 4 miles of railway across Parry Island. The new subsidy is \$3,200 per mile, with a further subsidy of 50 per cent on an expenditure in excess of \$15,000 per mile; the total subsidies not to exceed \$6,400 per mile.

Ottawa and Gatineau Valley Railway Company.

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

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

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

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

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

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

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

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

The total payments up to the 30th of June, 1894, amounted to \$284,128. No further payments have been made up to the 30th of June, 1897.

Oshawa Railway and Navigation Company.

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

(See Annual Report for 1895-96.)

Parry Sound Colonization Railway Company.

(See Annual Report for 1895-96.)

Phillipsburg Junction Railway and Quarry Company.

(See Annual Report for 1894-95.)

Port Arthur, Duluth and Western Railway Company.

(Formerly the Thunder Bay Colonization Railway Company.)

(See Annual Report for 1892-93.)

Pontiac and Renfrew Railway Company.

(See Annual Report for 1889-90.)

Pontiac Pacific Junction Railway Company.

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

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

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

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

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

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

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

By the Act 53 Vic., ch. 68 (1890), the time for completion of the railway to the town of Pembroke, and of the bridge over the River Ottawa, at or near the city of Ottawa, which the company were empowered to construct by the Act 45 Vic., ch. 69, was extended to the 22nd of May, 1892. The same Act gave the company power to extend their line from the said bridge to the canal basin in the city of Ottawa.

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

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

By the Subsidy Act 57-58 Vic., ch. 4 (1894), the subsidies voted in 1888 were revoked, subject to the condition that the entire work subsidized on this railway should be completed within four years. The time for completion is thus extended, so far as subsidy is concerned, to the 23rd of July, 1898.

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

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

By the Subsidy Act 60-61 Vic., ch. 4, 1897, the unpaid balances of the subsidies granted by the Acts of 1884 and 1894 amounting to \$114,272 were revoked.

By the same Act the subsidy for $7\frac{1}{2}$ miles from Hull to Aylmer, revoked by the Act of 1894, was, in effect, revoked, with the addition of 50 per cent on expenditure in excess of \$15,000 per mile ; the total of the subsidies not to exceed \$6,400 per mile.

Up to the close of the fiscal year 1887-88, a total of \$174,828 had been paid out of the subsidy voted in 1884. During the fiscal year 1894-95 the sum of \$18,750 was paid, making a total of \$193,578. No payments were made during the past fiscal year.

Quebec Central Railway Company.

(See Annual Report of 1895-96.)

Quebec and Lake St. John Railway Company.

(See Annual Report for 1895-96.)

Quebec, Montmorency and Charlevoix Railway Company.

(See Annual Report of 1894-95.)

Shuswap and Okanagan Railway Company.

(See Annual Report of 1894-95.)

South Norfolk Railway Company.

(See Annual Report of 1888-89.)

South Shore Railway Company.

(See No. 365.)

This company, incorporated by chap. 130 of the statutes of Nova Scotia of 1892, received a Dominion charter by the Act 58-59 Vic., ch. 64 (1895), with powers to construct a line of railway from a point near the harbour of Yarmouth, N.S., passing through the counties of Yarmouth, Shelburne, Queen's, Lunenburg and Halifax to a point in or near the city of Halifax ; also a branch line to Lockeport and Caledonia.

By the Subsidy Act 57-58 Vic., ch. 4 (1894), the grant of a subsidy to this company of \$3,200 a mile, limited to \$112,000, was authorized for 35 miles of railway from Yarmouth towards Shelburne and Lockeport.

Under date the 28th February, 1895, a contract was entered into with the company for the work so subsidized, the time for completion being fixed as the 1st of August, 1897. The location plans for the whole distance have been approved by an Order in Council dated the 14th of February, 1895.

No portion of the subsidy has been paid up to the 30th June, 1897.

St. Catharines and Niagara Central Railway Company.

(See Annual Report for 1895-96.)

Department of Railways and Canals.

St. Clair Frontier Tunnel Company.

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

St. John Valley and Rivière du Loup Railway Company.

(See Annual Report for 1893-94.)

St. Stephen and Milltown Railway Company.

(See Annual Report for 1895-96.)

Stewiacke Valley and Lansdowne Railway Company.

(See Annual Report for 1895-96.)

St. Lawrence and Adirondack Railway Company.

(See Annual Report for 1893-94.)

St. Lawrence, Lower Laurentian and Saguenay Railway Company.

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

(See Annual Report of 1891-92.)

St. Louis and Richibucto Railway Company.

(See Annual Report of 1884-85.)

Témiscouata Railway Company—Rivière du Loup to Edmundston.

(See Annual Report for 1892-93.)

Thousand Islands Railway Company.

(See Annual Report for 1895-96.)

Tilsonburg, Lake Erie and Pacific Railway Company.

(See Annual Report for 1895-96.)

Tobique Valley Railway Company.

(See Annual Report for 1893-94.)

Toronto, Grey and Bruce Railway Company.

(See Annual Report for 1887-88.)

United Counties Railway Company.

(See Nos. 297, 344 and 393.)

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

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

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

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

During the past fiscal year, the sum of \$2,700 was paid, making the total payments \$187,328 up to the 30th of June, 1897.

Vaudreuil and Prescott Railway Company.

(See *Montreal and Ottawa Railway Company*.)

Waterloo Junction Railway Company.

(See Annual Report for 1891-92.)

Western Counties Railway Company.

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

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

(See Annual Report for 1894-95.)

West Ontario Pacific Railway Company.

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

(See Annual Report of 1890-91.)

Woodstock and Centreville Railway Company.

(See Annual Report for 1895-96.)

Yarmouth and Annapolis Railway Company.

(See *Western Counties Railway Company*.)

LAND SUBSIDIES.

A number of companies have been aided by subsidies in land, duly authorized by Parliament and granted by the Department of the Interior, to whose report reference must be had for information as to their position.

Department of Railways and Canals

CANALS.

The total expenditure on the original construction and the enlargement of the several canals of the Dominion up to the 30th June, 1897, was \$69,289,531.31. A further sum of \$14,500,344.46 was expended on the repairs, maintenance and operation of these works, making a total of \$83,789,875.77. The total revenue derived, including tolls and rentals of lands and water-powers, amounted to \$11,302,577.27. (See the accountant's statements, Part II., p. 26.)

The total expenditure for the fiscal year ended on the 30th June, 1897, was as follows: on construction and enlargement a total of \$2,348,636.91, and a further sum of \$633,276.16 for repairs, renewals, and operation, making a total for the year of \$2,981,913.07.

The total revenue for the fiscal year was \$384,780.53, an increase compared with the net revenue of the previous year of \$43,277.44. The net canal tolls amounted to \$321,627.33, an increase of \$52,788.66, and the rents received to \$44,599.64, a decrease of \$6,914.37.

The total expenditure on canal staff and maintenance, repairs, and renewals, amounted for the year to \$633,276.16, a decrease of \$60,414.81; and the total net receipts amounting, as above, to \$384,780.53, the amount of expenditure in excess of receipts was \$248,495.63, compared with an excess expenditure the previous year of \$354,152.25.

The above figures relate to the *fiscal year* 1896-97, but very voluminous statistics relating to the canal traffic and various commercial statistics for the *season of navigation* of the year 1896 will be found in part V., "Canal Statistics."

The following features of the principal canal traffic during the *season of navigation* of 1896 will be of interest:—

On the Welland Canal, 1,279,987 tons of freight were moved, an increase of 486,625 tons; of which 793,362 tons were agricultural products, an increase of 303,614 tons, and 160,232 tons produce of the forest. 988,718 tons passed eastward and 291,267 westward: 1,243,595 tons were through freight, of which 957,928 tons past eastward through the whole length of the canal.

Canadian vessels carried 341,130 tons of through freight, and United States vessels 902,465 tons.

The total freight passed eastward and westward through this canal from United States ports to United States ports was 653,213 tons, an increase of 183,434 tons compared with the year 1895.

The quantity of grain passed down this and the St. Lawrence Canals to Montreal was 461,049 tons, an increase of 229,558 tons compared with the previous year; of this 77,355 tons were transhipped at Ogdensburg, as against 231,491 tons carried down in 1895, of which 18,987 tons were transhipped at Ogdensburg.

On the St. Lawrence Canals a total of 1,113,690 tons of freight were moved, an increase of 295,462 tons; of which 709,834 were east bound through freight; and

29,334 tons were west bound through freight ; 597,540 tons were agricultural products, and 106,053 tons were forest products.

Three cargoes of grain, aggregating 1,176 tons, were taken down direct to Montreal through the Welland and St. Lawrence Canals.

On the Ottawa River Canals the total quantity of freight moved was 502,046 tons, of which 490,482 tons were produce of the forest, a decrease of 41,602 tons.

On the Chambly Canal 344,935 tons were moved, of which 221,853 tons were the product of the forest, a decrease of 4,344 tons.

On the Rideau Canal 73,307 tons were carried, 46,102 tons being the product of the forest.

On the St. Peter's Canal 65,508 tons were carried, of which 6,332 tons were the product of the forest.

On the Murray Canal 13,056 tons passed and 2,489 tons of this were the product of the forest.

On the Trent Valley Canal 21,145 tons were moved, of which 20,650 tons were the product of the forest.

On the Sault Ste. Marie Canal the total movement of freight was 4,577,399 tons, carried in 5,136 vessels, the number of lockages being 3,042. Of wheat 19,312,877 bushels, and of other grain 6,656,940 bushels were carried ; 1,797,708 barrels of flour, also 2,492,905 tons of iron ore and 30,233,800 feet, board measure, of lumber. The total traffic at this point, accommodated by the two canals, the American and Canadian, amounted to 17,256,423 tons, an increase of 2,188,938 tons, carried in 18,577 vessels, an increase of 593. The total quantity of wheat carried was 63,463,876 bushels, an increase of 17,372,109, and of other grain 27,715,265, an increase of 19,173,055. Of lumber the total was 658,640,000 feet, board measure, a decrease of 52,141,344.

As having an interesting bearing on the question of canal *versus* railway transport of grain from the west, it may be noted that whereas grain and pease passed down to Montreal through the St. Lawrence canals to the extent of 495,868 tons, an increase of 248,348 tons over the previous year, the quantity carried to Montreal via the Canadian Pacific and Grand Trunk Railways amounted to 153,717 tons, an increase of 102,603. The quantity of grain carried to tide-water on the New York State canals was 753,039 tons, an increase of 372,608 tons, while the quantity carried by the railways of the State to tide-water amounted to 3,864,760 tons.

Of the total freight carried by the canals and railways of the State of New York, respectively, the proportion carried by the canals has fallen steadily from 68.9 per cent in 1859 and 47.0 per cent in 1869 to 8.5 per cent in 1896.

The results which may follow on the approaching completion of the enlarged system of Canadian canals, remain to be seen.

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

Department of Railways and Canals.

Every effort is being made by the department to secure the completion of these works to such extent as to admit of their use during the season of 1899.

It has to be observed that the chief engineer lays emphasis on the fact that though the dimensions of the enlarged locks are :—length 270 feet, width 45 feet, with 14 feet of water on the sills, the length of the vessels to be accommodated is limited to 255 feet.

DEEP WATERWAYS COMMISSION.

In 1895, a resolution was adopted by the United States Congress having in view the appointment of a commission to confer with commissioners to be appointed by Great Britain and Canada, for the purpose of inquiry and report as to the feasibility of building a system of canals such as to give communication with the Great Lakes for ocean going vessels. Three commissioners were accordingly appointed by the United States Government to serve without salary, and under an Order in Council dated the 30th of November, 1895, three Canadian commissioners, also unpaid, were appointed, namely, Messrs. O. A. Howland, T. C. Keefer, C.E., and T. Munro, C.E., and an appropriation for expenses was voted by Parliament.

The United States commissioners presented their first report at the close of the year, of which the main portion was embodied in an appendix to the annual report of the department last year.

The United States commissioners regard the project as entirely feasible; and consider that a navigable depth of not less than 28 feet should be provided; that the first work to be undertaken should be the construction of a ship canal at Niagara (Tonawanda to Olcott) and works for controlling the level of Lake Erie, for which they recommend that complete surveys and examinations be made; also for the development of the Oswego-Oneida-Mohawk route, the St. Lawrence-Champlain route, the improvement of the tidal Hudson River, and the improvement of the intermediate channels of the lakes. The cost of these surveys and investigations they estimate as not less than \$600,000, extending over several years. This report, which is most voluminous and instructive and is accompanied by a large number of plans and drawings, was transmitted to Congress on the 8th of January, 1897.

The Canadian commissioners have now made their report, under date the 17th of June, 1897, the main portion of which will be found as an appendix hereto. (Part VII.) It contains a mass of important information as to the increasing commerce of the Great Lakes and other features.

In the same appendix will be found a short extract from a report made by the Chief of Engineers of the United States Army, dated the 13th of July, 1897, covering a comprehensive report on a preliminary examination for a ship canal from the Great Lakes to the River Hudson conducted by Major Symons.

It will be observed from these several reports that whereas the project is pronounced to be perfectly feasible, the only route which can be regarded as beneficial to Canada is that which, following the St. Lawrence and Lake Champlain route, would afford both Montreal and New York whatever advantages might accrue from its execution. The opinion of Major Symons, however, is adverse to the undertaking, in any

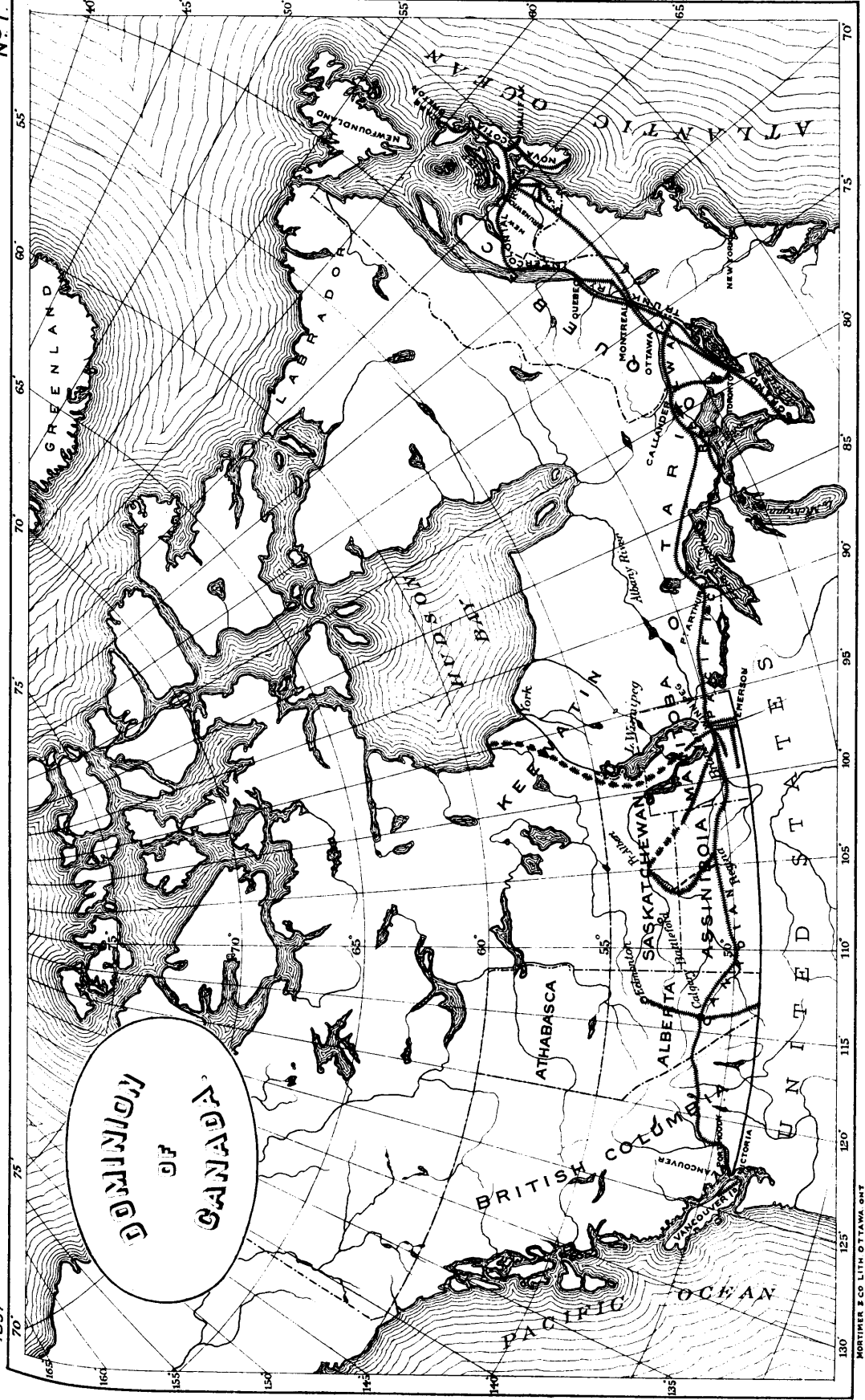
form. The cost of construction he estimates at \$200,000,000, and the cost of maintenance and operation at \$2,000,000 a year. He considers that the construction of such a canal is not a project worthy of being undertaken by the General Government, as the benefits to be derived would not be commensurate with the cost. He favours rather the enlargement and improvement of the Erie Canal to a size sufficient to accommodate 1,500 ton barges, giving a continuously descending canal from Lake Erie to the River Hudson. The cost he approximately estimates at one-fourth of the cost of a ship canal.

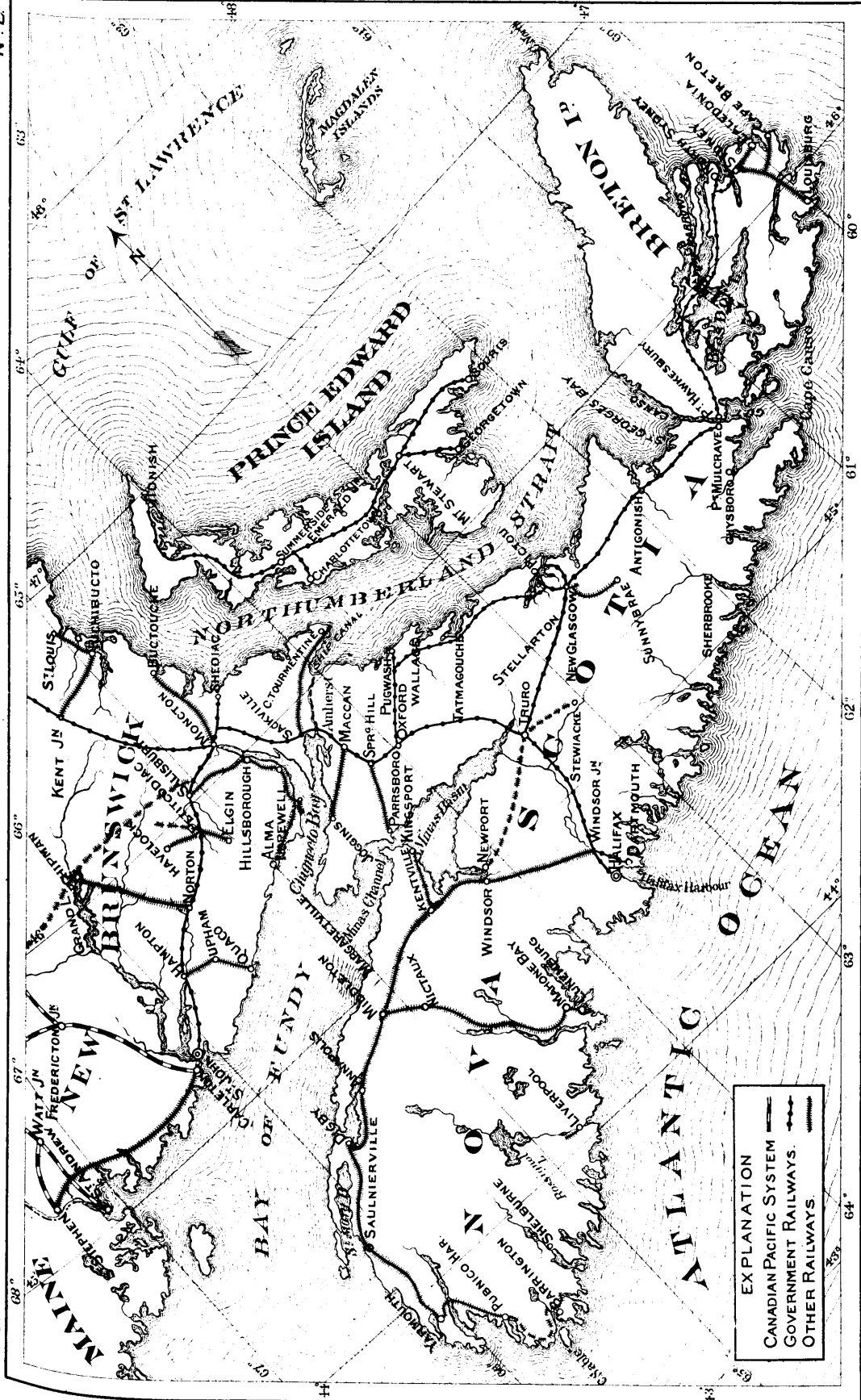
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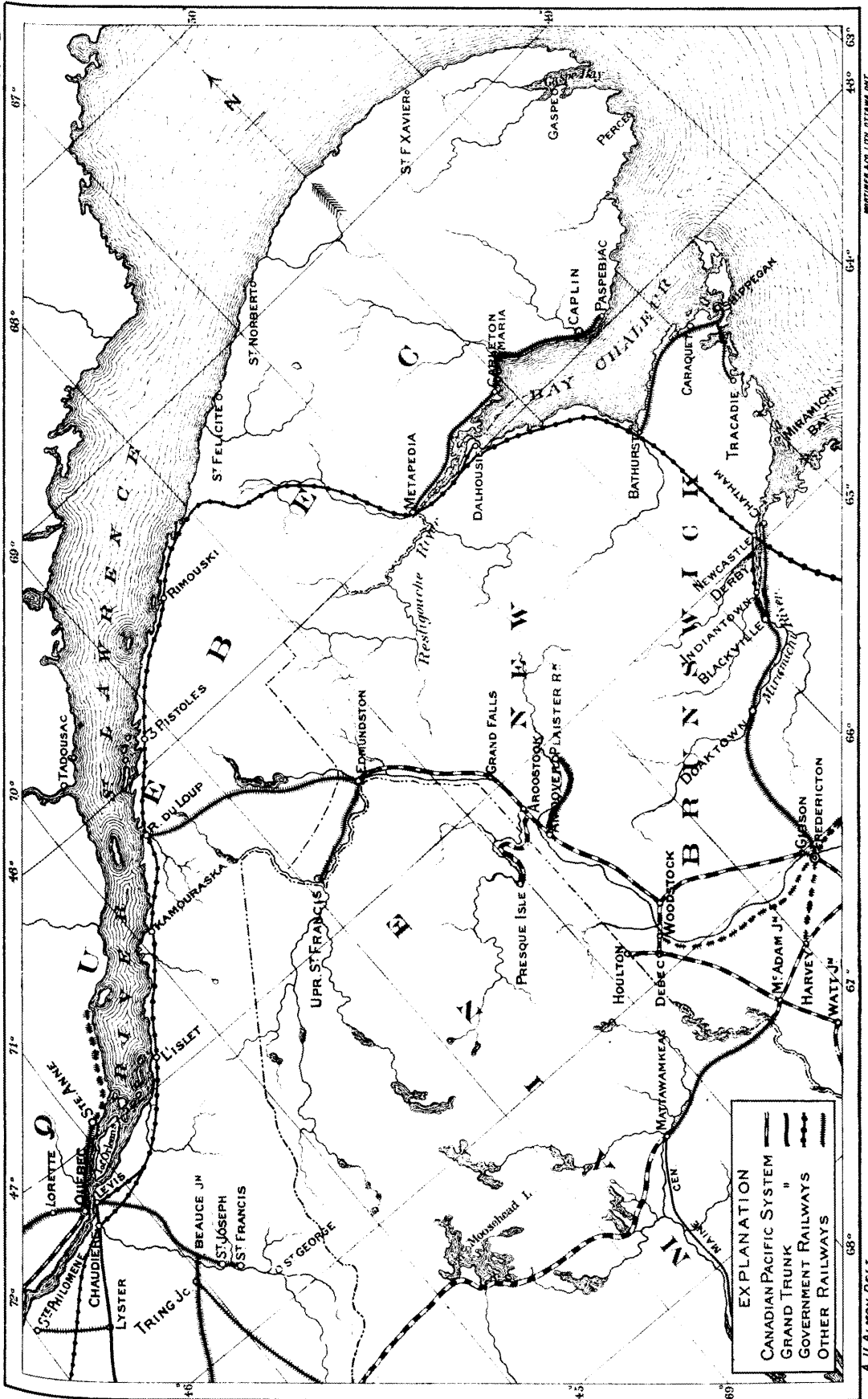
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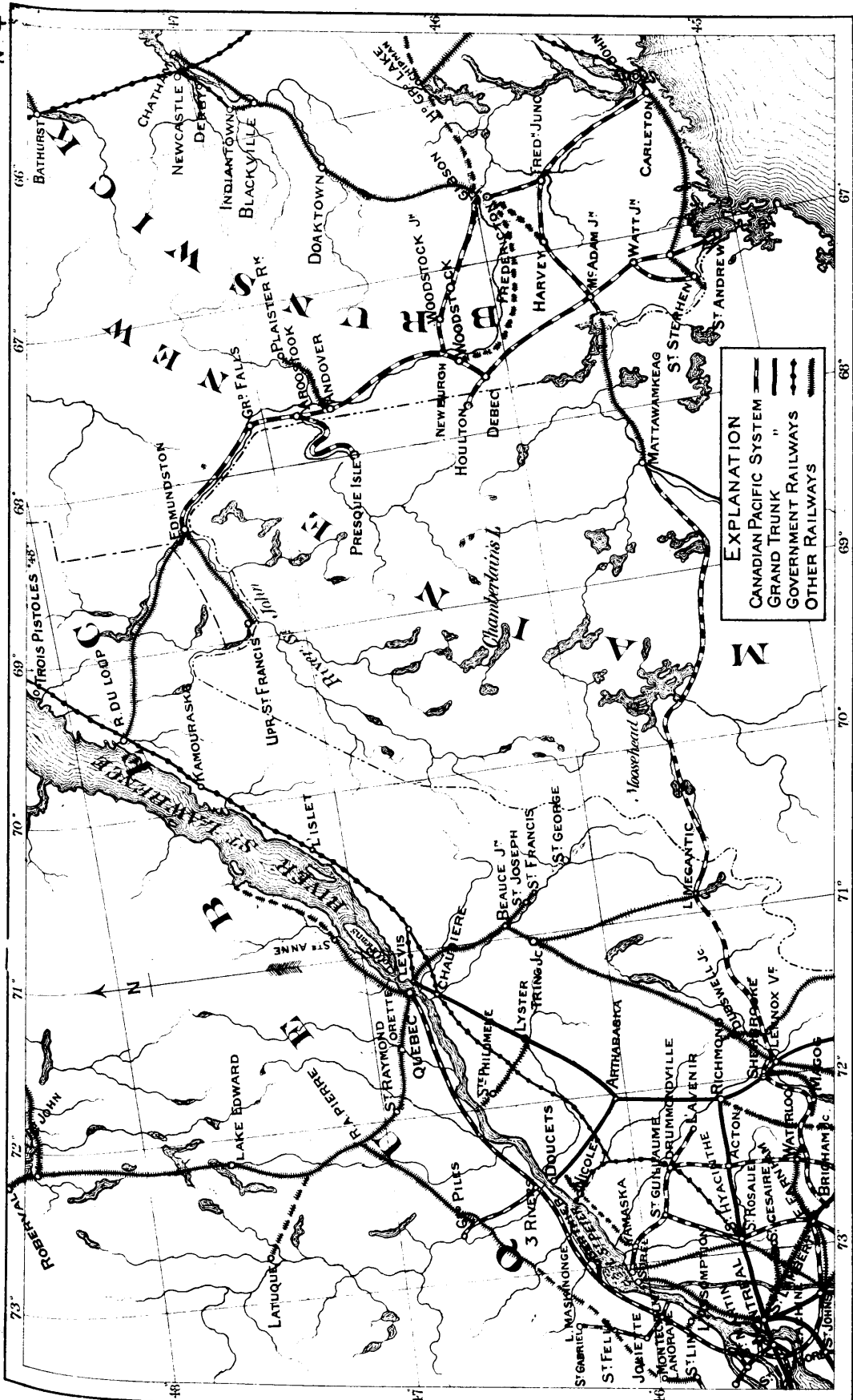
Your obedient servant,

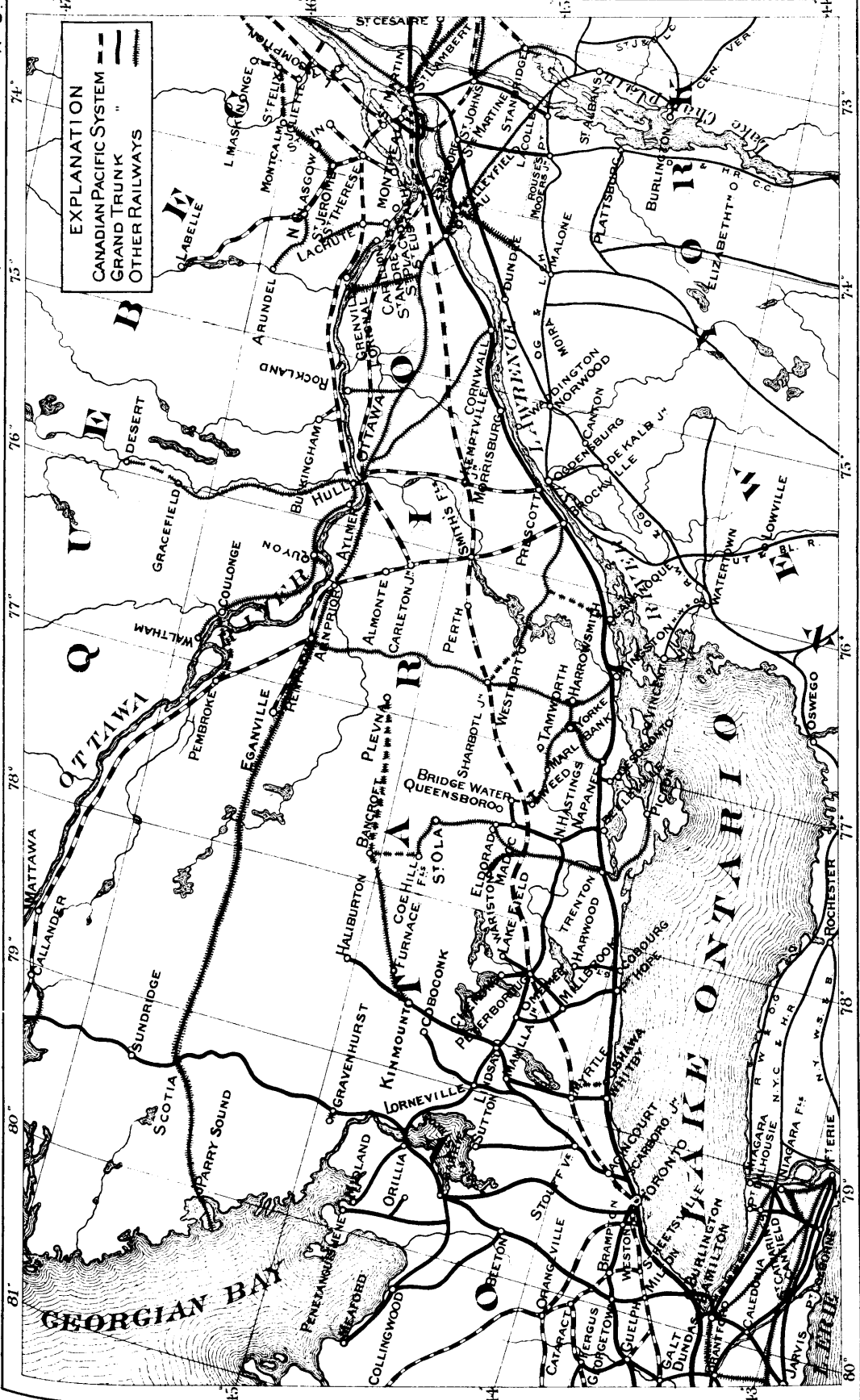
COLLINGWOOD SCHREIBER,
Deputy of the Minister of Railways and Canals.

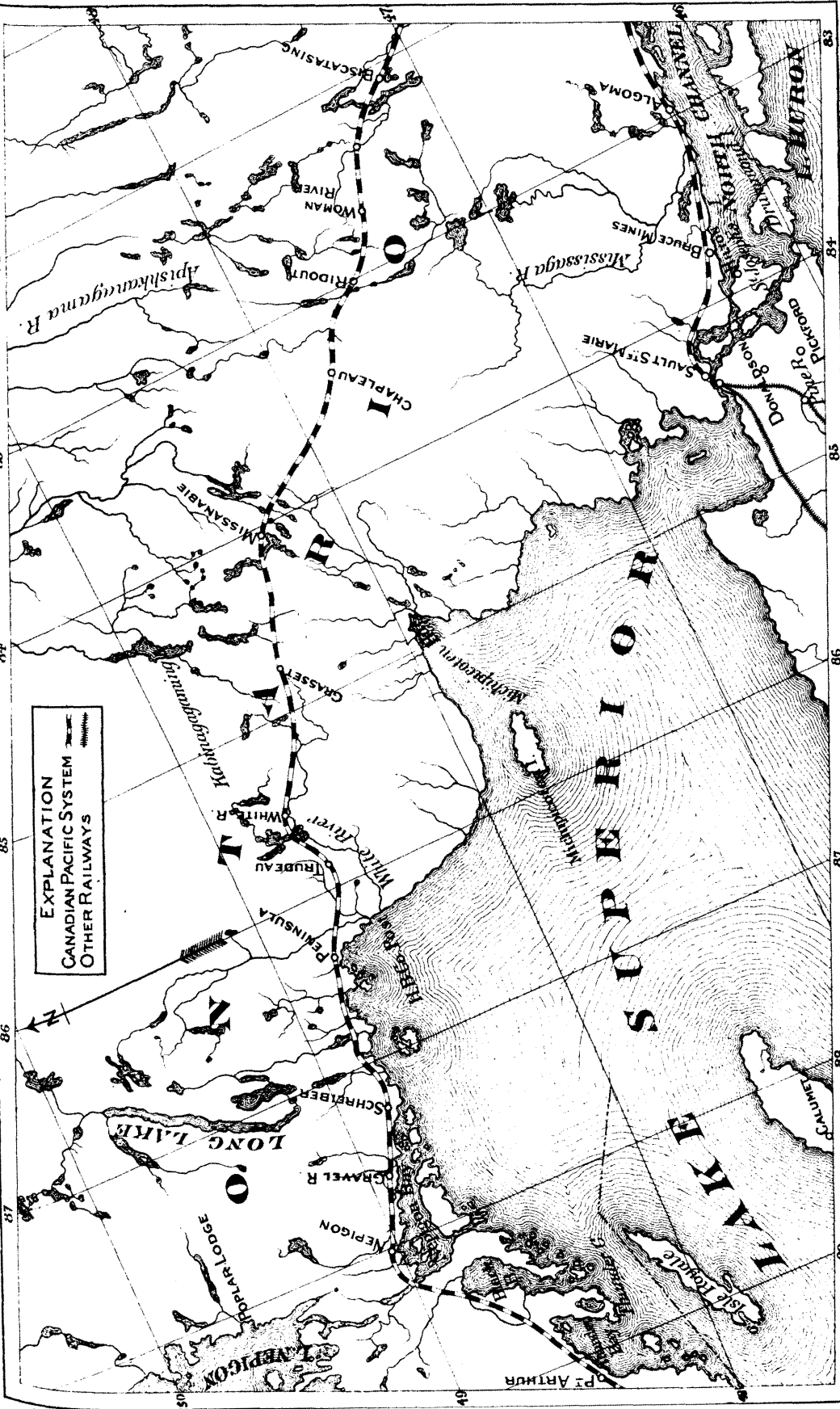




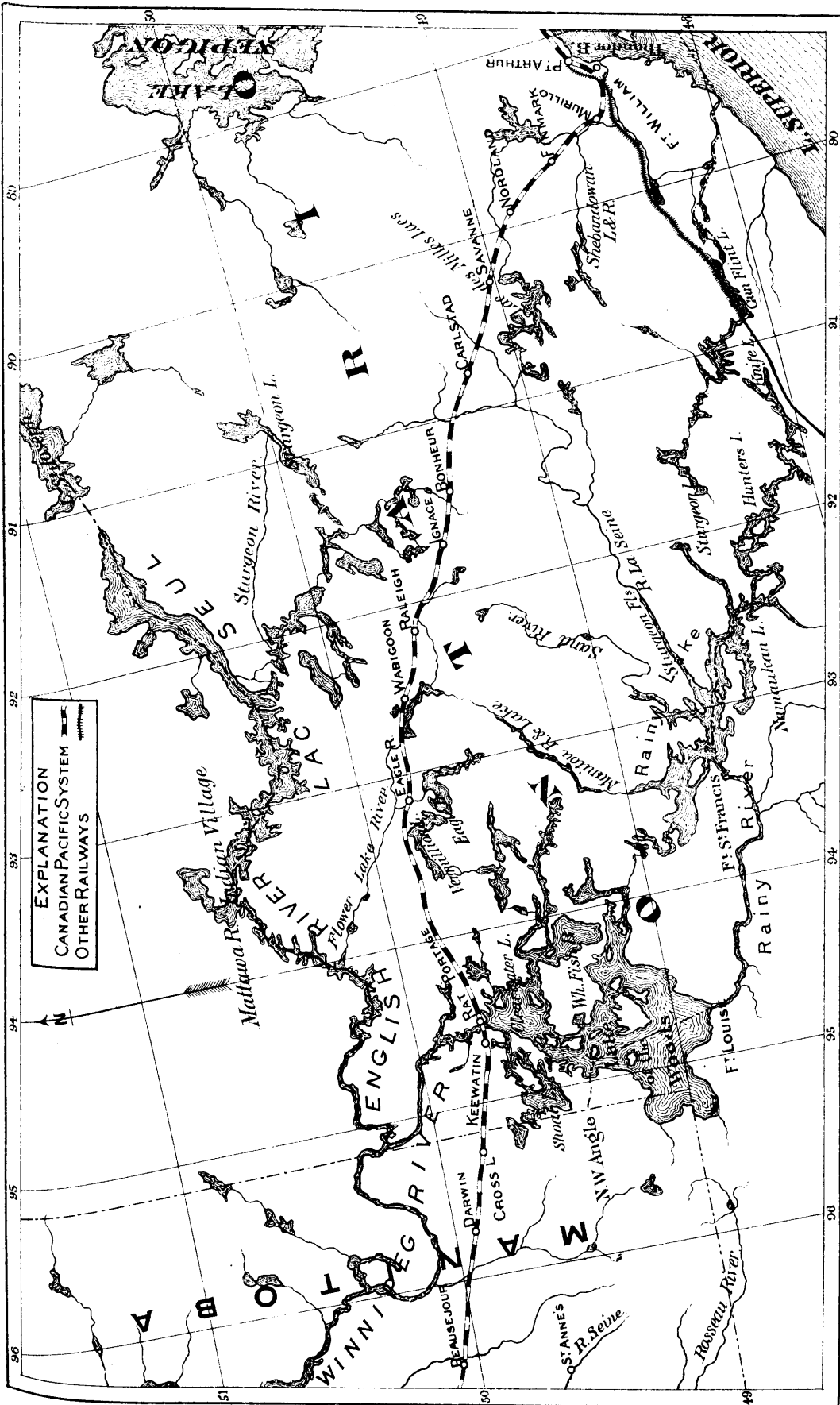


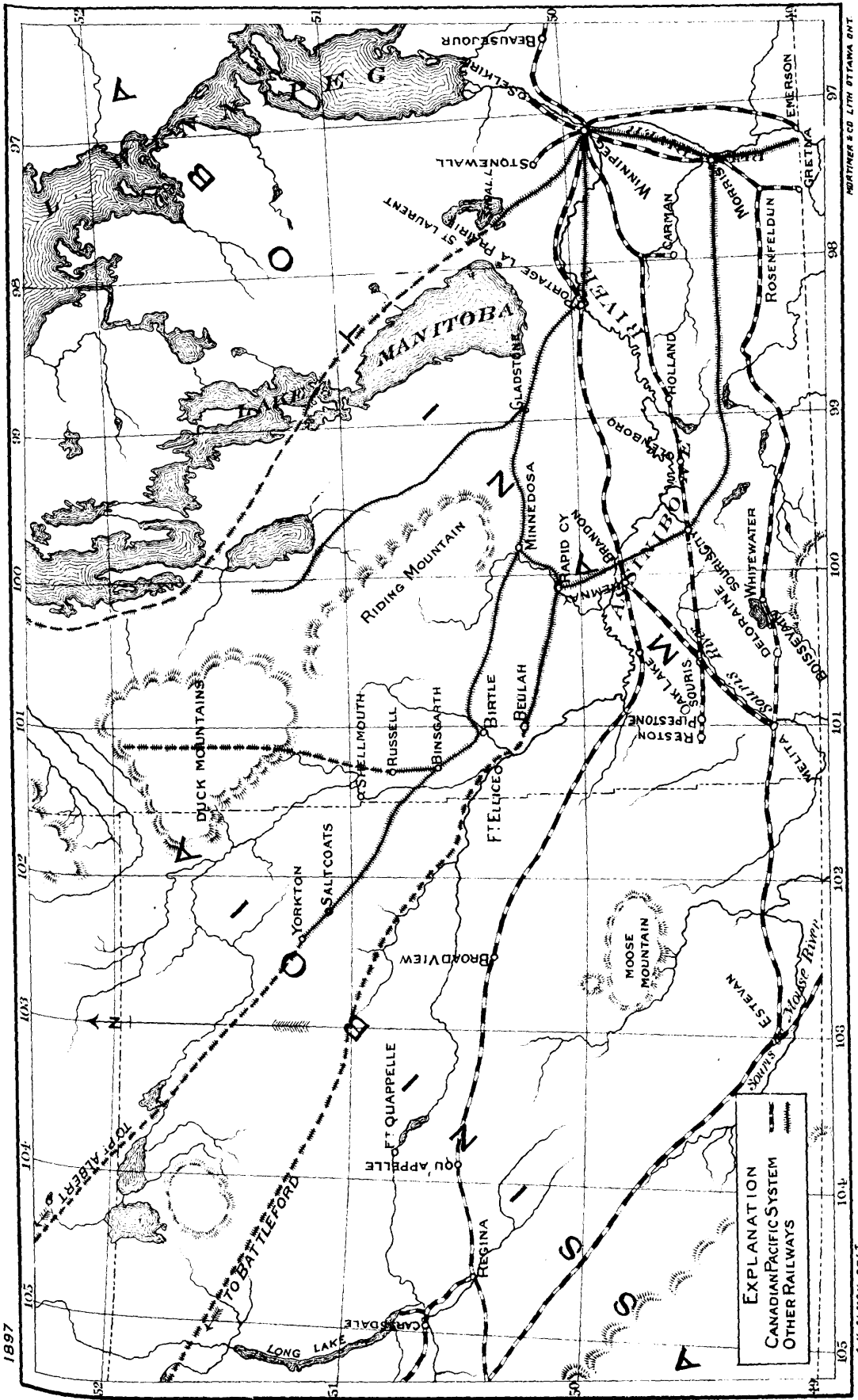


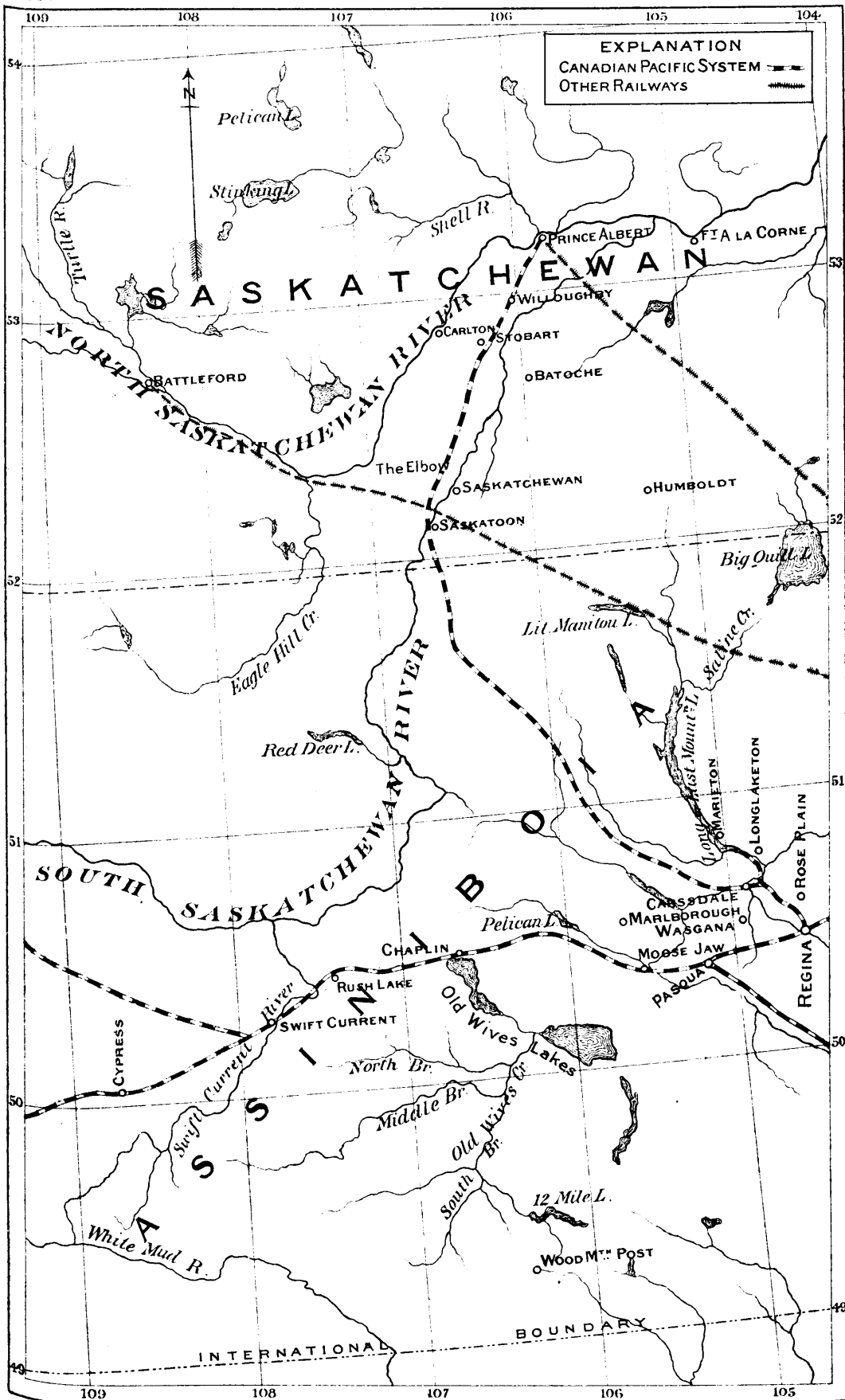


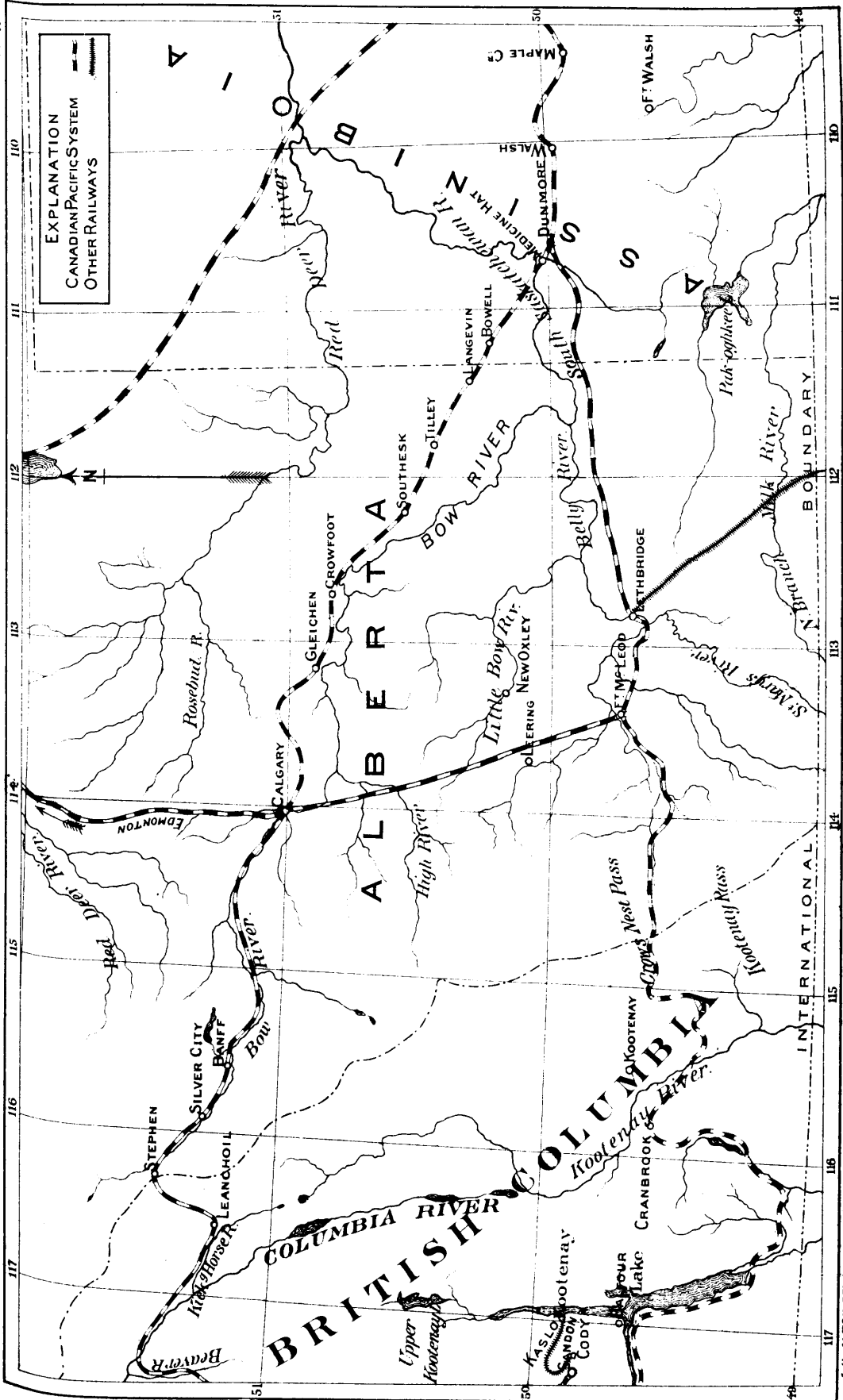


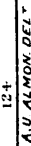
EXPLANATION
CANADIAN PACIFIC SYSTEM
OTHER RAILWAYS

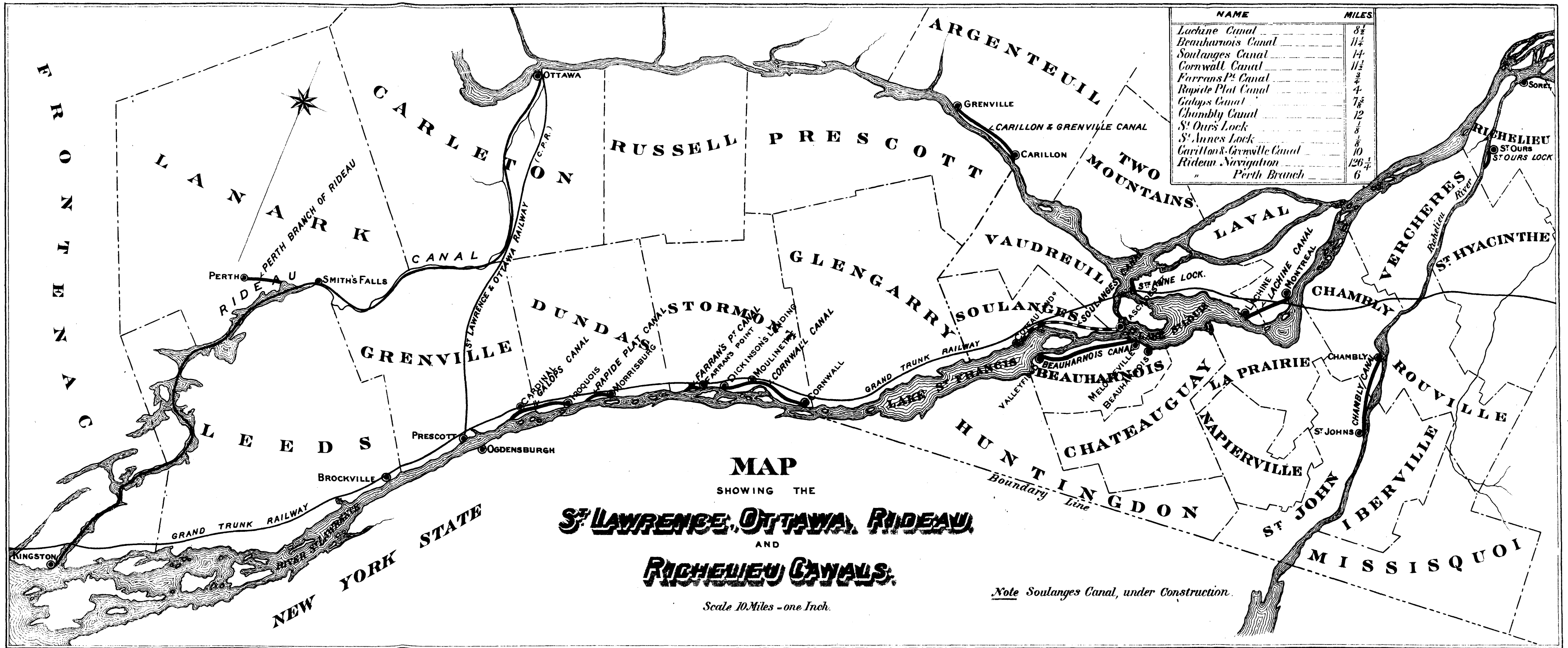


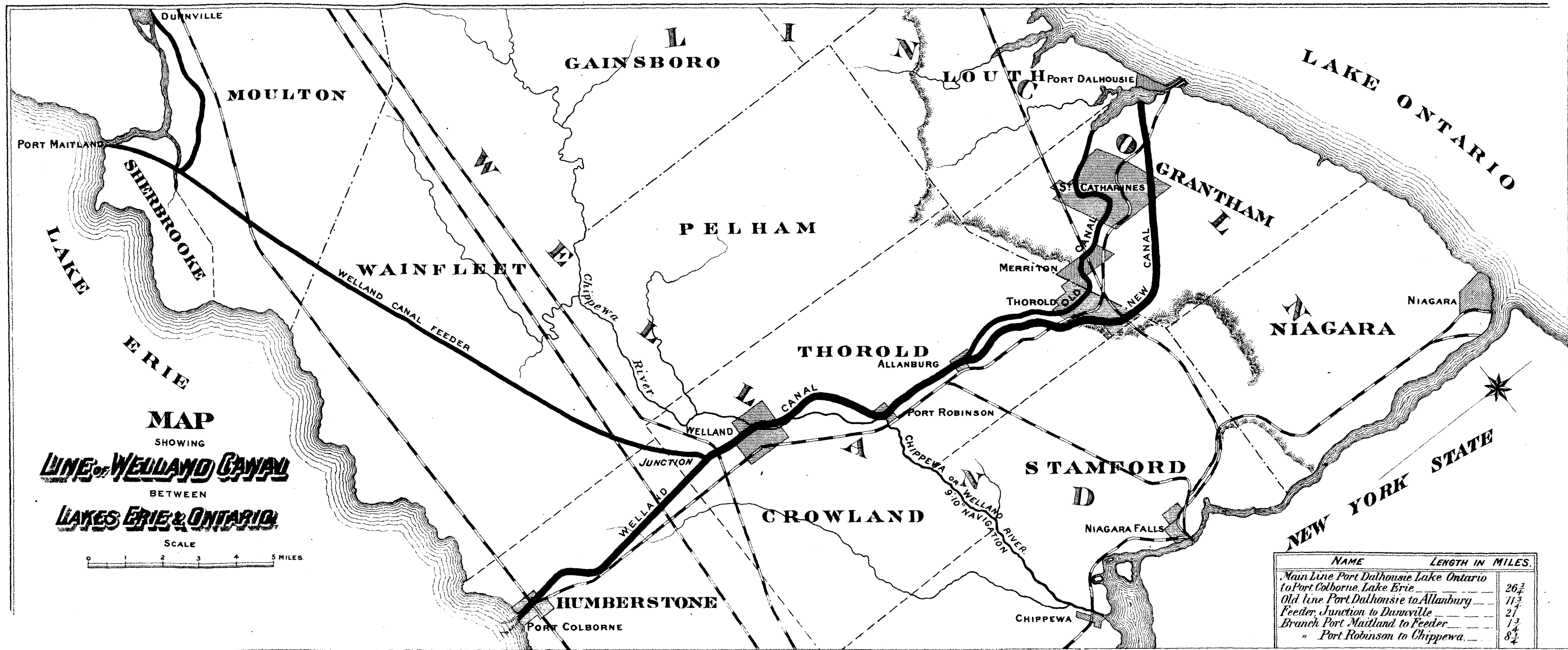


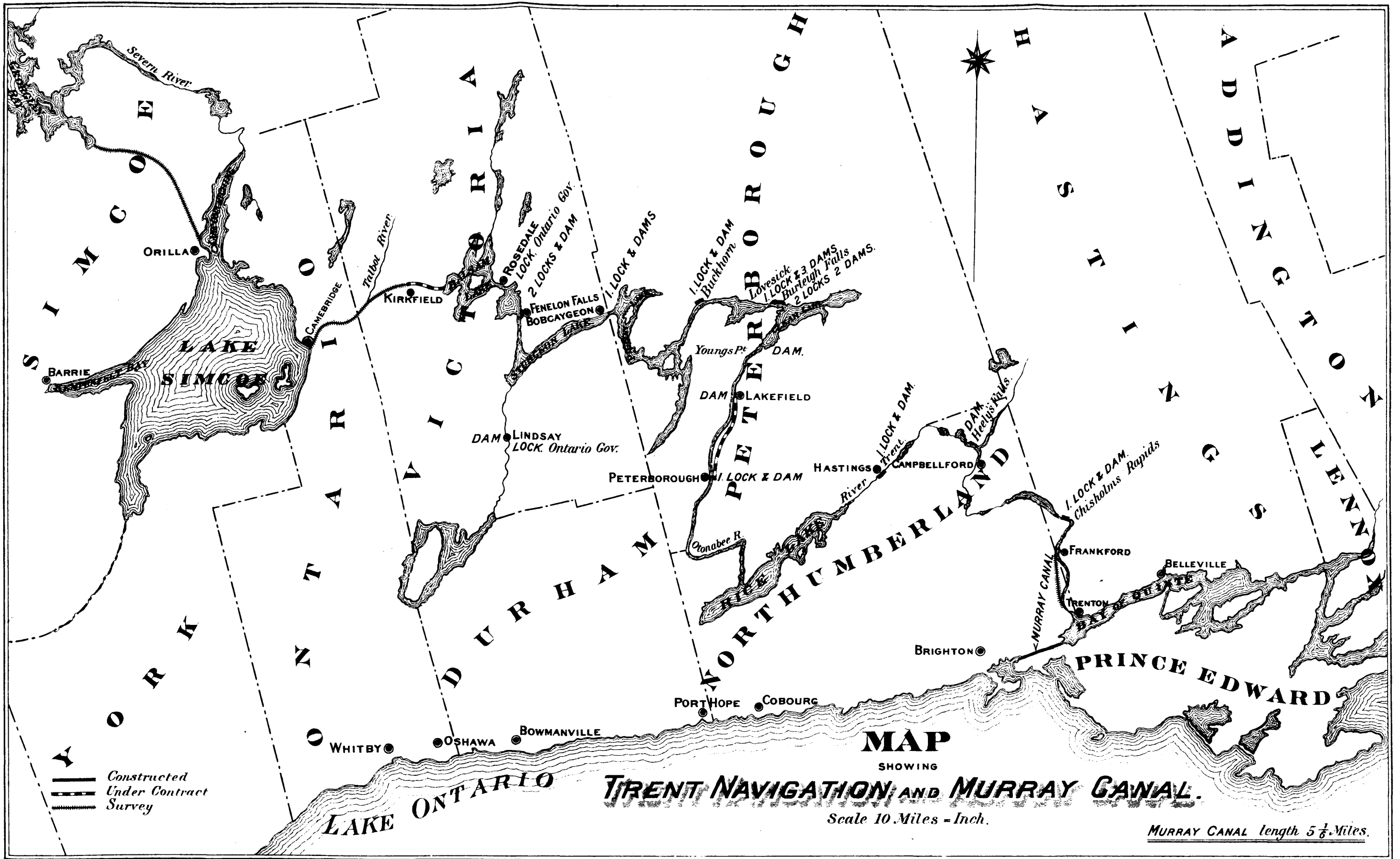


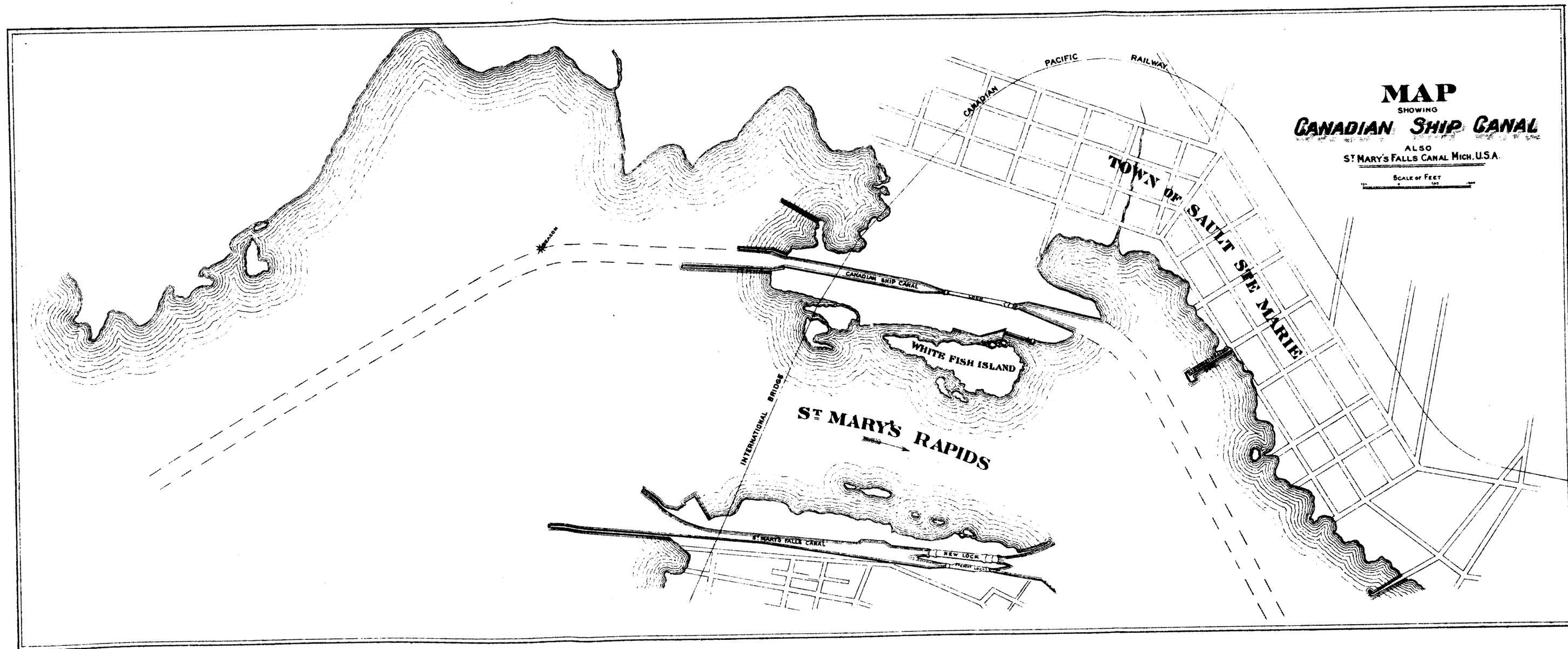












Department of Railways and Canals.

PART I

SKETCH MAPS OF DOMINION RAILWAYS AND CANALS

ALSO INFORMATION AS TO

TRANSCONTINENTAL RAILWAY COMMUNICATION AND AS TO
ROUTES OF CANAL NAVIGATION

AND

REPORT OF THE CHIEF ENGINEER

COMPRISING REPORTS OF

GENERAL MANAGER OF GOVERNMENT RAILWAYS AND SUPERINTENDENTS OF CANALS

ALSO

DECISIONS OF THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL

Department of Railways and Canals

CANADIAN TRANSCONTINENTAL RAILWAY COMMUNICATION.

HALIFAX OR ST. JOHN TO MONTREAL.

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

Intercolonial Railway Route—

	Miles.
By Intercolonial Railway to Point Lévis.	675
Grand Trunk Railway to Montreal.	173
	— 848

(Or by ferry across the St. Lawrence to Quebec, thence
by North Shore Railway, C.P.R., also 173 miles.)

Canadian Pacific Railway Route—

By Intercolonial Railway to St. John, N.B.	275
New Brunswick Railway and Maine Central Rail- way to Mattawamkeag.	146
Canadian Pacific Railway to Montreal.	334
	— 775

Grand Trunk Railway Route—

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

Témiscouata Railway, Route—

By Intercolonial Railway to St. John, N.B.	275
New Brunswick Railway to Edmundston.	170
Témiscouata Railway to Rivière du Loup.	81
Intercolonial Railway to Lévis.	115
Grand Trunk Railway to Montreal.	173
	— 814

MONTREAL TO THE PACIFIC COAST, CANADIAN PACIFIC RAILWAY.

Trunk Line.

	Miles.
Quebec to St. Martin's Junction (13 miles north of Montreal)	159
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Montreal (at the head of Atlantic Ocean Navigation to St. Martin's Junction)	13
St. Martin's Junction to Callander.....	331
Callander to Port Arthur.....	649
Port Arthur to Red River (opposite Winnipeg)....	428
Red River to Savona's Ferry.....	1,257
Savona's Ferry to the waters of the Pacific Ocean at Port Moody.....	213
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	2,547
Port Moody to Vancouver.....	15
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Total, Montreal to Vancouver	2,906
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This railway was opened for through traffic on the 28th of June, 1886.

INTERCOLONIAL RAILWAY.

The Intercolonial Railway touches six Atlantic Ocean ports, namely Pointe du Chêne, Pictou, Halifax, St. John, Sydney and North Sydney. Connection is made with the Grand Trunk Railway at Chaudière Junction and with the Canadian Pacific Railway at Quebec (by ferry from Lévis).

The total length of the road is 1,142 miles, to which is to be added for freight branches $12\frac{1}{2}$ miles, making a total of $1,154\frac{1}{2}$ miles.

The following are the through distances :—

	Miles.
Lévis (opposite Quebec) via St. Joseph and St. Charles Junction (14 miles) to Halifax.....	675
Lévis to St. John.....	578
Lévis via Truro { to Sydney.....	827
{ to North Sydney.....	820

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

WINDSOR BRANCH.

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

Department of Railways and Canals.

PRINCE EDWARD ISLAND RAILWAY.

LENGTH OF LINE.

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

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

CANALS.

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

1. The River St. Lawrence.
2. The Welland Canal.
3. The Sault Ste. Marie Canal.
4. The Richelieu navigation, from the St. Lawrence to Lake Champlain.
5. The River Ottawa.
6. The Rideau navigation, from Ottawa to Kingston.
7. The Trent navigation.
8. St. Peter's Canal, Cape Breton.

RIVER ST. LAWRENCE AND LAKES.

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

From the Straits of Belle Isle at the mouth of the St. Lawrence to Montreal the distance is 986 miles. From Quebec to Montreal the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, par-

ticularly 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, who in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness incurred. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

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

Montreal has by this work been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access, through the 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, Beauharnois, Cornwall, Farran's Point, Rapide Plat, Galops, Welland and Sault Ste. Marie. Their aggregate length is 71 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 51. This number will be reduced on the completion of the Soulanges Canal.

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 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.*

LACHINE CANAL.

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

The depth of the canal between locks is at present only adapted to vessels of 12 feet draught.

Department of Railways and Canals.

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

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

BEAUHARNOIS CANAL.

Length of canal.....	11 $\frac{1}{4}$ statute miles.
Number of locks.....	9
Dimensions of locks.....	200 feet by 45 feet.
Total rise or lockage.....	82 $\frac{1}{2}$ "
Depth of water on sills.....	9 "
Breadth of canal at bottom.....	80 "
Breadth of canal at water surface.....	120 "

This canal commences on the south side of the St. Lawrence, 15 $\frac{1}{4}$ miles from the head of the Lachine Canal. It connects Lakes St. Louis and St. Francis, and passes the three rapids known, respectively, as the Cascades, the Cedars and the Coteau.

A canal of the dimensions of the enlarged scheme is in course of construction on the north side of the river.

CORNWALL CANAL.

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

The old lift locks, 200 feet by 45 feet, are also available.

From the head of the Beauharnois to the foot of the Cornwall Canal there is a stretch, through Lake St. Francis, of 32 $\frac{3}{4}$ miles, which is navigable for vessels of the size at present in use.

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

WILLIAMSBURG CANALS.

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

FARRAN'S POINT CANAL.

Length of canal.....	$\frac{3}{4}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise or lockage.....	3 $\frac{1}{2}$ feet.
Depth of water on sills at ordinary water level.....	9 "
Breadth of canal at bottom.....	50 "
Breadth of canal at water surface.....	90 "

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

RAPIDE PLAT CANAL.

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

The old lift lock 200 feet by 45 is also available.

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

GALOPS CANAL.

Length of canal	7 $\frac{1}{3}$ miles.
Number of locks	4
Dimensions of locks	{ 2—270 by 45.
	{ 2—200 by 45.
Total rise or lockage	15 $\frac{1}{2}$ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	144 "

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

MURRAY CANAL.

Length between eastern and western pier heads	5 $\frac{1}{6}$ miles.
Breadth at bottom	80 feet.
Breadth at water surface	120 "
Depth below lowest known lake level	11 "
No locks.	

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

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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).....	26	2
Number of locks { lift.....	1	lift 25
{ guard.....	1	guard 1
Dimensions.....	1 lock 200 x 45 1 " 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 45	270 feet x 45 feet.
Total rise, or lockage.....	326¾ feet.	326¾ feet.
Depth of water on sills.....	10¼ feet.	14 "

WELLAND RIVER BRANCHES.

Length of canal—Port Robinson Cut to River	
Welland.....	2,622 feet.
" From the canal at Welland,	
to the river, via lock at	
aqueduct.....	300 "
" Chippawa Cut to River Nia-	
gara.....	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 " 10 inches.

GRAND RIVER FEEDER.

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

PORT MAITLAND BRANCH

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

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

From Port Dalhousie to Allanburgh, 11½ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

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

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

SAULT STE. MARIE CANAL.

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

This canal has been constructed through St. Mary's Island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian territory between Lakes Huron and Superior.

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 :—

The Ste. Anne's Lock,	} Ottawa River Canals.
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.

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

Sections of Navigation.	Intermediate distances.	Total distances from Montreal.
	Miles.	Miles.
The Lachine Canal.....	8½	
From Lachine to Ste. Anne's Lock.....	15½	23½
Ste. Anne's Lock and piers.....	½	23½
From Ste. Anne's Lock to Carillon Canal.....	27	50½
The Carillon Canal.....	¾	51½
From Carillon Canal to Grenville Canal.....	6¼	57¾
The Grenville Canal.....	¾	63¾
From the Grenville Canal to entrance of Rideau navigation.....	56	119¾
Rideau navigation, ending at Kingston.....	126¼	245¾

STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Length of canal.....	⅙ mile.	⅙ mile.
Number of locks.....	1	1
Dimensions of locks.....	190 x 45 feet.	200 x 45 feet.
Total rise or lockage.....	3 feet.	3 feet.
Depth of water on sills.....	6 “	9 “

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

THE CARILLON CANAL.

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

This canal overcomes the Carillon Rapids.

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

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

GRENVILLE CANAL.

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

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

RIDEAU NAVIGATION.

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

Length of navigation waters.....	126½ miles
Number of locks going from Ottawa to Kingston.	{ 35 ascending. 14 descending
Total lockage..... 446½ feet	{ 282½ rise and 164 fall. } at high water.
Dimensions of locks.....	134 by 33 feet.
Depth of water on sills, 5 feet; navigation depth through the several reaches....	4½ feet.
Breadth of canal reaches at bottom.....	{ 60 “ in earth. 54 “ in rock.
Breadth at surface of water.....	80 “ in earth.

PERTH BRANCH.

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

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

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

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

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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 south-west descending level to Kingston, supplied by the Mud Lake system, formerly known as the Devil Lake system, discharging into Lake Openicon.

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

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

RICHELIEU AND LAKE CHAMPLAIN.

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

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

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

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

ST. OURS LOCK AND DAM.

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

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

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

CHAMBLY CANAL.

Length of canal.....	12 miles.
Number of locks.....	9

Dimensions of locks :—

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

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

TRENT CANAL.

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

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

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

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

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

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon Lake south, affords communication with the town of Lindsay, and, through Lake Scugog, to Port Perry, a distance of 190 miles from Trenton.

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

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté, to Nine Mile Rapids		9
“ Nine Mile Rapids to Percy Landing.....	19½	
“ Percy Landing to Heeley's Falls Dam.....		14¼
“ Heeley's Falls Dam to Peterborough.....	51¾	
“ Peterborough to Lakefield.....		9
“ Lakefield to a point across Balsam Lake.....	61	
	<hr/> 132¼	<hr/> 32¾

Total distance, Bay of Quinté to a point across
Balsam Lake..... 165

From Sturgeon Point on Sturgeon Lake, 48¾ miles
from Lakefield, the branch through the town
of Lindsay to Port Perry at the head of Lake
Scugog..... 27½
==

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

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

At Young's Point, 5 miles from Lakefield, the dam between Lake Katchiwannoe and Clear Lake controls the water level through Clear and Stony Lakes up to the foot of the Burleigh Canal. The lock here, it should be observed, is controlled by the Provincial Government.

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

At Buckhorn Rapids, 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 up to Fenelon Falls.

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

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

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

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ST. PETER'S CANAL, CAPE BRETON.

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

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

SOULANGES CANAL.

This work is being constructed on the north side of the River St. Lawrence in place of enlarging the Beauharnois Canal on the south side. It follows a line extending upwards from Cascades Point to Macdonald's Point, near Coteau Landing. The scheme contemplates a canal on a practically straight line, 14 miles long, comprising one guard and four lift locks, overcoming a total rise of $82\frac{1}{2}$ feet. (The number of locks on the Beauharnois Canal, including the guard-lock, is nine.) The dimensions of the Soulanges locks will be those of the enlarged system, namely, length 270 feet, width 45 feet depth of water on sills 14 feet.

Department of Railways and Canals.

CHIEF ENGINEER'S REPORT.

DEPARTMENT OF RAILWAYS AND CANALS,
OFFICE OF THE CHIEF ENGINEER,
OTTAWA, 16th November, 1897.

SIR,—I have the honour to submit my annual report for the fiscal year ended 30th June, 1897, covering, however, works of construction up to the 1st November instant. I had expected to have placed this report in your hands at a much earlier date, but considerable delay occurred in obtaining from some of the officers in charge of work their reports to me; hence it is that I make my report at this late date. Accompanying it are the following :—

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

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

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

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

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

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

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

Eighth.—The canal statistics for the season of navigation of 1896, compiled by Mr. Devlin. (Part V.)

Ninth.—The railway statistics for the year ended 30th June, 1897, compiled by Mr. Ridout from returns prepared by the railway companies. (Part VI.)

The following table shows the length of the Government railways in operation on the 30th June, 1897 :

INTERCOLONIAL DIVISION.

	Miles.	Total miles.
Chaudière Junction to Halifax.....	678	
Moncton to St. John.....	89	
Truro to Sydney.....	217	
Oxford Junction to Pictou.....	70	
Chaudière Junction to Lévis.....	8	
Lévis to St. Charles Junction via Harlaka.....	14	
Dalhousie Junction to Dalhousie.....	7	
Derby Junction to Indiantown.....	14	
Painsec Junction to Indiantown.....	11	
Pugwash Junction to Pugwash.....	5	
Stellarton Junction to Brown's Point.....	12	
North Sydney Junction to North Sydney.....	5	
New Glasgow to Pictou Landing.....	7	
Dartmouth Branch.....	11½	
	<hr/>	1,148½

FREIGHT BRANCHES.

Rivière du Loup Wharf Branch.....	4	
Rimouski do.....	2	
Newcastle do.....	2	
Dorchester do.....	1	
Courtney Bay do.....	1	
Sackville do.....	½	
Stewiacke do.....	1	
Halifax Cotton Factory Branch.....	1	
	<hr/>	12½
Total.....		1,161

WINDSOR BRANCH.

Windsor Junction to Windsor.....	32
----------------------------------	----

PRINCE EDWARD ISLAND DIVISION.

Souris to Tignish.....	168	
Mount Stewart to Georgetown.....	24	
Charlottetown to Royalty Junction.....	5	
Emerald Junction to Cape Traverse.....	13	
Alberton to Cascumpec Wharf.....	1	
	<hr/>	211
Total length of Government railways.....		1,404

Department of Railways and Canals

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

Name of Railway.	Mileage in operation.	—	Amount.	Profit.	Loss.
			\$ cts.	\$ cts.	\$ cts.
Intercolonial Division.....	1,145	Earnings.....	2,866,028 02		
		Working expenses.....	2,925,968 67		59,940 65
Windsor Branch.....	32	Earnings.....	40,603 23		
		Maintenance.....	10,821 04	29,782 19	
Prince Edward Island Division.....	211	Earnings.....	153,443 13		
		Working expenses.....	240,489 90		37,046 77
				29,782 19	146,987 42
Total miles.....	1,388	Deduct profit from loss.....			29,782 19
		Net loss.....			117,205 23

The maintenance of the roads and rolling stock has received careful attention, and both roads and rolling stock continue to be in efficient condition. The business of the Intercolonial, I regret to say, shows no improvement.

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

—	1895-96.	1896-97.
	\$ cts.	\$ cts.
Intercolonial Division.....	2,957,640 10	2,866,028 02
Windsor Branch.....	36,561 83	40,603 23
Prince Edward Island Division.....	146,476 54	153,443 13
Total.....	3,140,678 47	3,060,074 35

Showing a decrease in the gross earnings of \$80,604.12.

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

—	1895-96.	1896-97.
	\$ cts.	\$ cts.
Intercolonial Division.....	3,012,827 62	2,925,968 67
Windsor Branch.....	16,476 46	10,821 04
Prince Edward Island Division.....	225,138 56	240,479 90
Total.....	3,254,442 64	3,177,269 61

Showing a decrease in working expenses for the year, compared with the previous year, of \$77,173.03, which is made up of the following:—

—	1895-96.	1896-97.	Difference.	
			Increase.	Decrease.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Locomotive power	1,047,967 27	1,051,238 89	3,271 62	.....
Car expenses	693,747 00	750,480 08	56,733 08	.....
Maintenance of way and works	890,218 71	737,609 94	.....	152,608 77
Station expenses	411,697 50	413,841 24	2,143 74	.....
General charges	209,748 81	218,435 68	8,686 87	.....
Car mileage	1,063 35	5,663 78	4,600 43	.....
	3,254,442 64	3,177,269 61	75,435 74	152,608 77
				75,435 74
Net decrease				77,173 03

INTERCOLONIAL DIVISION.

The ocean passenger and freight traffic via the port of Halifax shows a small increase for the winter season of 1896-97 as compared with the previous winter season.

COMPARATIVE STATEMENT of ocean-borne passenger business done at the port of Halifax during the winter seasons of 1895-96 and 1896-97.

Name of Steamer.	1895-96. No. of Passengers.			Name of Steamer.	1896-97. No. of Passengers.		
	1st Class.	2nd Class.	Total.		1st Class.	2nd Class.	Total.
Numidian	49	479	528	Mongolian	29	351	380
Salvador	61	491	552	Labrador	96	462	358
Mongolian	25	297	322	Numidian	29	204	233
Vancouver	66	293	359	Vancouver	64	496	560
Laurentian	43	502	545	Laurentian	41	307	348
Parisian	21	493	514	Scotsman	42	251	293
Scotsman	37	570	607	State of Nebraska	4	43	47
State of Nebraska	4	132	136	Parisian	52	453	505
				Siberian		102	102
Total	306	3,257	3,563	Scotia		279	279
				Prussia		471	471
				Total	357	3,419	3,776

Of the 3,563 passengers in 1895-96, 2,197 travelled via St. John by the Canadian Pacific Railway and 1,366 travelled via Chaudière by the Grand Trunk Railway.

Of the 3,776 passengers in 1896-97, 2,993 travelled via St. John by the Canadian Pacific Railway, and 783 travelled via Chaudière by the Grand Trunk Railway.

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COMPARATIVE STATEMENT of ocean-borne freight traffic during the winter seasons of
1895-96 and 1896-97.

Name of line of Steamers.	Winter of 1895-96.			Name of line of Steamers.	Winter of 1896-97.		
	Measure-ment tons.	Weight tons.	Total tons.		Measure-ment tons.	Weight tons.	Total tons.
Allan Line from Liverpool.....	1,121	1,499	2,620	Allan Line from Liverpool.....	1,172	721	1,893
Dominion Line From Liverpool.....	362	401	763	Dominion Line from Liverpool.....	707	263	970
Canada & Newfoundland from Liverpool.....	115	1,138	1,253	Canada & Newfoundland from Liverpool..	6	975	981
Furness Line from London.....	601	717	1,318	Furness Line from London.....	2,191	1,280	3,471
Donaldson Line from Glasgow.....	155	347	502				
Total.....	2,354	4,102	6,456	Total.....	4,076	3,239	7,315

The above statement shows an increase of 859 tons of ocean-borne freight traffic for the winter season of 1896-97 as compared with the winter season of 1895-96.

The following is a statement of the quantity and classes of the rolling stock purchased on capital account up to the 30th June, 1897 :—

	Engines.	Passenger Car Stock.					Conductors' Van.	Box and Cattle Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.	Rotary Snow Ploughs.
		1st Class Sleeping and ParLOUR.	1st Class.	2nd Class Sleeping.	2nd Class.	Baggage and Mail.								
.....	204	15	92	7	94	24	99	2,071	2,209	999	44	10	21	2
.....	...	5	.....	.....	.....	39	.....	103	110	418	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	658	.....	.....	.....	.....
Total.....	204	20	92	7	94	63	99	2,174	2,319	2,075	44	10	21	2

The following is a statement of the quantity and classes of rolling stocks which have been rebuilt during the year ended 30th June, 1897, at the cost of revenue to maintain the work :—

	Engines.	Passenger Car Stock.					Conductors' Van.	Box and Cattle Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.	Rotary Snow Ploughs.
		1st Class Sleeping and ParLOUR.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage and Mail.								
.....	9	.....	.....	.....	.....	.....	.....	110	59	204	.....	.....	1	.....
Total.....	9	.....	.....	.....	.....	2	.....	110	59	204	.....	.....	1	.....

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

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

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

Year.	For the West.		To Local Stations.	Total.
	Via Chaudière.	Via St. John.		
1876-77.....	.....	.....	103,420	103,420
1877-78.....	.....	.....	97,043	97,043
1878-79.....	300	.....	112,232	112,532
1879-80.....	1,097	.....	135,369	136,466
1880-81.....	6,102	4,022	174,483	184,607
1881-82.....	18,015	11,779	218,364	248,158
1882-83.....	12,837	22,206	227,380	262,423
1883-84.....	22,014	19,534	252,014	293,562
1884-85.....	133,440	1,773	213,791	349,004
1885-86.....	171,170	21,150	215,272	407,592
1886-87.....	192,871	27,536	233,178	453,585
1887-88.....	183,704	36,228	309,727	529,659
1888-89.....	160,026	27,923	338,538	526,487
1889-90.....	164,453	25,126	366,967	556,546
1890-91.....	113,996	39,213	344,829	498,038
1891-92.....	35,447	5,918	392,441	433,806
1892-93.....	156,868	3,775	402,653	543,296
1893-94.....	102,273	8,028	367,390	478,691
1894-95.....	67,082	7,865	310,253	385,200
1895-96.....	53,174	9,681	369,708	432,513
1896-97.....	38,395	12,305	331,469	382,172

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

Department of Railways and Canals.

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

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-77.....				1888-89.....	129,725		129,725
1877-78.....				1889-90.....	502,012		502,012
1878-79.....				1890-91.....	148,803	69,534	218,337
1879-80.....				1891-92.....	745,997	519,500	1,265,497
1880-81.....				1892-93.....	155,306	197,669	352,975
1881-82.....				1893-94.....	Nil.	8,026	8,026
1882-83.....	31,011		31,011	1894-95.....	Nil.	Nil.	Nil.
1883-84.....	73,389		73,389	1895-96.....	Nil.	Nil.	Nil.
1884-85.....	300,901		300,901	1896-97.....	Nil.	Nil.	Nil.
1885-86.....	389,122		389,122	Total.....	3,121,167	794,729	3,915,896
1886-87.....	575,880		575,880				
1887-88.....	69,021		69,021				

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

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

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

Year.	Bushels.	Year.	Bushels.
1876-77.....	292,852	1887-88.....	1,219,035
1877-78.....	331,170	1888-89.....	1,526,158
1878-79.....	302,921	1889-90.....	2,610,202
1879-80.....	531,021	1890-91.....	2,890,921
1880-81.....	565,678	1891-92.....	3,776,677
1881-82.....	560,253	1892-93.....	1,514,619
1882-83.....	1,195,601	1893-94.....	1,304,684
1883-84.....	654,673	1894-95.....	1,036,384
1884-85.....	734,902	1895-96.....	1,064,385
1885-86.....	849,800	1896-97.....	1,093,499
1886-87.....	1,018,395		

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

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

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

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

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

Year.	Via Chau- dière to and from the West.	Via St. John to and from the West.	To and from local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.
87 6-77				
87 7-78	14,949		3,405	18,354
87 8-79	21,628		2,643	24,271
87 9-80	21,073		4,952	26,025
88 0-81	15,454		3,334	18,788
88 1-82	21,607		4,168	25,775
88 2-83	24,875		7,911	32,786
88 3-84	19,696		6,533	26,229
88 4-85	22,787		8,405	31,192
88 5-86	13,464		8,216	21,680
88 6-87	16,923		9,811	26,734
88 7-88	41,864		8,878	50,742
88 8-89	17,340		11,481	28,821
88 9-90	9,895		11,730	21,625
89 0-91	9,923		10,764	20,687
89 1-92	9,719	17	23,335	33,571
89 2-93	7,295	100	12,319	19,714
89 3-94	3,023	204	13,455	16,682
89 4-95	6,749	213	10,399	17,361
89 5-96	3,767	314	16,748	20,829
89 6-97	2,654	263	17,239	20,156

The above statement does not include deals, which amounted to 83,100 tons for the year 1896-97.

Department of Railways and Canals.

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

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

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

Year.	Fresh Fish.				Salt Fish.			
	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77.....	530	921	527	1,978	551	1,848	802	3,201
1877-78.....	596	1,015	474	2,085	998	1,644	805	3,347
1878-79.....	471	1,336	817	2,624	988	1,038	1,048	2,974
1879-80.....	519	1,362	453	2,334	1,612	2,238	959	4,809
1880-81.....	498	1,879	920	3,297	2,418	937	1,051	4,406
1881-82.....	475	1,619	957	3,051	4,031	1,066	2,487	7,584
1882-83.....	542	384	393	1,319	3,299	759	1,354	5,412
1883-84.....	838	1,682	412	2,932	1,322	1,143	1,224	3,689
1884-85.....	1,062	1,885	484	3,431	3,563	3,600	1,596	8,759
1885-86.....	1,669	1,645	902	4,216	1,680	2,047	3,376	7,103
1886-87.....	1,278	1,572	2,008	4,858	3,236	569	1,747	5,552
1887-88.....	1,533	1,477	1,031	4,041	2,617	476	1,099	4,193
1888-89.....	2,474	2,000	1,870	6,344	3,070	7,746	2,994	13,810
1889-90.....	2,235	1,787	2,111	6,223	2,449	847	3,288	6,584
1890-91.....	2,029	2,788	1,848	6,665	1,953	1,917	3,236	7,106
1891-92.....	1,367	1,746	547	3,660	1,946	928	1,889	4,763
1892-93.....	1,683	1,875	3,340	6,898	3,262	1,811	2,176	7,249
1893-94.....	1,959	2,192	2,224	6,375	2,921	1,814	2,962	7,697
1894-95.....	2,006	3,726	1,160	6,892	2,075	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

Thirteen and a half miles of the 56-lb. steel rails have been lifted and replaced at the cost of revenue by 1,418 tons of 67-lb. steel rails, and 288,949 ties have been renewed.

CAPITAL ACCOUNT.

Total cost of road and equipment up to 30th June, 1897:—

Road, &c.....	\$47,593,553 30
Rolling stock.....	7,822,603 85
Total	<u>\$55,416,157 15</u>

The new Dartmouth Branch, connected with the Trunk Line at Windsor Junction, a distance of $11\frac{1}{2}$ miles, is completed and in operation.

The increased freight yard and warehouse accommodation provided on the east side of Water street at the deep water terminus at Halifax greatly facilitates the business of the station.

Both the road and rolling stock are in a high state of efficiency.

WINDSOR BRANCH.

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

The road has been maintained in efficient condition.

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

Year.	Miles in Operation.	One-third Gross Earnings.	Proportion of one-third Gross Earnings credited to Line Windsor Junction to Halifax.	Proportion of one-third Gross Earnings credited to the Windsor Branch.	Maintenance Expenses.	Profit.	Lo-s.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1880-81..	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	.....
1881-82..	32	28,461 07	7,407 88	21,053 19	13,099 55	7,953 64	.....
1882-83..	32	32,199 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	7,689 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	33,519 56	9,284 43	30,235 13	28,931 71	1,303 42	.....
1891-92..	32	42,891 23	9,382 38	33,508 85	19,514 37	13,994 48	.....
1892-93..	32	43,901 28	9,585 17	34,316 11	16,889 95	17,426 16	.....
1893-94..	32	41,834 70	8,859 23	32,975 47	17,645 09	15,330 38	.....
1894-95..	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	.....
1895-96..	32	47,456 74	10,894 91	36,561 83	16,476 46	20,085 37	.....
1896-97..	32	54,208 81	13,605 58	40,603 23	10,821 04	29,782 19	.....

Department of Railways and Canals.

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

Total cost of road and rolling stock up to the 30th June, 1897 :—

Road, &c.....	\$3,291,836 38
Rolling stock.....	458,729 00

Total..... \$3,750,565 38

The rolling stock provided on capital account consists of :—

Engines	Passenger Car Stock.				Box and Cattle Car.	Platform Cars.	Conductors' Vans.	Pay Cars.	Snow Ploughs	Flangers
	1st Class Car.	2nd Class Car.	Baggage and Smoking Cars.	Official Cars.						
21	17	13	6	1	175	125	3	1	8	7

Statement of rolling stock rebuilt during the year—1 locomotive, 1 first-class car, 9 box and cattle cars, 8 platform cars, 1 snow plough, 1 flanger.

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

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

Twelve and a half miles of old iron track were renewed with steel rails weighing 50 lbs. to the yard, so that the track now stands :—

	Miles.
Steel rails (50 lbs. to yard).....	139
Iron rails (40 lbs. to yard).....	72

Total length of road..... 211

One thousand tons of 50-lb. steel rails were used for renewing the 12½ miles of track.

The road and rolling stock are in good running condition.

BAIE DES CHALEURS RAILWAY

The Baie des Chaleurs Railway Company having appealed to the Government to take this road over and operate it as part of the Intercolonial Railway, confidently urging that it could be operated on a profit, the Government finally decided to give the scheme a trial by maintaining and operating the road for a few months, commencing on the 26th of December, 1896 ; ceasing its operation, and transferring it back to the Company on the 31st of May, 1897. The length of the road is 79 miles, extending from its junction with the Intercolonial Railway at Metapedia station to Caplin station.

The results of operation for the period named, show :—

Working expenses.....	\$18,679 97
Gross earnings.....	6,725 08
Loss.....	\$11,954 89

The following services entered into the working expenses as given above :—

Cost of clearing snow and ice from track.....	\$4,812 24
Repairing damages done by storm on 28th April, 1897..	1,100 00
	\$5,912 24

The result of these few months of operating the road were such as to discourage the idea of acquiring it and making it a branch of the Intercolonial Railway. Its operation is beyond question, however, a great accommodation to the locality which it serves.

CAPITAL ACCOUNT.

CANADIAN PACIFIC RAILWAY.

I made a trip over the Canadian Pacific Railway from Ottawa to Vancouver, and examined the work done and in course of execution under the arbitrators' award.

On the division between Savona's Ferry and Emory's Bar, the award work is nearly completed, which has given permanency to the character of the road, the alignment also having been greatly improved. The amount of the award has been faithfully and profitably employed.

The total award of the arbitrators in favour of the Canadian Pacific Railway Company was.....	\$579,255 20
The following statement shows the progress made with the work from time to time :—	
Amount of work done previous to date of award, July, 1891.....	\$202,675 20
Amount of work since done :	
From July, 1891, to February, 1892.....	11,966 79
In February, 1892.....	188 15
March ".....	9,160 77
April ".....	16,674 16
May ".....	16,010 86
June ".....	21,696 89
July ".....	21,907 15
August ".....	19,477 77
September ".....	21,182 75
October ".....	22,278 71
November ".....	12,349 29
December ".....	4,772 04
Carried forward.....	\$380,330 53
	\$579,255 20

Department of Railways and Canals.

Amount of work since done :—*Concluded.*

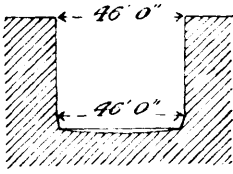
Brought forward.	\$380,330 53	\$579,255 20
January, 1893	6,183 40	
February "	3,873 20	
March "	4,014 85	
April "	10,815 33	
May "	10,445 76	
June "	8,329 18	
July "	6,269 49	
August "	7,889 02	
September "	11,954 28	
October "	9,398 85	
November "	1,920 40	
December "	Nil	
January, 1894	Nil	
February "	84 37	
March "	2,026 64	
April "	6,108 73	
May "	8,455 57	
June "	615 20	
July "	4,702 91	
August "	8,919 75	
September "	6,352 62	
October "	4,932 97	
November "	282 18	
December "	212 06	
January, 1895	Nil	
February "	Nil	
March "	Nil	
April "	390 56	
May "	1,387 77	
June "	4,357 23	
July "	4,689 27	
August "	7,615 10	
September "	8,885 20	
October "	10,832 50	
November "	3,237 63	
December "	777 70	
January, 1896	Nil	
February "	Nil	
March "	860 04	
April "	1,800 84	
May "	4,983 97	
June "	4,141 20	
July "	3,553 80	
August "	3,183 96	
September "	3,173 09	
October "	2,728 39	
November "	826 34	
December "	33 92	
January, 1897		
February "		
March "		
April "		
May "		
June "	49 31	
July "	335 08	
August "	475 51	
		572,445 70
Balance		<u>\$6,809 50</u>

GENERAL REMARKS.

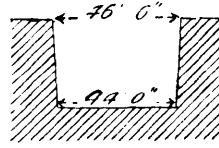
It is only proper here to note that amongst the various works and undertakings of the company for the substantial improvement of their railway in the directions of steel bridge construction, the formation of solid embankments and the adaptation of the most recent appliances to their rolling stock in order to ensure safety and comfort to their passengers and employees, they have now equipped with self couplers 7,589 freight cars, and have fitted 5,056 freight cars with automatic brakes.

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

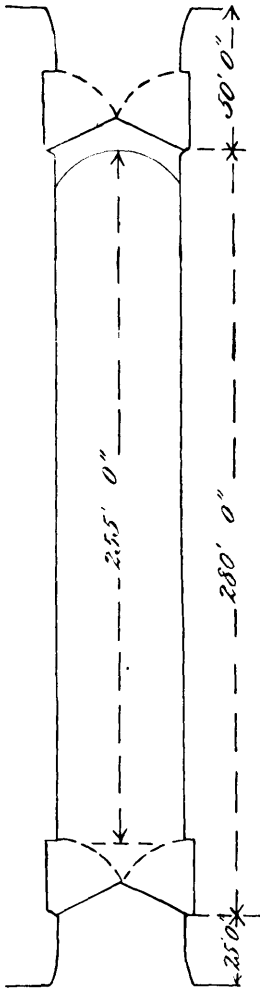
	1886-87. Miles, 4,274.	1887-88. Miles, 4,662.	1888-89. Miles, 4,974.	1889-90. Miles, 5,086.	1890-91. Miles, 5,537.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Earnings.....	10,650,254 08	12,711,010 01	13,016,611 81	15,572,985 62	18,672,174 04
Working expenses.....	7,299,045 16	9,034,360 27	8,997,312 05	9,424,166 45	11,538,133 53
Net revenue.....	\$3,351,208 82	\$3,676,649 74	\$4,019,299 76	\$6,148,819 17	\$7,134,040 51
No. Passengers carried.....	1,949,215	2,135,735	2,457,306	2,685,730	2,971,774
Tons Freight carried.....	2,118,319	2,321,957	2,636,121	3,006,684	3,675,113
	1891-92. Miles, 5,537.	1892-93. Miles, 5,782.	1893-94. Miles, 6,094.	1894-95. Miles, 6,159.	1895-96. Miles, 6,211.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Earnings.....	20,789,104 17	20,795,304 66	19,357,098 05	17,912,273 60	20,175,384 99
Working expenses.....	12,441,126 28	12,665,587 12	12,447,808 03	11,282,506 00	12,202,360 50
Net revenue.....	\$8,347,977 89	\$8,129,717 54	\$6,909,290 02	\$6,629,767 60	\$7,973,024 49
No. Passengers carried.....	3,150,684	3,335,598	3,153,340	2,892,995	3,036,619
Tons Freight carried.....	4,058,575	4,266,348	4,014,915	3,720,567	4,576,632
	1896-97. Miles, 6,314.				
	\$ cts.				
Earnings.....	21,242,638 75				
Working expenses.....	12,576,800 42				
Net revenue.....	8,665,838 33				
No. Passengers carried.....	\$2,987,163 00				
Tons Freight carried.....	4,640,578 00				



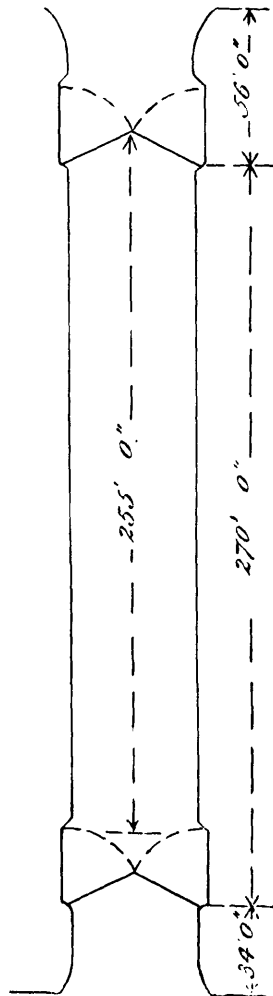
SECTION OF
SOULANGES CANAL LOCK.



SECTION OF
WELLAND CANAL LOCK



SOULANGES CANAL LOCK.



WELLAND CANAL LOCK

Department of Railways and Canals.

CANALS—CAPITAL ACCOUNT.

SAULT STE. MARIE CANAL.

Construction.

Since my last annual report some work of levelling the grounds, completing the superintendent's residence, and other minor works have been done, but there yet remains further work which, if executed, would, I am satisfied, prove advantageous to the operation of the canal, namely :—

1st. The substitution of a swing bridge spanning the entire prism of the canal for the present swing bridge which carries the Canadian Pacific Railway.

2nd. The extension of the entrance piers at both the upper and lower entrance to the canal.

3rd. The dredging off of the angle in the channel at the lower entrance.

All the contracts for the construction of this canal, excepting that of Messrs. Hugh Ryan & Co., are settled for; and the final estimate in their favour, dated 31st July, 1897, has issued but has not been fully paid. A large bill for extras has since been sent in by them, which, owing to pressure of other duties, has not yet received my attention. So far, however, as I am aware, I have embodied in my final estimate all they are entitled to.

The payments on account of the construction and equipment of this canal amounted to :—

Up to the 30th June, 1897.....	\$3,657,573 65
From 30th June, 1897, to 16th November, 1897....	2,885 72
Total	<u><u>\$3,660,459 37</u></u>

SOULANGES CANAL.

Construction.

Since the date of my last report the works on Sections 1, 2, 4, 5, 6, 7 and 12 have been taken out of the contractors' hands, owing, in the case of Sections 1 and 2, to the very slow progress being made with the work and in the case of Sections 4, 5, 6, 7 and 12 to the absolute suspension of the work by the contractor. Preparations are being made for the re-letting of the work for completing Sections 1 and 2, the work having been taken over by the Government in the early part of this month. As regards Sections 4, 5, 6, 7 and 12, tenders were received last spring; the contract for 4, 5, 6 and 7 was awarded to Andrew Onderdonk, and that for Section 12 to M. J. Hogan, two good, reliable contractors, in whom I have every confidence that they will carry out their engagements.

Sections Nos. 1 and 2.—Archibald Stewart, contractor. Owing to representations having been made to the Minister that the stone prepared for the construction of the locks was useless and quite unsuitable for canal work, the contractor was ordered by me, under instructions from the Minister, to suspend the use of this stone, of which some

16,000 cubic yards had been cut ready to place in the work, until the matter could be thoroughly investigated with a view to ascertaining the actual facts. Such investigation was made, with the result that the stone was pronounced to be of excellent quality, and in October, 1896, the contractor was authorized to proceed with the work. It was, however, too late in the season to organize the necessary force, and the season closed without any work having been done. The contractor made a claim for this delay, which, after negotiations, was settled by a payment of \$17,345. It should however here be mentioned that the suspension of the mason work did not prevent the work of breaking stone for concrete being proceeded with, nor did it interfere with the carrying on of the excavation of the prism of the canal, nor with the building of the entrance crib and concrete piers, &c. The season of 1897 arrived, when it was expected the contractor would go energetically to work, to complete his contract by the 31st October, 1898, as called for by a notice sent him, in March last, by me. However, little progress was made with the work, and in June, I served him with a notice that if he did not proceed with greater vigour within six days, the work would be taken out of his hands; the Minister, however, not desiring to act in any way harshly, deferred further action in the matter; still the contractor, though, with apparent sincerity, promising from time to time to increase his force and plant to enable him to carry the work to completion within the required time, for some unexplained reason made no improvement. Not a stick of timber was laid in the crib approach piers, nor was a yard of excavation done until about the middle of October last, when the steam shovel was started, but from want of rolling stock and rails, was not properly served; it therefore excavated only about 250 to 300 cubic yards a day, instead of at least 1,000 cubic yards. On the 14th October, I served him with another notice, and on the 6th of November instant, an Order in Council was passed taking the works out of his hands. At this time, the favourable working season was about closing. However, with a view to an early resumption of the building of the locks next spring, it was necessary that the delivery of sand and cut stone for the masonry, and the breaking of stone for the concrete, should be pushed forward vigorously, and these services are therefore being carried on by days labour until such time as the re-letting of the work takes place. I may here mention that the walls of Lock No. 1 are carried up to within about 14' 6" of the top, and at Lock No. 2 the first course of masonry is laid. It is due to the contractor that I should mention that this lock work, which was very nearly all built by him, is strong, substantial and of excellent quality, satisfactory both as to the workmanship and material, the walls being of massive masonry, of large sound stone, and well mixed concrete, such as no fault can be found with. The only complaint has been as to the slow progress made, which was such that, if continued, it would take several seasons to complete the work.

The approximate value of work under contract is \$ 820,000

Gross amount of progress estimates up to 1st Nov., 1897 516,935

Balance \$ 303,065

Section No. 3.—Messrs. O'Leary Brothers, contractors.

The work on this section was composed almost entirely of earthwork and stone lining to prism. In addition to this there were the canal piers and abutments of a

Department of Railways and Canals.

highway bridge, a 2' 6" iron pipe culvert under the canal, and fencing. The work has been completed in a most satisfactory manner, and the final estimate is being prepared.

The approximate value of the work under contract is . . . \$	200,000
Gross amount of progress estimates up to 1st Nov., 1897 .	193,853

Balance.	\$ 6,147
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Sections 4, 5, 6 and 7.—Andrew Onderdonk, contractor.

This work was first under contract with George Goodwin, who suspended operations. In consequence the work was taken out of his hands and re-let under competition to the present contractor on 7th April, 1897. The season's work has not been such as could have been desired. At the same time the organization is very good, and the general preparations for the rapid execution of the work next season satisfactory; and I see no difficulty in the work being completed by the opening of navigation in the spring of 1899.

The approximate estimate of work under contract is . . . \$	890,000
Gross amount of progress estimates to 1st Nov., 1897 . . .	391,045

Balance	\$ 498,955
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Section No. 8.—Charles Raynor, contractor.

The work under this contract was close upon completion when a series of small land slides, followed in October ultimo by one of much greater magnitude, occurred, carrying out with it into the centre of the canal, a concrete abutment of a highway bridge containing about 1,100 cubic yards, weighing over 2,500 tons; this it turned up on its side, after forcing it from its position about 40 feet. So solid and strong was this mass of concrete there not a break or a crack appears in it. This casualty will cause some delay in completion of the work. However, there can be no difficulty in having these slides removed, and the contract completed next season. At the same time, it can be readily understood that such mishaps are discouraging to a contractor.

The approximate value of work under contract is \$	300,000
Gross amount of progress estimates to 1st Nov., 1897 . . .	251,295

Balance	\$ 48,705
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Section No. 9.—Messrs. Manning & McDonald, contractors.

The work on this section was practically completed, except the stone lining of the slopes of the prism, which was in progress, when a series of earth slides occurred obstructing the channel. These are being removed, and if no further slides occur, and a sufficient force is employed next season to clean out the prism, this section should be completed by the 1st September.

The approximate value of work under contract is \$	150,000
Gross amount of progress estimates to 1st Nov., 1897 . . .	110,076

Balance.	\$ 39,924
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Section No. 10.—Messrs. Rogers & Taylor, contractors.

The work on this section is drawing near completion, and should, with ordinary energy, be completed by 1st September next.

The approximate value of work under contract is	\$ 280,000
Gross amount of progress estimates to 1 Nov., 1897	253,765
Balance	<u>\$ 26,235</u>

Section No. 11.—Messrs. Poupore & Fraser, contractors.

All mechanical works on this section are completed, and there remains practically only some earth and rock excavation, stone lining, and fencing to be done, which should be completed by the 1st October next.

The approximate value of work under contract is	\$310,000
Amount of progress estimates up to 1st Nov., 1897	271,896
Balance	<u>\$ 38,104</u>

Section No. 12.—M. J. Hogan, contractor.

This contract is composed of earth and rock excavation, stone lining, and fencing. It was first under contract with Messrs. O'Brien & Son, who failed to carry it on, owing to the hard material encountered in the excavation. The work was therefore taken from them, and under public competition, was re-let to George Goodwin, who, after working a few months, ceased operations; and for several years nothing was done. The work was therefore taken out of his hands and placed under contract with M. J. Hogan, who is now carrying it out. He has a large amount of plant on the ground, and his organization and arrangements are such that I have every confidence in his having the work completed by the 1st Nov., 1897, as he is able to take out the rock, of which there are about 120,000 cubic yards, during the winter season.

The approximate value of the work under contract is	\$280,000
Amount of progress estimates to 1st Nov., 1897	66,425
Balance	<u>\$213,575</u>

Section No. 13.—Manning & McDonald, contractors.

There remains considerable work on this section yet to be done, but as these gentlemen are experienced contractors, I have every expectation that the work will be completed next season, including the building of the guard lock.

The approximate value of the work under contract is	\$580,000
Amount of progress estimates up to 1st Nov., 1897	440,763
Balance	<u>\$139,237</u>

Based on the contract prices, the estimated cost of this canal, including land purchases and damages, is	\$5,000,000
Total payments to 1st November, 1897	2,877,548
Balance	<u>\$2,122,452</u>

Department of Railways and Canals

The contractors have been paid as follows up to the 1st of November, 1897.

Poupore & Fraser.....	Sec. 11	\$ 238,450 00
C. H. Raynor.....	do 8	235,100 00
J. & M. O'Leary.....	do 3	189,690 30
Rogers & Taylor.....	do 10	237,846 50
Manning & Macdonald.....	do 9	99,070 00
do	do 13	406,690 00
A. Stewart	Sec. 1 and 2	487,420 00
Andrew Onderdonk.....	Sec. 4, 5, 6 and 7	58,320 00
George Goodwin.....	Sec. 11	42,020 00
do	Sec. 4, 5, 6 and 7	281,160 00
do	Sec. 12	8,100 00
M. J. Hogan.....	do 12	19,840 00
		<hr/>
		\$ 2,303,706 80
		<hr/>

LACHINE CANAL.

ENLARGEMENT.

The works of enlargement in progress are :

1. The deepening of the prism of the Lachine Canal between St. Gabriel and Lachine to a depth of 16 feet, which work is under contract with Messrs. McNamee & Mann, excepting a short stretch around the piers of the Canadian Pacific Railway, which is being performed by day labour. These works have been carried on by day and night, and satisfactory advancement has been made ; so much so that there appears to be no room for doubt but that the work will be completed next season.

The approximate value of work under contract is.....	\$595,200
Amount of progress estimates up to 1st Nov., 1897.....	432,224
	<hr/>
Balance.....	\$ 162,976
	<hr/>

LAKE ST. LOUIS.

CONSTRUCTION.

This work is composed of the cutting of a channel 300 feet wide with a depth of 17 feet of water for a distance of about four miles. It is under contract with the Weddell Dredging Co. They have three dredges at work, which have done good service, the work being so far advanced towards completion that there exists no reasonable doubt as to its being completed next season.

The approximate value of work under contract is.....	\$213,400
Amount of progress estimates up to 1st Nov., 1897.....	157,393
	<hr/>
Balance.....	\$ 56,007
	<hr/>

GRENVILLE CANAL.

ENLARGEMENT.

The prism of the canal for a couple of miles was left unfinished when in progress some years ago, and from the falling away of the sides of the prism into the canal, it became so narrow and shallow that navigation grew difficult, and it was considered advisable in the interests of trade to have this portion of the channel cleaned out and widened, to conform to the dimensions of the remaining portion of the canal. Tenders were therefore invited and received; the contract being awarded to the lowest tenderers, Messrs. Pigott and Ingles, who entered into a contract on the 9th of April, 1897. They have so far made very little progress, but it is anticipated that they will go vigorously to work during the winter season, when the canal is unwatered.

The approximate value of work under contract is \$	70,000 00
Gross amount of progress estimates up to 1st Nov., '97	9,208 00
Balance	<u>\$ 60,792 00</u>

TRENT CANAL.

CONSTRUCTION.

The Peterborough-Lakefield division, extending from Peterborough to Lakefield, a distance of 10 miles, is divided for construction purposes into two sections; Messrs. Corry and Laverdure having a contract for the first 3½ miles out from Peterborough, and Messrs. Brown, Love and Aylmer for the 6½ miles to Lakefield.

Section No. 1—Brown, Love and Aylmer, contractors.

These contractors have managed their work very well, three of the concrete locks are completed, and another is commenced; two of the dams are completed and a third is in progress; the road diversions are made, and about three-quarters of the rock cutting at Lakefield is done. I see no reason why this section should not be completed next season.

The approximate value of work under contract is \$	380,000 00
Gross amount of progress estimates up to 1st Nov., 1897	218,478 00
Balance	<u>\$ 161,522 00</u>

Section No. 2—Corry and Laverdure, contractors.

These contractors have made good progress with the work; concrete abutments for a number of highway bridges have been built, and concrete piers and abutment for the Grand Trunk Railway bridge, with approach walls, have been completed. The dam at Warsaw is about half done, and the prism of the canal is pretty nearly completed for over 2½ miles. I see no reason why these contractors should not finish their contract next season.

The approximate value of work under contract is \$	360,000 00
Gross amount of progress estimates up to 1st Nov., 1897	145,712 00
Balance	<u>\$ 214,288 00</u>

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The Rosedale channel is being executed by day's labour. The work consisted of the deepening and widening of the channel, the depth of which was only 3 feet. It has been made 7 feet deep, with a minimum width of 60 feet, the work is just drawing to a close.

The approximate value of the work is	\$ 40,000 00
Expenditure thereon up to 1st November, 1897.....	39,352 00
	<hr/>
Balance	\$ 648 00
	<hr/>

BALSAM LAKE AND LAKE SIMCOE DIVISION.

The distance between Balsam Lake and Lake Simcoe is 21 miles, the first section of which extends from Balsam Lake for a distance of $6\frac{1}{2}$ miles; it is under contract to Andrew Onderdonk, and is very nearly completed. One of the principal features in this piece of work, was a rock cutting about 25 feet deep and a mile long; this is fully completed.

The approximate value of work under contract is.....	\$420,000 00
Amount of progress estimates up to 1st Nov., 1897...	385,855 00
	<hr/>
Balance.....	\$ 34,145 00
	<hr/>

MURRAY CANAL.

No expenditure has been made on capital account on this canal during the year and up to 1st November, 1897.

CORNWALL CANAL.

CONSTRUCTION AND ENLARGEMENT.

The works of the enlargement of the canal from Cornwall to Mille Roches, the building of the Sheik's Island Dam, and the enlargement of the canal from the upper dam to the upper entrance of the canal.

Sections 2, 3 and 4 and the Sheik's Island Dam are under contract with William Davis & Sons: the contracts may be said to be almost completed, the work remaining to be done being the cleaning up of the channel when the water is let out of the canal next spring.

The approximate value of work under contract is.....	\$2,600,000 00
Gross amount of progress estimates up to 1st Nov., 1897	2,577,158 00
	<hr/>
Balance	\$22,842 00
	<hr/>

Sections 5, 6, 7 and 8 were under contract to the Gilbert Dredging Co., who have finished their work.

The approximate value of work under contract is.....	\$510,000 00
Gross amount of progress estimates up to 1st Nov., 1897	499,902 00
Balance	<u>\$10,098 00</u>

Section No. 10.—Upper entrance was under contract to Jocks, DeLorimier & Co. Their contract is completed. The final estimate amounts to \$439,855.00

The total estimated cost of the enlargement of this canal is...\$	4,700,000 00
Amount paid up to 1st Nov., 1897.....	4,508,230 00
Balance	<u>\$ 191,770 00</u>

The contractors have been paid the following amounts, up to 1st Nov., 1897 :

Section 2, William Davis & Sons	\$ 955,413 24
do 3 do	572,396 91
do 4 do	716,167 34
do 5, E. Gilbert & Sons	136,306 73
Sheik's Island, William Davis & Sons	423,202 73
Section 6, E. Gilbert & Sons	47,721 37
do 7 do	96,832 88
do 8 do	215,270 21
do 10, Jocks, DeLorimier & Co.	438,055 86
Total	<u>\$ 3,601,367 27</u>

FARRAN'S POINT CANAL.

ENLARGEMENT.

The work of enlargement of this canal may be said to be the building of entrance piers, a lift lock 800 feet long by 45 feet wide, with a depth of water on the mitre sill of 14 feet, and the straightening and enlarging of the prism. Tenders were invited and received for this work last spring, the contract being awarded to the Canadian Construction Company of Montreal, the contract being dated 1st June, 1897, and to be completed by the 31st January, 1899. These contractors have not had a satisfactory organization or sufficient plant to warrant expectation of the works being completed within the time named, and unless a radical improvement is made before spring opens, it will be my duty to serve them with a six days' notice under the 14th clause of the contract. So far, works on the entrance piers have progressed favourably, but very slow progress has been made with the work of excavation in the prism. The work of excavating for the

Department of Railways and Canals

foundation of the lock has of late made good progress. No stone for the masonry work has yet been delivered, but there is a quantity of stone cut in the quarry at Mille Roches.

The approximate value of work under contract is.....	\$582,000
Gross amount of progress estimates up to 1st November,	
1897	71,775
Balance	<u>\$510,225</u>

RAPIDE PLAT CANAL.

ENLARGEMENT.

The work of enlargement on this canal is completed, with the exception of the cleaning up of the bottom when the water is let out of the canal next spring.

The estimated cost of the enlargement is.....	\$1,660,000
Gross amount of progress and final estimates up to 1st	
November, 1897.....	1,614,881
Balance	<u>\$ 45,119</u>

The contractors have been paid the following amounts up to 1st November, 1897 :—

Section 1—Poupore & Fraser.....	\$ 836,030 00
do 2—Weddell Dredging Co	223,419 80
do 3—Poupore & Fraser	238,050 00
Total	<u>\$1,297,499 80</u>

GALOPS CANAL.

ENLARGEMENT.

The Iroquois Section.—This section extends from Iroquois to Sparrow Hawk Island. Tenders were invited and received for this work last spring; the contract being awarded to the lowest tenderer, Messrs. Larkin & Sangster. The date of contract is the 30th May, 1897, and that of completion the 1st January, 1899. The principal items of work under this contract are crib entrance piers, a masonry lock 800 feet long by 45 feet wide, the forming of water tight embankments, the cutting of a new prism for some distance, the deepening and widening of the old prism at the west end, and the construction of piers and abutments of a highway bridge. These contractors have organized very satisfactorily, and their plant is, I think, sufficient, with due diligence, to warrant the expectation of the contract being so far completed by the opening of navigation in the spring of 1899 as to enable the traffic to be carried on without interruption. The rock in the new prism is stripped, as well as in the lock pit, so that the work of rock excavating can be vigorously prosecuted during the winter season.

The approximate value of work under contract is.....	\$789,920
Gross amount of progress estimates up to 1st Nov., 1897..	153,650
Balance	<u>\$636,270</u>

Cardinal Section.—This section extends from the west end of the Iroquois Section, through Cardinal, to the locks on the upper entrance. This work was put up to tender last spring and the contract was awarded to the lowest tenderers, Messrs. Wm. Davis & Sons. The work consists chiefly of cribwork and excavation, there being about 2,750,000 cubic yards of material to move. This section requires that the greatest activity should be shown, a large amount of plant must be provided, and a complete organization furnished in order that the work may be finished within the time named in the contract. The contractors have their work well organized and a large amount of plant upon the ground, but to complete the work by the spring of 1899 active operations must be carried on both day and night next season.

The approximate value of work under contract is	\$1,100,000
Gross amount of progress estimates up to 1st Nov., 1897..	108,890
	<hr/>
Balance	\$ 991,110
	<hr/>

Upper Entrance Section.—Messrs. Murray & Cleveland, contractors. The work on this section is far advanced towards completion, and should be finished early next summer.

The approximate value of work is	\$1,650,000
Amount of progress estimates up to 1st Nov., 1897..	1,514,940
	<hr/>
Balance	\$ 35,060
	<hr/>

The contractors' names and the amounts paid them up to 1st Nov., 1897, are as follows, viz. :—

William Allan	\$ 193,652
Murray & Cleveland	1,300,777
	<hr/>
Total payments to contractors	\$1,494,429
	<hr/>

GALOPS RAPIDS IMPROVEMENT.

These works remain untouched since my report of last year. Messrs. Gilbert Bros. are, however, preparing to commence operations next spring.

The names of the contractors who performed the work and the amounts paid up to 1st Nov., 1897, are as follows :—

William Davis & Son	\$ 22,000
E. Gilbert & Sons	607,629
	<hr/>
Total	\$629,629
	<hr/>

It is the intention to have this channel cleaned out.

NORTH CHANNEL AT THE HEAD OF THE GALOPS.

This channel is being formed through shoals, reefs, and an island ; the work consists mainly of earth, and rock work, and cribwork.

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The contract for the work was entered into with M. A. Cleveland ; after competition, he being the lowest tenderer. The work is well organized, fully equipped with plant, and matters are in good shape for working during the winter season, it being the contractor's intention to have a large force employed during this winter in excavating rock, which he proposes to do dry, having dammed in about 75 acres along the line of the channel.

The approximate value of work under contract is..... \$393,100

Gross amount of progress estimates up to 1st Nov., 1897.. 45,908

Balance..... \$347,192

ST. PETER'S CANAL.

No work on capital account has been executed on this canal during the year ended 30th June, 1897, nor up to this date.

CANADIAN GOVERNMENT CANALS.

MEMORANDUM of Expenditure on construction up to 1st December, 1897.

Name of Canal.	Expenditure on Construction and Enlargement up to 1st December, 1897.			
	Expenditure on Construction and Enlargement up to 30th June, 1897.			Total Expenditure up to 1st December, 1897.
	Original construction up to 30th June, 1897, and 1st December, 1897.	Enlargement up to 30th June, 1897.	Total Expenditure up to 30th June, 1897.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Lachine	2,589,532 85	7,818,471 89	10,408,004 74	10,474,145 48
Lake St. Louis		127,962 86	127,962 86	154,609 26
Soulanges	2,639,034 61		2,639,034 61	2,992,269 73
Beauharnois	1,611,690 26		1,611,690 26	1,611,700 26
Cornwall	1,945,624 73	4,496,525 31	6,442,150 04	6,521,089 58
Farran's Point	80,041 21	7,833 76	87,874 97	156,523 53
Rapide Plat	426,882 15	1,701,559 24	2,128,441 39	2,194,750 11
Galops	813,732 18	1,664,158 87	2,477,891 05	2,750,970 99
Galops Channel		738,478 54	738,478 54	738,478 54
North Channel				34,521 18
Murray	1,247,470 26		1,247,470 26	1,247,470 26
St. Lawrence River and Canals		405,246 79	405,246 79	1,156,072 64
Welland	7,693,824 03	16,077,811 73	23,771,635 76	23,771,635 76
Sault Ste. Marie	3,649,952 90		3,649,952 90	3,662,249 82
Chambly	637,206 76		637,206 76	637,206 76
Carillon and Grenville	63,053 64	3,968,643 66	4,031,697 30	4,039,964 78
Trent	309,932 81	1,715,422 86	2,025,355 67	2,196,692 46
Rideau	4,094,877 37		4,094,877 37	4,094,877 37
St. Ours	121,537 65		121,537 65	121,537 65
Culbute (canal abandoned)	379,494 46		379,494 46	379,494 46
St. Johns	1,170,215 63		1,170,215 63	1,170,215 63
St. Peter's	248,762 86	399,992 80	648,755 66	648,755 66
	29,722,866 36	39,122,108 31	68,844,974 67	70,755,231 91

CANALS.

OPERATION AND MAINTENANCE.

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

STATEMENT showing the dates of closing and opening canals.

Name of Canal.	Closed.	Opened.
Sault Ste. Marie.....	10th December, 1896.....	21st April, 1897.
Lachine.....	30th November, 1896.....	1st May, 1897.
Beauharnois.....	30th November, 1896.....	1st May, 1897.
Cornwall.....	5th December, 1896.....	1st May, 1897.
Williamsburg.....	5th December, 1896.....	26th April, 1897.
Welland.....	15th December, 1896.....	20th April, 1897.
Chambly.....	30th November, 1896.....	3rd May, 1897.
St. Ours.....	28th November, 1896.....	11th April, 1897.
Ste. Anne's.....	23rd November, 1896.....	27th April, 1897.
Carillon and Grenville.....	28th November, 1896.....	26th April, 1897.
Rideau.....	{ at Kingston.....	28th November, 1896.....
	{ at Ottawa.....	23rd November, 1896.....
		1st May, 1897.
		1st May, 1897.
Trent.....	{ on Central Reach.....	28th November, 1896.....
	{ on Lower Reach.....	26th November, 1896.....
		19th April, 1897.
		13th April, 1897.
Murray.....	3rd December, 1896.....	5th April, 1897.
St. Peter's.....	2nd January, 1897.....	20th April, 1897.

Department of Railways and Canals

STATEMENT showing the dimensions of the locks of the canals.

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

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

LACHINE CANAL.

OPERATION.

There has been no interruption to traffic in this canal during the year, as during the period in which the damage done by the steamer "Princess" was being repaired the old lock was used. The canal has been satisfactorily operated throughout.

MAINTENANCE.

I must refer you to the superintending engineer's report for particulars of the repairs executed.

The cost of these repairs for the year ended 30th June, 1897, is as follows:—

Ordinary repairs under the head of Staff and Repairs...	\$25,820 73
Special repairs under the head of Income :	
Stop logs.....	\$ 2,099 65
Extending electric light along canal and to complete electric light station.....	10,721 52
Providing and planting boundary stones.....	348 03
Roofing and painting sheds at Jacques Basin.	1,495 01 14,664 21
Total	<u>\$40,484 94</u>

BEAUHARNOIS CANAL.

OPERATION.

The traffic was passed through this canal satisfactorily, with the exception of the case of the steamer "Ocean" which ran into and carried away lock gates and stopped the traffic for 28 hours.

MAINTENANCE.

The following is a statement showing the cost of repairs for the year 1896 97 :

The cost of ordinary repairs was as follows:—

Ordinary repairs under head of Staff and Repairs.....	\$14,862 98
Special repairs under head of Income :	
Improving channel at upper and lower entrances.	\$2,844 84
Dredging shoals at entrances.....	3,283 31
Damages to crops by overflow.....	285 00
Replacing copings on 9 locks.....	2,600 00
Changing current of telephone from ground to metallic.....	800 00 9,813 15
Total.....	<u>\$24,676 13</u>

CHAMBLY CANAL.

OPERATION.

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

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.....	\$13,128 55
Special repairs under head of Income:—	
Building rubble wall along highway.....	\$2,487 52
Damages to land flooded by canal.....	350 00
Building culverts at St. Johns.....	9,828 36 12,665 88
Total.....	<u>\$25,794 43</u>

Department of Railways and Canals.

ST. OURS LOCK.

OPERATION.

This lock was worked for the year without accident.

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.	\$ 707 06
There were no special repairs under the head of Income.	Nil
Total	<u>\$ 707 06</u>

STE. ANNE'S LOCK.

OPERATION.

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

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.	\$ 1,688 12
There were no special repairs under the head of Income.	Nil
Total	<u>\$ 1,688 12</u>

CARILLON AND GRENVILLE CANALS.

OPERATION.

These canals were operated successfully, without accident, during the year 1896-97.

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.	\$11,607 95
Special repairs under head of Income :—	
Building 2 pairs of spare gates.	\$2,895 99
Building boom pier, and store.	2,043 21
	<u>4,939 20</u>

Total	<u>\$16,547 15</u>
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TRENT CANAL.

OPERATION.

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

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs..... \$3,497 90

Special repairs under head of Income :—

Building dams at Chisholms.....	\$ 818 71
Removing rock in Hastings Channel...	3,500 00
Building guard booms and piers at Peter-	
borough Swing Bridge.	2,452 05
Dredging channel at Katchewannoe Lake	592 19
Building landing pier at Burleigh	1,997 03
Removing rock in channel at Bobcay-	
geon.....	3,193 02
Providing hoisting engine and boiler...	995 54
Building fishway at Lindsay.....	331 83
	<hr/> 13,880 37

Total..... \$17,378 27

RIDEAU CANAL.

OPERATION.

Owing to the improvements made in the channel, navigation has been attended with no difficulty, and the traffic has been worked satisfactorily.

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs..... \$29,535 94

Special repairs under head of Income :—

Damages to B. S. Snider's mill.....	\$1,000 00
Constructing bridge across By-wash at	
Smith's Falls.....	7,199 51
Completing sheet piling in deep cut,	
Ottawa.....	7,180 94
Dredging Cataraqui River between King-	
ston and Kingston Mills.....	2,701 56
Completing dredging at Merrickville	
and Newboro.....	997 10
	<hr/> 19,079 11

Total..... \$48,615 05

Department of Railways and Canals.

MURRAY CANAL.

OPERATION.

Vessels passed through this canal during the year without accident of any kind. It was closed to traffic on 3rd December, 1896, and reopened on 5th April, 1897.

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.....	\$3,966 41
Special repairs under head of Income.....	Nil.

Total.....	<u>\$3,966 41</u>
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CORNWALL CANAL.

OPERATION.

The canal was closed for the season on 5th December, 1896, and reopened for traffic on 1st May, 1897. This canal was operated during the year without any accident occurring to interfere with navigation.

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.....	\$16,438 32
Special repairs under head of Income.....	Nil.

Total.....	<u>\$16,438 32</u>
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WILLIAMSBURG CANALS.

OPERATION.

These canals were closed to traffic on 5th December, 1896, and opened for the season of 1897 on 26th April, 1897.

These canals have been operated during the year without accident.

MAINTENANCE.

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

Ordinary repairs under head of Staff and Repairs.....	\$8,210 71
Special repairs under head of Income :—	

Farran's Point, dredging prism to original dimensions	\$2,880 00
Iroquois, building new gates lock 25.....	3 60
Completing renewal of entrance pier....	997 16
	<u>3,880 76</u>

Total.....	<u>\$12,091 47</u>
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WELLAND CANAL.

OPERATION.

This canal was closed to traffic on 15th December, 1896, and reopened on 27th April, 1897. The steamer "J. H. Outhwaite" carried away four gates at lock 7 on 21st May, 1897, causing interruption to traffic until noon on 26th May, 1897; with this one exception the navigation was not interfered with.

MAINTENANCE.

The works of repairs necessary on this canal were not fully carried out, owing to the pressure brought to bear by the transportation companies and others to have the canal opened for navigation at such an early date that the canal could not be unwatered last spring to enable the works below water to be carried on.

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

Ordinary repairs under the head of Staff and Repairs... \$41,247 81

Special repairs under head of Income:—

Removing sand bars in Dalhousie and	
Port Colborne Harbours.....	\$3,887 50
Building superstructure of piers at Port	
Dalhousie.....	6,586 90
Rebuilding cement walls of lock 24....	4,345 77
Renewing tow-path bridge.....	3,189 65
Renewing one pair lock gates, &c., lock 7	
(Old canal)	2,150 55
Renewing raceway.....	1,047 18
Renewing swing-bridge at Stromness....	1,075 51
	<hr/> 22,283 06
Total.	<hr/> \$63,530 87 <hr/>

ST. PETER'S CANAL.

OPERATION.

This canal was closed to navigation on 2nd January, 1897, and re-opened on 20th April, 1897. There have passed through the canal during the year 1,612 vessels.

MAINTENANCE.

Some repairs are required on this canal but not of a very costly character. The canal generally is in good repair. The cost of repairs during the year amounted to:

Ordinary repairs under head of Staff and Repairs.....	\$1 20
Special repairs under head of income.....	Nil.
Total.	<hr/> \$1 20 <hr/>

Department of Railways and Canals.

GENERAL OBSERVATIONS RESPECTING GOVERNMENT CANALS.

The same system as regards the supplies and materials obtained is in force as that of last year, namely, their purchase, as a general rule, under tender and contract, and their issue only on requisition by the authorized officer. All transactions in that connection are duly entered in proper books.

Cost of maintenance and operation of canal system for	
1896-97.....	\$633,276 16
Net revenue of canals after deducting refunds.....	384,780 53
	<hr/>
Excess cost of maintenance and operation over revenue	<u>\$248,495 63</u>

RAILWAY SUBSIDIES.

Under the terms of the Subsidy Act of last session it is not possible to show clearly the amount of cash subsidy granted, as the amount of subsidy payable will, in several cases, be based upon the cost of each road. For the same reason, I am unable to give the amount of cash subsidy available, but I shall, as heretofore, show the amount actually paid; also the number of miles of railway in which subsidy granted per mile was available on the 1st of July, 1897, and the number of miles of railway for which cash subsidy per mile was granted, built up to the 30th of June, 1897. There will also be found the amount of subsidy granted up to the 1st of November, 1897.

There also appears a statement of the cash subsidy per annum paid up to the 30th of June, 1897, with the number of miles built; also a statement showing the railways which have been granted aid in land.

Amount of cash subsidy per mile paid up to 30th June, 1897.....	\$14,515,637 33
Number of miles of railway on which cash subsidy per mile was paid up to 30th June, 1897.....	5,401.19
Amount of subsidy paid up to 1st November, 1897....	\$14,586,863 28
Cash subsidy per annum paid up to 30th June, 1897....	\$ 1,492,800 00
Number of miles built on cash subsidy per annum up to 30th June, 1897.....	252
Number of miles of railway to which aid in land has been authorized.	2,937.21
Number of acres of land grant of which in aid of railways has been authorized.....	39,725,130

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

These roads received in cash as follows :—

Canadian Pacific Railway.....	\$25,000,000
Canada Central Railway.....	1,525,250
Esquimalt and Nanaimo Railway.....	750,000
	<hr/>
	<u>\$27,275,250</u>

In land as follows :—

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

CANAL STATISTICS.

These statistics are for the season of 1896 ; they have been prepared by Mr. R. Devlin, the officer in charge of the Canal Statistics office.

TABLE showing the tons of freight passing through each canal, the tolls collected, and the number of trips of vessels passing through each canal, for the year ending 31st December, 1896 :—

Name of Canal.	Tons of Traffic passing through.	Tolls collected.	Number of trips of vessels passing through.
Lachine		\$ cts.	
Beauharnois.....			
Cornwall.....			
Williamsburg.....			
Welland	1,113,690	70,004 24	11,095
Chambly	1,279,987	194,969 33	2,766
Ste. Anne's.....	344,935	24,150 74	2,985
Carillon.....			
Grenville.....	502,046	30,506 56	2,073
Rideau	73,307	5,011 10	2,146
Murray.....	13,056	605 04	608
Trent	21,145	823 62	1,710
St. Peter's.....	63,309	4,711 36	2,239
*Sault Ste. Marie.....	4,577,399	Free.	5,136

RAILWAY STATISTICS.

Great difficulty has been experienced, year by year, in getting out the Annual Report of the Department, owing to many of the railway companies failing to make the returns required by law and taking no notice whatever of the communications addressed to them from time to time, urging them to forward their returns. Again, this year, a few companies are delinquents in that respect, and I have had to close the Railway Statistics returns for the year ended 30th June, 1897, without returns from these roads. Their cases have been placed in the hands of the law officers of the Crown to compel them to comply with the law ; the costs of the suits to be charged against them.

Department of Railways and Canals

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

Year.	Miles in Operation.	Year.	Miles in Operation.
1835.....	0	1867.....	2,278
1836.....	16	1868.....	2,278
1837.....	16	1869.....	2,524
1838.....	16	1870.....	2,617
1839.....	16	1871.....	2,695
1840.....	16	1872.....	2,899
1841.....	16	1873.....	3,613
1842.....	16	1874.....	3,832
1843.....	16	1875.....	4,331
1844.....	16	1876.....	4,804
1845.....	16	1877.....	5,218
1846.....	16	1878.....	5,782
1847.....	54	1879.....	6,126
1848.....	54	1880.....	6,858
1849.....	54	1881.....	7,194
1850.....	66	1882.....	7,331
1851.....	159	1883.....	8,697
1852.....	205	1884.....	9,577
1853.....	506	1885.....	10,273
1854.....	764	1886.....	10,773
1855.....	877	1887.....	11,793
1856.....	1,414	1888.....	12,184
1857.....	1,444	1889.....	12,585
1858.....	1,863	1890.....	13,151
1859.....	1,994	1891.....	13,838
1860.....	2,065	1892.....	14,564
1861.....	2,146	1893.....	15,005
1862.....	2,189	1894.....	15,627
1863.....	2,189	1895.....	15,977
1864.....	2,189	1896.....	16,270
1865.....	2,240	1897.....	16,550
1866.....	2,278		

FATAL ACCIDENTS for Year ended 30th June, 1897.

	Passengers Killed.	Employees Killed.	Others Killed.	Total Killed.
Falling from cars or engines	3	24	12	39
Getting on or off trains in motion	3	3	13	19
At work making up trains	0	3	0	3
Putting heads or arms out of windows	0	0	0	0
Coupling cars	0	6	0	6
Collisions and derailments	1	11	0	12
Striking bridges	0	0	0	0
Walking or being on track	0	12	82	94
Explosions	0	0	0	0
Other causes	0	17	23	40
Total	7	76	130	213

The summary of tables for the years ended 30th June, 1896, and 30th June, 1897, is as follows, viz.:—

	Comparative Statement.	
	30th June, 1896.	30th June, 1897.
Miles of railway completed (track laid).....	16,387	16,687
do sidings.....	2,106	2,218
do iron rails in main line.....	250	210
do steel do.....	16,137	16,477
do do do double track.....	537	550
Capital paid (including the four following items).....	\$899,817,900	\$921,858,232
Government (Dominion and Provincial) bonuses paid.....	\$157,600,100	\$159,241,584
do do loans paid.....	\$21,569,149	\$21,569,149
do (Provincial only) subscription to shares paid.....	\$300,000	\$300,000
Municipal aid paid.....	\$14,494,757	\$15,610,868
Miles in operation.....	16,270	16,550
Gross earnings.....	\$50,545,569	\$52,353,276
Working expenses.....	\$35,042,655	\$35,168,665
Net earnings.....	\$15,502,914	\$17,184,611
Passengers carried.....	14,810,407	16,171,338
Freight carried (tons).....	24,266,825	25,300,331
Train mileage.....	44,500,602	45,780,851
Passengers killed.....	11	7
Number of elevators.....	72	93
do guarded level crossings—public roads.....	166	167
do unguarded do do.....	11,000	11,239
do overhead bridges.....	413	421
do level crossings of other railways.....	235	230
do junctions with other railways.....	326	327
do do branch lines.....	235	219
do engines owned.....	1,980	2,006
do do hired.....	64	90
do sleeper and parlour cars owned.....	178	189
do do do hired.....	26	37
do first class cars owned.....	998	1,047
do do do hired.....	44	38
do second class and immigrant cars owned.....	646	684
do do do hired.....	2	4
do baggage, mail and express cars owned.....	† 625	663
do do do hired.....	25	11
do cattle and box freight cars owned.....	†35,302	†34,939
do do do hired.....	1,489	2,532
do platform cars owned.....	15,192	15,149
do do do hired.....	401	203
do coal and dump cars owned.....	4,810	4,831
do do do hired.....	2	.....

† Comprising 33,585 box freight cars, 300 refrigerator cars, 942 conductors' vans and 112 tool cars.

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

COLLINGWOOD SCHREIBER,

Deputy Minister and Chief Engineer of Railways and Canals.

The Honourable A. G. BLAIR,

Minisier of Railways and Canals.

Department of Railways and Canals.

No. 1.

RAILWAYS.

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE GENERAL MANAGER,
MONCTON, N.B., 12th November, 1897.

SIR,—I have the honour to submit the following report on the working of the Intercolonial Railway during the fiscal year ended 30th June, 1897.

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

- No. 1. Capital account.
2. Revenue account.
3. Locomotive power.
4. Car expenses.
5. Maintenance of way and works.
6. Station expenses.
7. General charges.
8. General stores account.
9. General balance.
10. Comparative statement of averages.

The Dartmouth Branch was opened for traffic on the 22nd June, 1896, and this addition made the mileage of railway in operation during the year 1,145 miles.

CAPITAL ACCOUNT.

The total cost of road and equipment on the 30th June, 1896, by last report, was \$55,267,044.63.

The additions during the year were as follows :—

Increased accommodation	at Halifax	.....	\$ 22,274 97
do	do	at Moncton	..... 29,877 32
do	do	at Pictou	..... 5,000 00
do	do	at Sayabec	..... 796 05
do	do	at Causapscah	..... 686 92
do	do	at Ste. Flavie	..... 1,488 93
do	do	at Lévis	..... 28 20
Original construction		.....	724 09
Dartmouth branch		.....	37,206 44
Indiantown Branch		.....	664 80
Rolling stock		.....	14,996 04
Land and damages in Cape Breton and on Oxford and New Glasgow Railway		.....	7,443 29
Section house at Lakeside		.....	1,453 34
do	at Sacré-Cœur	.....	1,500 00
do	at Henderson's	.....	1,479 96
Station and siding at No Man's Brook		.....	7 02
Extension of freight shed, Truro		.....	1,095 00

Improvements at Sussex, Trenton and Orangedale....	\$	653	46
do Little Metis.....		1,197	82
Wharf improvements at Dalhousie.....		3,026	86
Grading at Rivière du Loup Station.....		1,598	17
Snow fences on Oxford and New Glasgow, Cape Breton and St. Charles Branch Railways.....		6,006	65
Providing wells at stations.....		499	52
Purchasing sluice at Etchemin.....		1,500	00
Water supply at Grand Narrows.....		25	73
Cribwork protection in Cape Breton.....		1,498	28
Coal trestle and shed at Mulgrave.....		58	32
15 hoists in new erecting shop, Moncton.....		400	00
For a tower clock for St. John Station.....		500	00
Loading platform and siding at St. François Station...		349	76
Extension of Halifax Cotton Factory Branch.....		1,839	47
do to deep water at Sydney.....		5	00
do of sidings at stations between Cacouna and St. Valier.....		3,604	07
		<hr/>	
		\$149,485	48
Less Credit St. Charles Branch.....		372	96
		<hr/>	
		\$149,112	52

Making the total cost on the 30th June, 1897, \$55,416,157.15.

Increased accommodation at Halifax.—This expenditure was for the widening of the coal wharf and the erection of a warehouse thereon for steamship freight, also for excavating rock and completing the filling of the cribwork retaining wall.

Increased accommodation at Moncton.—This is for additional machinery for the workshops, and for moving freight sheds, and grading the yard preparatory to the erection of the new passenger station.

Increased accommodation at Pictou.—This is for re-arranging, extending and improving the accommodation for both local and through freight.

Increased accommodation at Sayabec.—This is for building a freight shed and changing the freight room into a passenger waiting room.

Increased accommodation at Causapscal.—This is for building a freight shed.

Increased accommodation at Ste. Flavie.—This is for building a freight shed, providing a waiting room for ladies, and a baggage room.

Increased accommodation at Lévis.—This is for the services of engineer and of valuator in connection with lands there.

Original construction.—This is for legal expenses in connection with old construction claims.

Dartmouth Branch.—This is for a freight shed, a turntable, for building a telegraph line along the branch, and for ballasting.

Indiantown Branch.—This is for legal services in connection with construction claims.

Rolling Stock.—This is for applying the Westinghouse automatic air brake to freight cars. It was applied to ninety-seven box cars and one hundred platform cars. The total number of freight cars now equipped with this brake is one thousand four hundred and eighteen.

Improvements at Little Metis.—This is for the purchase of land, for legal expenses, for rock excavation and for building a covered platform.

Wharf improvements at Dalhousie.—This is for an extension of the wharf at that place.

Grading at Rivière du Loup.—This is for rock excavation to enlarge the space for carriages at the passenger station.

Department of Railways and Canals.

Purchasing sluice at Etchemin.—This was an aqueduct passing over the railway, and as its height above the track was not sufficient it was decided to purchase it and also the rights of the owner, and remove it.

Cribwork protection in Cape Breton.—This is for the construction of additional cribwork where the railway runs along the shore, to protect embankments from damage by the waves of the sea.

St. Charles Branch.—This credit is an amount for land which could not be paid as the whole of the heirs could not be found.

REVENUE ACCOUNT.

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

Working expenses.....	\$2,925,968 67
Gross earnings.....	2,866,028 02
	<hr/>
	\$ 59,940 65

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

In 1895-96.....	\$2,957,640 10
In 1896-97.....	2,866,028 02

Decrease.....	\$ 91,612 08
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The earnings from passenger traffic compare as follows :—

In 1896-97.....	\$ 979,005 57
In 1895-96.....	971,426 26

Increase.....	\$ 7,579 31
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The earnings from freight traffic compare as follows :—

In 1895-96.....	\$1,788,813 18
In 1896-97.....	1,687,050 42

Decrease.....	\$ 101,762 76
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The earnings from the carriage of mails and express freight compare as follows :—

In 1896-97.....	\$ 199,972 03
In 1895-96.....	197,400 66

Increase.....	\$ 2,571 37
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The earnings per mile of railway compare as follows :—

In 1895-96.....	\$ 2,589 88
In 1896-97.....	2,503 08

	<hr/>
	\$ 86 80

The earnings per train mile compare as follows :—

	Cents.
In 1895-96.....	76·97
In 1896-97.....	75·83

The decrease in earnings was entirely in freight traffic.

The number of passengers carried compare as follows :—

In 1896-97.....	1,501,690
In 1895-96.....	1,471,866

Increase.....	29,824
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The increase was entirely in local passengers.

The weight of freight carried compares as follows :—

	Tons.
In 1895-96.....	1,379,618
In 1896-97.....	1,296,028
Decrease.....	83,590

There was an increase of 470 tons in through freight and a decrease of 84,060 tons in local freight.

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

Articles.	1895-96.	1896-97.	Increase.	Decrease.
Barrels of flour.....	822,087	847,701	25,604	
Bushels of grain.....	1,064,385	1,093,499	29,114	
Lumber in superficial feet.....	226,332,715	243,355,725	17,023,010	
Head of live stock.....	64,051	72,082	8,031	
Coal in tons.....	432,513	383,362		49,151
Manufactured goods in tons.....	345,829	313,818		32,011
Cords of firewood.....	12,920	14,971	2,051	
All other articles in tons.....	207,368	152,791		54,577

There was an increase in the quantity of the following articles carried : Flour and meal, grain, potatoes, turnips and other roots, eggs, pork both fresh and salted, leather, lumber, firewood and plaster, and a decrease in the quantity of the following : coal, ore, iron, sand, stone, bricks, lime, cement, hay, straw, sugar, dry goods, hardware and groceries.

WORKING EXPENSES.

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

In 1895-96.....	\$3,012,827 62
In 1896-97.....	2,925,968 67
Decrease.....	\$ 86,858 95

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

Per mile run by engines :—

	cents.
In 1895-96.....	63.90
In 1896-97.....	62.85

Per mile run by trains :—

In 1895-96.....	78.41
In 1896-97.....	77.42

Expenditure per mile of railway :—

In 1895-96.....	\$ 2,638 20
In 1896-97.....	2,555 43

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

The number of ties renewed was 288,949.

Fifty miles of the track were rebalasted

The relaying of the track with new and heavier steel rails weighing sixty-seven pounds to the yard was continued.

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New sidings were laid at various places to accommodate the traffic.

The bridges on all parts of the line received necessary repairs, and one steel bridge was put in near Sussex to replace a wooden one, and between New Glasgow and Mulgrave, three steel bridges were put in, replacing wooden ones.

The fences received necessary repairs, and thirty-four and one-quarter miles of new fences were erected.

The snow sheds and snow fences were repaired, and in many cases rebuilt.

The wharfs at various places received necessary repairs.

The buildings on all parts of the line received necessary repairs, and a new freight house was built at Rivière du Loup to replace a smaller one destroyed by fire.

The necessary repairs were made to existing signals, and a number of new semaphore signals were erected.

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

Nine locomotives were rebuilt during the year, and eighty-four received heavy repairs.

The work of improving the sleeping cars so as to keep them up to modern requirements was continued, and this was also done in regard to other passenger cars. Two baggage cars were rebuilt in the railway shop.

The freight cars received necessary repairs, and three hundred and seventy-three were rebuilt. Of these one hundred box cars and one hundred platform cars were built by contract; and one box car, nine refrigerator cars, nine platform cars, sixteen large coal cars and one hundred and thirty-six hopper cars were built in the railway workshops.

STORES.

The value of stores purchased was.....	\$ 825,350 78
The value of stores used was.....	1,164 448 30
The value of old material sold was.....	125,564 95

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

Ordinary stores including fuel.....	\$ 307,097 44
Iron and steel rails and fastenings.....	271,305 62
Old material for sale.....	60,429 83

Total.....	\$ 638,832 89
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GENERAL.

On the 27th and 28th April, 1897, there was a heavy freshet in the Restigouche and Metapedia Rivers, the water and ice did considerable damage to the railway near Metapedia station, and obstructed the running of trains. For a distance of over one thousand yards the rails and ties were carried off the road bed, and the embankment was washed away to a depth of three feet in some places. At a point four and a half miles west of Metapedia station the water and ice damaged the track for a length of two thousand feet.

About seven hundred rods of fence was also washed away and destroyed.

These damages were repaired at a cost of several thousand dollars.

I have the honour to be, sir,

Your obedient servant,

D. POTTINGER,

General Manager, Government Railways.

COLLINGWOOD SCHREIBER, C.M.G.,

Deputy Minister and Chief Engineer Railways and Canals.

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE CHIEF ENGINEER,
MONCTON, N.B., 9th November, 1897.

SIR,—I have the honour to submit the report of the Engineering Department for the year ended 30th June, 1897.

TRACK.

During the year, $13\frac{1}{2}$ miles of old 4 inch and $4\frac{1}{4}$ inch steel rails, weighing 56 pounds to the yard, have been taken up and replaced with new $4\frac{1}{2}$ inch rails, weighing 67 pounds to the yard.

TIES.

During the year, 285,961 ordinary ties, and 83 sets of switch ties were renewed.

BALLASTING.

About 25,000 cubic yards of ballast have been distributed on about 50 miles of track.

SEMAPHORES AND SWITCHES.

Five new distant signals were put up, and necessary repairs were made to semaphores, switches and station signals throughout the line.

SIDINGS.

During the past year, $1\frac{1}{2}$ mile of additional siding accommodation were provided. Of this, three-quarters consisted of extensions to sidings on the River du Loup division and at Pictou. These latter were constructed at the expense of Capital Account.

FENCING.

Thirty-four and one-quarter miles of new barbed wire and woven wire fence were erected during the past year throughout the line, to replace old pole fence and post and board fence, and to protect the line at points where no fence had previously been erected. Large repairs were made to the old fences.

SNOW SHEDS AND SNOW FENCES.

During the year 256 rods of new snow fence were built on the Central Division and on Northern Division No. 3. Large repairs were made to snow sheds and fences on the Western Division and on Northern Divisions 1 to 5.

WHARFS AND TRESTLES.

At Richmond, the pile approach from the shore was replaced with a wooden crib constructed with old piles and filled with stone ballast.

At the Deep Water Terminus, Halifax, the coal drop on the south of the original wharf was moved out about 50 feet to the face of the extension on south side, so that coal can now be bunkered on either side of this wharf.

The coal shed at Richmond was thoroughly overhauled and partially renewed in pitch pine, including sills, posts, caps and stringers. The approach which was partially

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renewed with pitch pine a few years ago, was completed, so that this shed is now in first-class shape.

At Pictou Landing, three mooring posts were renewed, and other necessary repairs made.

At Mulgrave, the coal trestle was extended 20 feet and other improvements made to facilitate the handling of cars on trestle.

The sheathing on the north corner of Mulgrave wharf was renewed, and other necessary repairs made to the wharf.

Some small repairs were made to Point Tupper wharf, where damaged by ss. "Mulgrave."

Necessary repairs were made to the coal trestles at Spring Hill and Amherst, and to the wharf at Dorchester, also the wharfs at Point du Chêne and St. John.

At Dalhousie, a portion of the floor of wharf was renewed, and other necessary repairs made.

Some temporary repairs were made to the large high level coal shed at St. Charles.

Necessary repairs were made to Princes pier at Hadlow, and heavy repairs were made to the timber crib-work carrying the track between Levis and Pointe Levis.

BUILDINGS AND PLATFORMS.

At Halifax, the outside platforms of North Street station were overhauled and repaired.

At Richmond, the government house, occupied by the mechanical foreman, was overhauled and repaired, and a water supply connected with the city service provided.

The floors of round house were partially renewed, a pair of new doors were provided, and 7 iron hoods of iron smoke stacks were renewed. Necessary repairs were made to machine shops, oil house and other small buildings.

At Bedford, repairs were made to roof, doors, windows, &c., of agent's dwelling. A coal shed for station was provided.

At Windsor Junction, the loading platform was renewed.

At Rawdon River, a new passenger platform, 36 feet long, by 8 feet wide, was provided.

At Elmsdale, the loading platform was overhauled, and repaired.

At Stewiacke, 9 feet of the passenger platform was rebuilt.

At Truro, a hardwood floor was laid in the general waiting room. The station, round house and other buildings received necessary repairs. The spruce platform in front of the freight house was replaced with asphalt at a cost of about \$400.

At Stellarton, new joists and a new hardwood floor was put in the general waiting room. One side of the shingle roof of Stellarton engine house was renewed.

At New Glasgow, at George Street Crossing, a passenger platform 80 feet long by 8 feet wide was provided for the accommodation of mill hands employed at Trenton. Storm sashes were provided, and a number of locks and new springs for the station doors.

At Merigomish, a new leading platform 100 feet long by 16 feet wide, was provided for the shipment of heavy timber.

At Piedmont, necessary repairs were made to the station and other buildings.

At Avondale, a large room 22 by 20, was fitted up over the freight shed for the use of the agent's family.

At Antigonish, the passenger platform was extended 48 feet, and the old platform repaired.

At Marshy Hope, James River, Heatherton, Afton and Bayfield, the necessary repairs were made to the stations and platforms.

At Tracadie, a room similar to that at Avondale, 22 by 20, was fitted up for the use of the station agent.

At Harbour Bouche, the roof of station was repaired, the dwelling apartments of the agent cleaned and papered, and storm sashes provided for windows in dwelling apartments.

At Mulgrave, the rear end of engine house damaged by a locomotive was repaired. The roof and windows were also repaired.

At Boisdale, a new kitchen was provided for the agent.

At Granton, about three miles east of Westville, a new passenger platform 60 feet long by 8 feet wide was erected.

At Sylvester's, the station platform was renewed.

At Roger's Siding, a new loading platform 60 feet long by 20 feet wide was provided for the shipment of lumber sawn at Rogers Mill near by.

At Oxford, the planking of platform was renewed.

At Belmont, the roof of station was re-shingled, and a hardwood floor laid in office.

At Londonderry the station was thoroughly overhauled and repaired. The sills were renewed. Hardwood floors were laid in the waiting room and baggage room.

At Greenville, the roof of station was reshingled.

At Oxford Junction, the passenger platform was renewed and lengthened 80 feet on one side of the station, and 100 feet on the other side.

At Salt Springs, a coal shed was provided.

At Spring Hill Junction, the oil house was moved across the track, the passenger platform was extended 50 feet, and the freight platform was raised 27 inches to provide better passenger accommodation. The old platform was repaired.

At Athol, the kitchen was sheathed, and necessary repairs made to the station and platform.

At Amherst, a watchman's shelter was provided at the main street crossing. Repairs were made to the freight house platform.

At Fort Lawrence, the loading platform was extended and widened 200 feet by 12 feet.

At Aulac, the loading platform was repaired.

At Memramcook, an addition of 100 feet by 10 feet was made to the loading platform, and the top of the old platform was renewed.

Necessary repairs were made to the platforms at Folleigh Lake, Westchester, Sackville, Dorchester, Memramcook and Painsec.

Four tool houses were provided for the section men between Painsec and Truro. They were constructed of abandoned box car bodies.

At Point du Chêne, the station and freight house were thoroughly overhauled and repaired.

At Moncton, the roof of west wing of machine shop was recovered with Sparham cement. The planking of 5½ bays in the old round house, was taken up and replaced with Trinidad asphalt. The planking of the remainder of the bays was partially renewed and repaired. Necessary repairs were made to all other buildings in Moncton yard.

At Salisbury, the dwelling apartments of the agent were overhauled, repaired and papered. They had not been occupied for some time, and were much in need of attention.

At Sussex, one side of the engine house was reshingled. The station and station platform received necessary repairs.

At Apohaqui, a fire in the dwelling apartments of this station burned through the roof, and damaged the building. The necessary repairs were made.

At Rothesay, an addition was made to the freight house to provide accommodation for baggage which obstructed the general waiting room.

At St. John, one side of the train shed roof originally covered with Sparham, was recovered with Rockland slates. The large glass skylights were overhauled and repaired, and many of the galvanized bars supporting the glass were replaced with heavier bars, the old ones being too light. The exterior walls of train shed were overhauled and pointed, and the interior walls cleaned and white-washed. The roofs of car shop and blacksmith shop were reshingled. An addition was made to the offices occupied by the freight clerks, and a private office fitted up for the agent. This involved changes in the gas and heating pipes.

At Berry's Mills, the roof of station was reshingled.

Department of Railways and Canals.

At Birch Ridge, a new flag station and passenger platform were provided in place of those burned by forest fires.

At Gallagher's Ridge, a passenger platform was erected to provide accommodation for new settlers in that vicinity.

At Harcourt, a portion of the roof of agent's dwelling was reshingled.

At Adamsville and Kent Junction, kitchens were fitted up for the agents.

At Barnaby River, a new water closet was provided.

At Chatham Junction, a portion of the roof of freight house was renewed with Sparham cement. The interior walls of waiting rooms were sheathed with pine, it being impossible to keep the plaster good on account of the frost heaving the building. Other necessary repairs were made to the station and freight house.

At Newcastle, a new hardwood floor was laid in the ladies waiting room and also in the agent's office. Two new ventilators were provided for the round house. The Sparham roofs on round house here and on the freight sheds at Millerton and Indiantown received the necessary repairs. Tool houses were provided for sections Nos. 57, 58, 61, 64 and 68.

Necessary repairs were made to all loading platforms and passenger platforms between Moncton and Newcastle.

At Bartibogue, an old box car body was provided and fitted up for a freight shed, the room in the passenger used for that purpose having become too small. Tool houses for sections north and south of this station were also provided.

At Gloucester Junction, 18 storm sashes were provided for the station and dwelling apartments, and the passenger platform partially renewed.

At Bathurst, the brick work of station was overhauled, repaired and pointed. The passenger platform was partially renewed, and the balance repaired.

At Nigadoo, an old box car body was fitted up as a freight house, and the passenger platform renewed.

At Petit Rocher, the station was overhauled, repaired and painted.

At Belledune, the station was repaired and painted.

At Jacquet River, the roof of station was repaired, the platform partially renewed, and the balance of it repaired.

At New Mills, the agent's office was sheathed with planed pine. The station building received the necessary repairs, and a well was provided for the use of the station.

At Charlo, an old box car body was fitted up for a coal shed, and another one for a tool house for the section men. The agent's office was sheathed with pine and 11 storm windows were provided for dwelling apartments. The coal shed was repaired.

At Flat Lands, Millstream, Assametouaghan, Causapsca and Sayabec, the platforms were renewed.

At St. Moise, the roof of freight house was reshingled.

At St. Octave, the roof of kitchen was reshingled.

At Ste. Flavie, necessary repairs were made to the engine house and station platform.

At Rimouski, a gallery was built for the station agent at the rear of the station. The platform was overhauled and repaired, and a number of the doors in station were renewed.

At Bic, the station platform was extended and necessary repairs were made to station. The section house at Bic Mountain was thoroughly overhauled, and repaired at a cost of about \$200.

At St. Simon, 6 storm windows were provided, and necessary repairs made to station and platform.

At St. Eloi, the clapboards were taken off, the walls of station caulked, with oakum, sheathed with paper, and the clapboards replaced and painted. The platform was partially renewed and necessary repairs made to the interior of station building.

At St. Arsène, the platform was partially renewed and necessary repairs made to station.

At Cacouna, the station was overhauled, repaired and painted.

At Rivière du Loup, a new freight house was built to replace the old one destroyed by fire which is longer and wider than the old one. Necessary repairs were made to the machine shop, round house and oil house. A pair of the entrance doors of engine house were renewed.

At Ste. Hélène, an addition was made to the freight house to meet the increased business at that place. A new hardwood floor was laid in the waiting room.

At River Ouelle, the station platform was renewed, and the necessary repairs made to the station.

At St. Philippe de Néri, the station platform was renewed.

At Cap St. Ignace, the loading platform was renewed.

At Chaudière Junction, an office was fitted up for the station agent. The station was overhauled, repaired and painted.

At Hadlow, repairs were made to roof and walls of round house. The coal shed was also repaired.

At Lévis, the floating pontoon was thoroughly overhauled, repaired and painted. A new entrance was made to the freight shed. A new loading ramp and platform was built. The heating apparatus of station was partially renewed, and the whole put in good order.

The following buildings were painted two coats, the work being done by contract under the inspection of the department:—

Halifax, fence on Water Street.

Brookfield station.

Truro, iron turntable.

Hopewell station.

Merigomish station.

Iona station.

North Sydney Junction station.

Sackville station.

Sackville freight house roof.

Pointe du Chêne, dwelling.

Springhill station roof.

Rogersville station.

Barnaby River station.

Chatham Junction station.

Petit Rocher freight house.

Belledune station.

BRIDGES, CULVERTS, ETC.

At Halifax, the heavy retaining wall along Campbell Road, between North Street and Water Street Bridge, was repaired and pointed with Portland cement. Forty feet of clay culvert pipe was taken up under the tracks in North Street yard, and re-laid.

A water-tight decking of seasoned white pine was put down on the ties of Bedford Bridge, over the abutments and piers to prevent the water gaining access to the masonry which is of very poor quality, and impossible to keep water-tight with cement.

A new cedar culvert was put in through embankment at Fairview, where a washout had taken place.

At Windsor Junction, a box culvert was extended 14 feet. East of Windsor Junction, about a mile, two additional beam culverts, and a 24 inch iron pipe culvert were provided. These were rendered necessary on account of frequent washouts at this place.

Necessary repairs were made to box culverts at Shubenacadie, Stewiacke and Truro.

At Pine Tree wooden trestle east of New Glasgow, the east and west end bents were straightened. This bridge will require to be renewed next year. Straining beams and braces were put in the wooden span at Little Gut.

A 4 by 5 cedar box culvert was put in place of a wooden trestle at Dewar's, and a solid embankment made.

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Near Mile Post 25, a 3 by 3 box culvert of cedar was put in place of a 20 foot wooden culvert, and a solid embankment made up.

At Mile Post 32, the stringers and wall plates of a 10 foot beam culvert were renewed.

At Chisholm's Brook, a pair of wooden stringers were replaced with a pair of rolled steel beams fitted with hard pine ties and standard guard rail.

At Pomquet, an old wooden Howe truss was replaced with a through steel span of 96 feet, fitted with hard pine ties and standard guard rail.

At Antigonish, temporary bents were put under Murphy's Howe truss bridge, of 160 feet span, to carry it over another year, when it is proposed to renew with a steel span.

At Little River, 8 posts of Howe truss span were renewed.

At Pirate Harbour, the old timber trestle was replaced with a steel span 64 feet and first class masonry abutments. This span was fitted with standard floor and guard rails, and the embankment made up to the abutments on either side.

Temporary repairs were made to the public road bridge over the stream under this span.

Near Iona, C.B., a new culvert was built in place of the one referred to in my report as giving out last year.

Four hundred and twenty-six ties on pile trestle bridge near Pictou were renewed, and other necessary repairs made to this bridge which is about a half a mile long.

Twelve creosoted pile braces, 74 feet long, were driven in the rest piers of the draw span of the Grand Narrows bridge to strengthen it.

At Folleigh, the old timbers of two 100 feet spans were renewed with pitch pine, fitted with chords and standard guard rails.

On sections 26½ and 29, cedar culverts were put in to drain the adjoining properties where claims were being pressed for damages alleged to have been caused by the construction of the railway.

A system of lateral bracing was provided for the 100 feet span at Nappan.

Ten pairs of cattle guards between Truro and Painsec Junction were renewed, and also the stringers on nine open culverts.

Necessary repairs were made to wooden spans at Havelock Hill, Perkins and McKinley's, between Shediac and St. John.

The old wooden trestle at Musquash, west of Sussex, was replaced with a steel through span of 103 feet, set on stone abutments of first class masonry. This bridge was fitted with pitch pine ties, chocks and iron guard rails.

A wooden bridge over the ballast pit track at Boundary Creek was renewed.

The pile trestle bridge near Coldbrook was partially renewed and put in good order.

A short wooden bridge at Gondola Point was renewed.

A cedar culvert was put in near St. John to improve the drainage.

Twelve stone culverts were overhauled and repaired between Shediac and St. John.

Between Moncton and Newcastle, 7 pairs of surface cattle guards and one pit guard were put in. An open cedar culvert was built on the Indiantown branch, and a box culvert on the Newcastle wharf track.

A number of ties were renewed on iron spans at Coal Branch, and chocks of the Miramichi through spans.

The floor of the overhead bridge at Derby was repaired.

Seven pairs of cattle guards between Newcastle and Campbellton were renewed.

A new bridge seat was put under one of the iron spans at Nepisiguit.

The floors of overhead iron bridges at Tetagauche and Charlo were partially renewed and repaired.

A stone bridge seat was put in place of a broken one in abutment of south Charlo span. The abutment was repaired and pointed.

Ten stone culverts between Newcastle and Campbellton received the necessary repairs.

North of Metapedia, a pair of wooden stringers were replaced by iron girders of 10 feet span, covered with pitch pine ties and standard guard rail.

At Millstream Bridge, a portion of the common pine ties were renewed with pitch pine ties, properly chocked, and fitted with standard guard rail.

The piers of Rimouski bridge were overhauled, repaired and pointed with Portland cement.

The plank of flooring on Trois Pistoles Bridge was renewed.

A cedar box culvert was put in at the west end of Trois Pistoles station ground.

Three new ice fenders (wooden cribs filled with stone), were built at Montmagny in place of those destroyed by the high freshets of last year.

Heavy repairs were made to the cut-waters of the St. Paschal, Montmagny, St. Henri and Echemin bridges, damaged by the same freshets.

Six stone culverts on the division between Rivière du Loup and Lévis were rebuilt and large repairs made to many others.

Two gangs of rivetters were out during the working season tightening up rivets, putting in lateral bracing, and making other necessary repairs to iron bridges.

The following bridges were scraped and painted two coats under the inspection of the department :—

Bridge	5 spans,	48 feet each.
Bedford	do	1 do 21 do
Ellis	do	2 do 100 do
Stewiacke	do	4 do 80 do
New Glasgow	do	1 do 120 do
Antigonish	do	1 do 15 do
South River	do	1 do 40 do
Monastery	do	1 do 160 do
South River	do	2 do 100 do
North River	do	2 do 100 do
Isgonish River	do	1 do 40 do
Belmont	do	3 do 100 do
River Philip	do	3 do 160 do
Sackville	do	1 do 15 do
Dorchester	do	2 do 44 do
Red Pine	do	3 do 100 do
Jacquet River	do	1 do 18 do
Shaw's	do	

GENERAL.

A large gang was engaged about six weeks in taking down loose rocks at Bic Mountain cutting. On account of the heavy rains, more trouble was experienced at this cutting last spring than for many years.

A drain was made from the engine house to the river at Rivière du Loup, the old one having become choked up with ashes from engine pits.

A cedar crib was built on the railway boundary at Rivière du Loup yard, about 200 feet long, 9 feet high and 10 feet wide, the space behind filled with ashes, and the area of the yard thus enlarged.

A large quantity of ties, switch ties, cedar posts and miscellaneous timber gotten out by contract on Northern Divisions 1, 2 and 3, was loaded up and forwarded to the several divisions for which it was required for general repairs and renewals. Two working trains and a gang of about 35 men on each were employed about six weeks at this work.

Two and a half miles of badly worn 4-inch rails were taken up and replaced with a much better quality of 4½-inch rails, taken up on other divisions of the line.

About 20 miles of the old barbed wire fencing, where the posts were placed a rod apart originally, were thoroughly overhauled and repaired, and about 4 vertical stays put in each panel and secured to the horizontal wires with steel clamps, so that fence will now turn stock, which it would not do before this was done.

The steam dredge worked up to December, 1896, deepening the docks at the Deep Water Terminus, Halifax, and from April to the end of the fiscal year was engaged in deepening the docks at the railway wharfs at Pictou and Pictou Landing.

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At Londonderry, a pipe line 470 feet long was laid from the tank to station, and the necessary plumbing done to give a suitable supply to the waiting rooms and dwelling apartments.

A gang of men and working train was engaged in cleaning cuttings between Truro and Amherst.

WASHOUT AT METAPEDIA.

The damage done to the track and road bed by water and ice near Metapedia Station, on the 27th and 28th of April last was very heavy. About 500 feet of the cedar crib bank protection near the bridge was damaged, but not very seriously. From the west end of the snow shed near Metapedia Station, westwardly, 3,300 feet, the greater part of the rails and ties were carried off the road bed, and covered up with ice on the land side of the track.

The ballast and part of the road-bed, from one to three feet deep, was washed away. Four and a half miles west of Metapedia, the ballast was washed away for a length of 2,000 feet. About 700 rods of fence was also destroyed. The estimated cost of the damage to track, road-bed, fencing, etc., was \$2,911.70.

BAIE CHALEUR RAILWAY.

The Intercolonial Railway commenced operating this road on the 31st day of December, 1896, and continued to do so until the 31st day of May, 1897.

During that time, the following expenditures were made :—

Labour on track.....	\$4,211 86
Repairs of bridges and culverts.....	97 15
Repairs of buildings.....	20 46
Fencing.....	7 50
Clearing snow and ice.....	4,812 24
Total	<u>\$9,149 21</u>

About \$1,000 of this amount was spent in repairing damages done to the road-bed by the great ice-jam and freshet in the Restigouche and Metapedia Rivers, which occurred on the 28th day of April, 1897.

CAPITAL ACCOUNT.

Increased Accommodation at Halifax.

The coal wharf was widened about 50 feet on the south side, and a warehouse erected thereon, 431 by 34 feet. The crib facing referred to in my report of last year was filled to the surface with stone ballast. About 10,000 cubic yards of material was deposited behind it, and a considerable additional area thus obtained for tracks.

Extension of Halifax Cotton Siding.

This was for additional siding and re-arrangement of old sidings to meet the largely increased business in this quarter.

Dartmouth Branch.

The grading, ballasting, fencing, signals, &c., were completed immediately after funds were made available for that purpose.

Extension of Freight Shed, Truro.

This was an extension east of the present shed of 80 feet. The work was done by contract, and cost \$1,095.

Increased Accommodation, Pictou.

The freight shed on the St. Olaf wharf, and the local freight shed, were moved over and placed in line near the face of what is known as the public wharf, making a continuous shed 140 feet long. A pile foundation 100 by 20 was provided for one of these sheds. A new coal shed was erected. A new siding 883 feet long was laid to the freight houses in the new position. The crib-work at the east end of the yard was made available for schooner traffic by building on a pile facing about 410 feet long by 12 feet wide.

Improvements at Sussex, Trenton and Orangedale.

Modern water closets were provided for general waiting-room at Sussex. At Trenton, an extension was made to the passenger platform, and a small loading platform provided.

At Orangedale, the old freight house was converted into a ladies' waiting-room, and the agent's office enlarged.

Crib-work in Cape Breton.

This was for the erection of additional crib-work at the foot of embankments along the shores of the Bras d'Or Lake, where they were being badly cut into by the high seas on the lake.

Wells at Stations.

This was for stations where no water supply of any kind existed, and was necessary for the protection of the station from fire, as well as for a domestic supply for the agent.

Coal Shed and Trestle at Mulgrave.

This was for a short extension of the coal trestle. The bulk of the work had been completed at the expense of maintenance before this vote was available.

Snow Fences—O. and N. G. and C. B. Divisions, and St. Charles Branch.

This was for additional snow fencing where serious delays had occurred to traffic for want of them.

Station House at Henderson's Siding.

This was for a combined station and section man's house. The building was let by contract to the American Furniture Company of Oxford, N.S.

Increased Accommodation at Moncton.

The old freight house 300 by 30, was moved across the tracks to a new site on the south side of the yard, to make room for the new brick station, let to contract to Messrs. Rhodes, Curry & Co.

About 20,000 yards of filling was deposited on the south side of the tracks to make a new freight yard and site for the shed, unclaimed goods warehouse, and loading platform.

Four acres of land were purchased about a half mile west of the station, and is being excavated by steam shovel, and the material used for filling in the yard. After the four acres is levelled, it will be available for additional tracks. About $2\frac{1}{2}$ miles of additional sidings have been provided for the new freight yard on the south side. Additional sidings have also been provided on the Y on the north side of the track. A covered transfer platform 280 feet long and 14 feet wide, was erected on the Y to better facilitate the handling of way freight in transit, and thus avoid shunting to freight house. A new entrance was made to the west engine house, so that engines can now come out to the east end of the yard as well as to the west. The check office which was in the way of the new freight yard, was moved to a site further north.

A 10-ton hoisting crane was erected at the east end of the loading platform.

Fifteen new Hoists in Erecting Shop, Moncton.

These have been provided to enable the mechanical department to better handle their heavy material in connection with the repairs of locomotives. They are suspended to the iron roof trusses over the engine pits.

Department of Railways and Canals.

Station House, Lakeside.

This is for a combined station and dwelling for section man who acts as agent. The building was let to contract to A. S. Wetmore, and has been completed.

Wharf Improvements at Dalhousie.

This was for an addition to the present wharf to accommodate the largely increased deal shipments from Amqui and Cedar Hall, and which were formerly shipped from St. Lawrence ports.

Increased Accommodation, Causapscah.

This was for a new freight house, the old one having become too small for the business offering.

Increased Accommodation, Sayabec.

A new freight house was provided here, and the old one converted into a general waiting room.

Improvements, Little Metis.

About 1,500 yards of grading was done here to make a better approach to the station and freight shed. The interior arrangements of station were improved, and a modern water closet provided for the men's waiting room. A portion of the outside platform was covered for the better protection of baggage, a large quantity of which comes here with the summer visitors.

Increased Accommodation, Ste. Flavie.

A new freight shed was erected, and the interior of lower flat of station was re-arranged. The floor of room used for freight was lowered two feet, and converted into a waiting room and baggage room. Hardwood floors were laid in the waiting rooms. The walls of waiting rooms and office were sheathed and modern water closets were provided for the ladies waiting room and station agent's apartments.

Section House, Sacré Cœur.

This is for a combined station and section house; the section man taking charge of it, keeping fires on in winter, and looking after freight and passengers. It was let to contract to Alfred Samson, of Lévis, for \$1,500.

Grading Rivière du Loup Station Yard.

This was excavating about 2,000 cubic yards of rock work to make a better approach to the station house and freight shed. The old approach was very much cramped, and in summer season often congested.

Extensions of Sidings, &c.

The extensions were as follows:—

Cacouna, 300 feet; Ste. Hélène, 325 feet; Ste. Louise, 275 feet; Cap St. Ignace, 550 feet; St. Pierre, 550 feet; St. François, 325 feet; St. Valier, 369 feet.

This additional siding room, will very much facilitate the handling of traffic on his division.

Loading Platform and Siding, St. François.

Heretofore this business was done on the through siding and occasioned delay to the traffic, as well as our local business.

I have the honour to be, sir,

Your obedient servant,

WM. B. MACKENZIE, *Chief Engineer.*

J. POTTINGER, Esq.,

General Manager, Government Railways, Moncton.

No. 1.—INTERCOLONIAL RAILWAY.

DR.

CAPITAL ACCOUNT, Year ended 30th June, 1897.

CR.

1896. June 30.	1896. June 30.	\$	cts.	\$	cts.	By Dominion of Canada.....	\$	cts.
To Cost of Intercolonial Railway to date.....		48,011,783	94					
do Eastern Extension Railway to date.....		1,324,042	80					
do Oxford and New Glasgow Railway to date.....		1,950,820	60					
do Cape Breton Railway to date.....		3,864,010	94					
do Cape Breton and Oxford and New Glasgow to date.....		53,241	50					
do Train Ferry at Strait of Canso.....		63,463	03					
		55,267,362	82					55,267,044 63
Less refund previous year's expenditure.....		318	19					
				55,267,044	63			
1897. June 30.	Expenditure for current year :—							
	Intercolonial Railway :—							
	Increased accommodation, Halifax.....	22,274	97					
	do do Moncton.....	29,877	32					
	do do Sayabec.....	796	05					
	do do Lévis.....	28	20					
	do do Ste. Flavie.....	1,488	93					
	do do Causapscal.....	686	92					
	do do Pictou.....	5,000	00					
	Dartmouth Branch.....	37,206	44					
	Construction (original).....	724	09					
	Land and damages, Oxford and New Glasgow and Cape Breton Railways.....	3,472	77					
	Station house, Lakeside.....	1,453	34					
	Extension freight house, Truro.....	1,095	00					
	Rolling stock.....	14,996	04					
	Purchase sluice at Etchemin.....	1,500	00					
	Snow fences, Oxford and N. Glasgow and St. Charles Branch.....	6,005	55					
	Wharf improvements, Dalhousie.....	3,026	86					
	Provide wells at Stations.....	499	52					
	Crab protection, Cape Breton.....	1,498	28					
	Station and siding, McMan's Brook.....	7	02					
	Station house, Sacré Cœur.....	1,500	00					
	Indiantown Branch.....	684	80					
	New hoists in erecting shop, Moncton.....	400	00					
	Improvements, Sussex, Trenton and Orangedale.....	653	46					
	Grading near River du Loup Station.....	1,598	17					
	Extension, Halifax Cotton Siding.....	1,839	47					
	Extension of sidings, St. Valier, St. Pierre, &c.....	3,604	07					
	Improvements, Little Metis.....	1,197	82					
	Provide water supply, Grand Narrows.....	25	73					

Department of Railways and Canals.

Extension to deep water, North Sydney	5 00			
Station house, Henderson's, N.S.	1,479 96			
Coal shed and trestle, Mulgrave	58 32			
Loading platform and siding, St. Francois	349 76			
Clock for St. John Station	500 00			
St. Charles Branch (Or.)	372 96			
	145,142 00			
Oxford and New Glasgow and Cape Breton Railways	3,970 52			
		149,112 52	1897.	By Dominion of Canada
		55,416,157 15	June 30.	149,112 52
				55,416,157 15

T. WILLIAMS,
Chief Accountant and Treasurer.

E. & O. E.

Moncton, N.B., 30th June, 1897.

No. 2.—INTERCOLONIAL RAILWAY.

DR. REVENUE ACCOUNT, Year ended 30th June, 1897.

CR.

Previous Year.	Expenditure.	Year ended 30th June, 1897.	Previous Year.	Earnings.	Year ended 30th June, 1897.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
993,801 39	Locomotive power, Abst. No. 1.	995,247 29	971,426 26	Passenger traffic ..	979,005 57
659,525 46	Car expenses " 2.	708,513 01	1,788,813 18	Freight traffic	1,687,050 42
774,556 25	Maintenance way & works " 3.	624,454 43	197,400 66	Mails and sundries	199,972 03
383,895 37	Station expenses " 4.	384,982 77			
199,985 80	General charges " 5.	207,107 39			
1,063 35	Car mileage	5,663 78			
3,012,827 62	.... Total working expenses	2,925,968 67	2,957,640 10		2,866,028 02
	.... Balance		55,187 52	.... Balance	59,940 65
3,012,827 62		2,925,968 67	3,012,827 62		2,925,968 67

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 3.—INTERCOLONIAL RAILWAY.

LOCOMOTIVE POWER—(Abstract No. 1).

Previous Year.		Year ended 30th June, 1897.
\$ cts.		\$ cts.
11,573 95	Mechanical superintendent's salary, clerks, office and travelling expenses	12,160 85
264,604 16	Wages of drivers, firemen and cleaners	267,291 80
408,861 78	Fuel	375,635 35
28,224 41	Oil, tallow and waste, and small stores	30,848 49
230,257 00	Repairs to engines, tenders and engine tools	261,880 32
31,694 62	Water, including pump and tank repairs	30,498 81
18,585 47	Miscellaneous	16,931 67
993,801 39		995,247 29

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 4.—INTERCOLONIAL RAILWAY.

CAR EXPENSES—(Abstract No. 2).

Previous Year.		Year ended 30th June, 1897.
\$ cts.		\$ cts.
65,534 61	Repairs to passenger cars	84,793 82
19,133 07	Repairs to postal, express and baggage cars	20,976 44
205,191 64	Repairs to freight cars and vans	231,203 22
6,176 41	Repairs to snow ploughs and flangers	3,771 23
255,412 68	Wages of conductors, train baggage-masters and brakemen	255,465 63
15,098 59	Oil and waste for packing	22,954 90
62,477 04	Small stores and fuel	66,664 51
30,501 42	Miscellaneous	28,683 26
659,525 46		708,513 01

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

Department of Railways and Canals

No. 5.—INTERCOLONIAL RAILWAY.

MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Previous Year.	—	Year ended 30th June, 1897.
\$ cts.		\$ cts.
5,858 79	Chief and assistant engineers' salaries, clerks, office and travelling expenses.	6,947 14
353,687 70	Wages: Repairing roadway, fences, semaphores, including new sidings laid in	340,869 04
54,041 94	Rails and fastenings, including new sidings laid in	29,165 13
87,920 23	Ties	60,890 15
82,451 79	Timber, lumber, &c., for repairs to bridges, cattle guards, snow fences, &c.	71,160 86
72,080 28	Repairs to wharfs	18,855 11
62,272 71	Repairs to buildings and platforms, including extensions and additions to same	50,279 25
8,245 32	Repairs to tools	10,705 50
42,454 17	Clearing snow and ice	33,570 36
5,543 32	Miscellaneous	2,011 89
774,556 25		624,454 43

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 6.—INTERCOLONIAL RAILWAY.

STATION EXPENSES—(Abstract No. 4).

Previous Year.	—	Year ended 30th June, 1897.
\$ cts.		\$ cts.
303,796 20	Salaries and wages of station masters, agents, clerks and telegraph operators, station baggage masters, yard masters, switchmen and labourers	305,419 59
80,099 17	Fuel, oil and light, stationery, tickets and other incidental expenses	79,563 18
383,895 37		384,982 77

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 7.—INTERCOLONIAL RAILWAY.

GENERAL CHARGES—(Abstract No. 5).

Previous Year.	—	Year ended 30th June, 1897.
\$ cts.		\$ cts.
82,844 16	General manager's, district superintendents', train despatchers', general freight agents', general passenger agents' salaries, clerks, offices and travelling expenses	87,893 21
27,932 94	Chief accountant's and treasurer's, traffic auditor's, paymaster's and cashier's salaries, clerks, offices and travelling expenses	30,442 98
12,386 72	Damages to men, animals and goods	12,048 00
25,959 04	Ferry service	27,073 20
2,732 10	Telegraph expenses, not including pay to operators	2,415 44
30,438 81	Miscellaneous printing, advertising, &c.	28,780 85
17,692 03	Agency expenses	15,453 82
	Commissioners investigating (vote, \$2,500.00)	2,999 89
199,985 80		207,107 39

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 8.—INTERCOLONIAL RAILWAY.

DR. GENERAL STORES ACCOUNT Year ended 30th June, 1897. Cr.

1896		\$	cts.	\$	cts.	1897		\$	cts.	\$	cts.
June 30..	To Balance.....					June 30..	By Issues during year.....			1,164,448	30
	Purchases during year.....		825,350	78			Sales, material, fuel, &c., to other			20,719	18
	Charges from other Departments.....		298,223	37			railways, &c.....			125,564	95
	Labour, &c.....		44,253	14			Sales old material.....				
	Staff pay rolls.....		15,889	14			By Balance :—				
							Ordinary stores including fuel.....			307,097	44
							Iron and steel rails and fastenings.....			271,305	52
							Old material for sale.....			60,429	83
										638,832	89
										1,949,565	32

E. & O. E.,

Moncton, N.B., 30th June, 1897.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 9.—INTERCOLONIAL RAILWAY.

Department of Railways and Canals

Dr,

GENERAL BALANCE, Year ended 30th June, 1897.

Cr.

To Cash.....	\$	cts.	By Dominion of Canada.....	\$	cts.
Stations.....			Suspense.....	1,253	23
General Stores—			Grand Trunk Railway—traffic.....	48,874	10
Ordinary stores including fuel.....	\$307,097	44	Canadian Pacific Railway—traffic.....		\$ 10,284 90
Iron and steel rails and fastenings.....	271,305	62	do do do N.B. Division.....		2 20
Old material for sale.....	60,429	83	Chatham Railway.....	10,287	10
Department accounts:—			Gulf Shore Railway.....	0	07
Agriculture.....	\$ 494	25	Temiscouata Railway.....	29	50
Post Office.....	21,092	50	Unclaimed freight.....	58	67
Public Works.....	147	88	Prince Edward Island Steam Navigation Company.....	46	12
Marine and Fisheries.....	6	78	Canada Atlantic Plant Line.....	3	66
Militia and Defence.....	4,132	16		479	55
Canadian Pacific Railway rolling stock.....					
Dominion Atlantic Railway—general.....	\$ 1,304	33			
do do —traffic.....	838	52			
Canada Eastern Railway—general.....	\$ 4,955	54			
do do —traffic.....	5,891	09			
New Brunswick and Prince Edward Island Railway.....					
Caracquet Railway.....					
Kent Northern Railway.....					
Prince Edward Island Railway.....					
Canadian Pacific Railway—general.....	\$ 7,292	55			
do do N.B. Division.....	4,015	43			
Buctouche and Moncton Railway.....					
Bay Chaleur Railway.....					
Edgin and Havelock Railway.....					
Pullman Palace Car Company.....					
Boston and Maine Railway.....					
Grand Trunk Railway—general.....					
Salisbury and Harvey Railway.....					
New York, New Haven and Hartford Railway.....					
Central Vermont Railway.....					
Tobique Valley Railway.....					
Canada Atlantic Railway.....					
St. John Street Railway Company.....					
Western Counties Railway—general account.....	\$ 15,833	35			
do do —traffic.....	64	57			
Springhill and Parrsboro' Railway.....					

No. 9.—INTERCOLONIAL RAILWAY—Continued.

Dr.

GENERAL BALANCE, Year ended 30th June, 1897.

Cr.

	\$	cts.
To Halifax and Cape Breton Railway.....	1,151	42
Elgin Branch Railway.....	726	10
Michigan Central Railway.....	0	40
Great Northern Railway Company.....	535	26
Chicago, Burlington and Quincy Railway.....	29	91
Minneapolis, St. Paul and Sault Ste. Marie Railway.....	0	58
Coast Railway of Nova Scotia.....	0	91
Central Railway of New Brunswick.....	32	40
Fitchburg Railway.....	9	55
Rutland Railway.....	0	40
Portland and Rumford Falls Railway.....	3	00
Quebec Central Railway.....	2,775	34
Armour Car Lines.....	1	11
Great Eastern Freight Line.....	0	43
Imperial Tank Line.....	0	95
Germania Tank Oil Company.....	0	45
Morris Refrigerator Line.....	1	00
National Despatch Line.....	0	64
Rents.....	2,957	16
Canadian Express Company.....	4,531	99
Canada Coal and Railway Company.....	11	84
Acadia Coal Company.....	2,103	35
Intercolonial Coal Company.....	13	00
Cumberland Railway and Coal Company.....	627	72
Donnison Coal Company.....	122	17
I. C. R. Employees R. and Insurance Association.....	39	61
Halifax Cotton Company Siding.....	5	27
Western Union Telegraph Company.....	1,704	34
Steamer "Admiral".....	1,142	42
Car "Victoria".....	14	03
Car "Ottawa".....	465	26
Nova Scotia Steel Company (Limited).....	320	00
Canada Locomotive and Engine Company.....	928	18
Union Bearing Company.....	273	25
Poulson Iron Works.....	1,276	00
Ontario Car and Foundry Company.....	1,967	41
Coldbrook Rolling Mills.....	32,000	00
Town of Dartmouth.....	788	81
Remittances destroyed.....	71	30
Schooner "Mary Jane".....	1,892	13
Allan Steamship Line.....		

Department of Railways and Canals.

To stations—		
Nauwigewauk.....	\$ 3 00	
Glengarry.....	5 00	
Bloomfield.....	25 21	
Coal Branch.....	65 84	
Weldford.....	55 00	
Ste. Luce.....	80 00	
Bic.....	22 00	
St. Arsène.....	107 12	
Valley.....	6 65	
Iona.....	72 71	
Nappan.....	40 00	
Kent Junction.....	28 38	
Derby Junction.....	231 04	
Gloucester Junction.....	78 87	
Dalhousie Station.....	19 69	
Isle Verte.....	25 00	
Campbellton (freight).....	25 00	
	890 51	
To Individual accounts.....	8,543 45	
Total.....	862,484 71	
		Total..... 862,484 71

T. WILLIAMS,
Chief Accountant and Treasurer.

E. & O. E.,
MONCTON, N.B., 30th June, 1897.

No. 10.—INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT of Averages, Year ended 30th June, 1897.

	1897.	1896.
Mileage of railway	1,145	1,142
Engine mileage	4,655,171	4,714,661
Train mileage	3,779,283	3,842,502
Car mileage	40,823,781	43,005,684
Receipts per engine mile	61 56	62 73
Receipts per mile of railway	2,503 08	2,589 88
Percentage of passenger earnings to gross earnings	34 16	32 85
do freight do	58 86	60 48
do other do	6 98	6 67
Expenses per engine mile :—		
Drivers', firemen and cleaners' wages	5 74	5 61
Fuel	8 07	8 67
Oil, tallow, waste and small stores	66	60
Repairs to engines	5 63	4 88
Water and tank repairs	66	67
Miscellaneous	36	40
Total	21 12	20 83
Mechanical superintendent's salary, office and travelling expenses	26	25
Total	21 38	21 08
Locomotive power per engine mile	21 38	21 08
Car expenses per engine mile	15 22	13 99
Maintenance way and works per engine mile	13 41	16 43
Station expenses	8 27	8 14
General charges	4 45	4 24
Car mileage	12	02
Total per engine mile	62 85	63 90
Locomotive power per train mile	26 33	25 86
Car expenses	18 75	17 16
Maintenance way and works per train mile	16 52	20 16
Station expenses per train mile	10 19	9 99
General charges	5 48	5 21
Car mileage	15	03
Total per train mile	77 42	78 41
Working expenses per mile of railway	2,555 43	2,638 20

E. & O. E.

MONCTON, N.B., 30th June, 1897.

T. WILLIAMS.

Chief Accountant and Treasurer.

Department of Railways and Canals

INTERCOLONIAL RAILWAY OF CANADA,

OFFICE OF MECHANICAL SUPERINTENDENT,

MONCTON, N.B., 6th September, 1897.

SIR,—I beg to submit for your information the following statements :—

A.—Statement showing the number of locomotives, and of the various classes of cars.

B.—Statement showing the locomotive and car mileage, and the number of passenger and freight cars hauled per mile run by engines.

C.—Abstract of locomotive returns.

D.—Statement of the cost of locomotive power for each month during the year.

E.—General statement of the expenses of the mechanical department during the year.

Two baggage and express cars, 110 box cars and refrigerator cars, 59 platform cars, 136 hopper cars, 48 gondola cars, 18 large coal cars, and 1 flanger car were taken out of service and replaced with the same number of new ones.

The following is a summary of the principal work done :—

DRAWING OFFICE.

Designed new boiler and frame, with details, and arrangement, for proposed new ten wheel passenger engines.

Designed frame with details, and arrangement, for rebuilds B 03 class.

Designed new boilers and details for shunting engines.

Designed new standard tender frame, also new cab for B 03 class, new main rods for various classes, new "American" balance slide valve for A 1 class, and 40 various drawings for locomotive repairs.

The following drawings were designed for applying "Cleveland" patent cylinders, viz. : cylinder, steam chest, cylinder covers, pistons and rods, valves and valve rods with connections, indicator gear, smoke box and netting, exhaust pipe, engine truck and necessary alterations on front ends of frames.

Drawings were made for refrigerator car details, standard freight car truck, draft gear for 40,000 lbs. cars, and internal fittings for passenger cars.

Specifications made for car and locomotive work.

Detail drawings made for foundations and arrangements of new machinery, new air compressor, air hoists, flanging blocks, air crane traveller, &c., for Moncton shops.

Register of locomotive repairs and water service kept, specifications and special drawings supplied to stores for ordering on, and all materials so ordered checked and tested.

MONCTON LOCOMOTIVE SHOPS.

Three passenger locomotives, Nos. 149, 150 and 156, were "rebuilt" at a cost of \$6,587 each, with new extended wagon top boilers complete. All boiler mountings, sight feed lubricators, and injectors new. New ends on front frames. Back frames strengthened up. New cylinders, balance valves, pistons, crossheads, and guides complete. New driving axles, crank pins, and axle boxes. New underhung driving springs and gear. New main rods. New eccentric sheaves. New sand boxes. New cabs, heavy C.I. footplates, and C.I. running boards. New engine trucks complete. Westinghouse brake improved ; $9\frac{1}{2}$ inch air pumps fitted.

Three passenger locomotives, Nos. 58, 61 and 63 were, "rebuilt" at a cost of \$5,489 each, with new extended wagon top boilers complete. All boiler mountings, sight feed lubricators, and injectors new. New ends on front frames. Back frames strengthened

up. New cylinders, balance valves, pistons, crossheads, and guides complete. New driving axle boxes, springs and gear. New cabs, heavy footplates, and C.I. running boards. Westinghouse brake improved.

Three freight locomotives, Nos. 110, 112 and 114, were "rebuilt" at a cost of \$4,979 each, with new extended wagon top boilers complete. All boiler mountings, sight feed lubricators, and injectors new. New ends on front frames. Back frames strengthened up. New cylinders, balance valves, pistons, crossheads, and guides complete. New driving axles and boxes. New springs and gear. New cabs, footplates, and running boards.

One passenger locomotive, No. 128, "rebuilt" at a cost of \$5,686. Weight increased from 70,000 lbs. to 91,000 lbs. with large second hand repaired boiler. New set boiler tubes. New smoke box and stack. Frames cut, lengthened, and strengthened. New cylinders, balance valves, pistons, crossheads, and guides. New sight feed lubricator. New fluted side rods.

Forty-eight locomotives received heavy repairs, and 46 had specific repairs. The following new parts being supplied :—2 new inside fireboxes, 1 new throat sheet, 2 new half side sheets, 1 new smoke box, 6 new cylinders, 10 new driving wheels, 56 new driving tires, 7 new driving axles, 2 new main rods, 16 new crank pins, 19 new pistons, 3 new piston crossheads, 36 new driving axle boxes, 34 new smoke stacks, 5 new cabs, 12 new piloss, 15 new eccentric sheaves and 23 straps, 1 new engine truck complete.

Fifty-eight locomotive boilers were tested. 32 fireboxes, 4 boiler barrels, and 16 tender tanks were patched, 9,395 tubes were pieced.

Five locomotives were equipped with steam heaters.

Ninety-seven pair driving tires were turned; 105 truck wheels were re-tired.

Fifty-one engines and tenders were repainted and varnished; 7 engines and tenders were renovated and varnished.

Five water service boilers repaired with new tube sheets and 270 pieced tubes.

Six hundred and ninety tubes pieced for stationary boilers.

One repaired stationary boiler put in boiler room with new connecting drum.

MONCTON BRASS FOUNDRY.

Output :—59,785 lbs. brass castings and 105,449 lbs. brass bearings.

MONCTON CAR SHOPS.

Nine refrigerator cars were built new complete, and equipped with "Westinghouse" air brake, "Moore" burglar proof doors, and automatic couplers.

Two baggage and express cars Nos. 706 and 719 were "rebuilt."

One hundred and sixty-three freight cars were "rebuilt" and one flanger car.

The following received heavy repairs :—Governor General's car "Victoria," official cars "Ottawa" and "Cumberland," 14 sleepers, 4 parlours, 5 second class sleepers, 35 first class cars, 29 second class cars, 12 postal cars, 10 baggage cars, 18 vans, 2 wing ploughs, 4 flangers, 453 freight cars.

The following received medium repairs :—10 snow ploughs and 2 freight cars.

The following received light repairs :—4 sleepers, 1 parlour, 6 second class sleepers, 37 first class cars, 56 second class cars, 7 postal cars, 18 baggage cars, 33 vans, 6 snow ploughs, 1 steam shovel car, 3,200 freight cars.

The following were repainted or stained, and varnished :—Official car "Ottawa," 3 sleepers, 2 second class sleepers, 14 first class cars, 24 second class cars, 2 postal cars, 8 baggage cars.

The following were renovated and varnished :—Governor General's car "Victoria," 12 sleepers, 1 second class sleeper, 3 parlours, 20 first class cars, 4 second class cars, 9 postal and 4 baggage cars.

Five hundred and seventy-eight freight cars, 12 vans, 6 snow ploughs, and 5 flangers were repainted.

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Special work was done as follows :

Sleepers "Margaree," "Baddeck," "Halifax," and "Rustico" had men's lavatory altered to open out of smoking room. All hoppers renewed with flushing water closets. All lavatory fittings new throughout of white "Ajax" metal. Windows all fixed with new "Acme" blinds.

Official car "Cumberland" had new electric bells and annunciator put in.

Eleven first class cars were re-upholstered with same covering used.

One hundred and twenty-eight freight car trucks were built.

Three hundred and thirty-nine pair steel tired wheels were turned.

One hundred and eighteen new axles were turned.

Two thousand and eighty-two old axles were trued up.

Two thousand one hundred and sixty-four new wheels were pressed on axles.

One thousand and eight second hand wheels were pressed on axles.

Two freight cars were equipped with the Westinghouse air brake.

A large amount of work was done to freight and baggage trucks, chairs, safes, ticket cases, footboards, and other articles for out stations.

RIVIÈRE DU LOUP SHOPS.

Twenty-four locomotives received heavy repairs, and 10 had specific repairs, the following new parts being supplied, chiefly from Moncton shops:—One new tube sheet, 8 new sets tubes, 1 new driving axle, 1 new cylinder, 1 new driving wheel, 20 new driving tires. 18 new driving boxes, 8 new smokestacks, 6 new fluted side rods, 10 new crank pins, 12 new driving springs, 4 new engine truck springs, 10 sets new side rod brasses, 4 sets new cylinder cocks, 2 new rocker boxes, 8 new eccentric sheaves and 8 new straps, 5 new piston rods, 5 new valve rods, 2 new piston crossheads, 9 new pilots, 4 new tender frames.

Twenty locomotive boilers were tested; 12 fire boxes, 6 smoke boxes, and 14 tender tanks were patched.

One locomotive was equipped with steam heater; 43 pair driving tires were turned; 21 engines and tenders were repainted and varnished.

One new wrecking crane built for Chaudière.

RICHMOND SHOPS.

Twelve locomotives received heavy repairs, and 31 had specific repairs, the following new parts being supplied, chiefly from Moncton shops:—

One new tube sheet, 2 new side rods, 2 new crank pins, 1 new extension smoke box, 5 new smokestacks, 2 new C. I. running boards, 1 new heavy C. I. footplate, 7 new driving boxes, 2 new driving springs, 5 sets new side rod brasses, 1 new cab, 1 new sand box, 4 sets new cylinder cocks, 2 new throttle valves and gear, 2 new dry pipes, 3 new buffer beams, 6 new pilots.

Eleven locomotive boilers were tested, 8 fire boxes, 1 dome, 3 boiler barrels, 4 smoke boxes, and 5 tender tanks, were patched.

One locomotive was equipped with steam heater.

Twenty-four pair driving tires were turned, 12 engines and tenders were repainted and varnished.

PLANT AND MACHINERY.

One new pneumatic rivetter for boilers,

One new pneumatic rivetter for tanks.

One new pneumatic stay bolt cutter.

One new pneumatic stay bolt breaker.

One new pneumatic rotary tapping and stay bolting machine.

One new pneumatic special milling machine.

One new 4 ton travelling crane with pneumatic hoist for rivetters.

One new "Boyer" piston air drilling machine.
 One new 20 ton weighing machine with brass steelyard and special shackle.
 One new "Vance" lightning flue cutter.
 One new blower fan for boiler shop.
 One new No. 4 duplex bear punch.
 One new power pipe cutting machine, cutting up to 4-in.
 One new No. 000 extra double geared forming machine with 3-in. slip rolls, 37-in. long, for tinsmiths.
 One new "Pond" special double head car wheel steel tire lathe.
 One new No. 3 "Universal" trimmer with knives complete.
 One new saw gummer.
 One new power band saw setting and filing machine.
 One new planer knife balancing machine.
 One new improved automatic knife grinding machine.
 One new traveller with 12-in. air hoist complete for wheel press built in Moncton shops.
 Two new 7-in. air hoists for maching shop swing cranes built in Moncton shops.
 Three new hand power drilling machines built in Moncton shops for Truro, Stellarton, and Sydney round houses.

TURNTABLE REPAIRS.

Springhill Junction.—New end girder. New centre roller case and bearings.
Richmond.—New set of centre bolts, 2-in. diameter.
Truro.—Table repaired.
Pictou.—41 new ties under rails, new plank flooring.
Ste. Flavie.—Light repairs made to centre and table.
Hadlow.—Light repairs made to table.

WATER SERVICE.

Amherst.—New sheathing on trestle. Tank repainted. Crane repaired.
Assametsquaghan.—Cleaned out reservoir, and new covering put on.
Bathurst.—New globe and check valves on boiler, flue rebuilt, new timbers and floor in pump house.
Boisdale.—Tank raised to standard height, and repainted, tank hcops re-rivettet, new tank pipe, repaired turntable put in windmill.
Calhouns.—New smoke pipe.
Campbellton.—Reservoir repaired and cleaned out, new tank pipe and smoke pipe.
 Valves, pipes and fire hydrant repaired.
Canaan.—Steam pump and feed pipe repaired.
Chaudière.—Windmill pump repaired.
Causapsal.—New tank pipe.
Folleigh.—New smoke pipe. Pump repaired. Repaired boiler put in.
Hampton.—New stove, new tunk pipe.
Harcourt.—New smoke pipe.
Hadlow.—Tank and trestle repaired, and repainted. Hoops re-rivettet, repaired steam pump put in.
Indiantown.—New tank stove.
Jacquet River.—New tank pipe.
Londonderry.—325 feet 1½" and 2" pipe laid from tank to station.
Little Metis.—Reservoir repaired. Tank roof repainted.
Metapedia.—Reservoir cleaned out. Fence repaired. New tank pipe.
Moncton.—Water cranes repaired.
Mulgrave.—New tank stove. Reservoir cleaned out.
Millerton.—Reservoir cleaned out and repaired.
North Sydney.—Repaired turntable put in windmill. Pump repaired.

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Oxford Junction.—Repaired boiler put in. Steam pump repaired.
Pointe du Chêne.—Repaired steam pump put in. Boiler and tank pipes repaired.
Dalhousie.—Reservoir cleaned and repaired. Crane repaired.
Dalhousie Junction.—Reservoir cleaned and repaired.
Pugwash Junction.—Repaired boiler put in for temporary use.
Pictou.—New tank pipe.
Portage Ballast Pit.—New hand pump and tank pipe. Built new box tank.
Rogersville.—Tank roof repaired. New tank pipe.
Rivière du Loup.—Reservoir cleaned. Boiler and pump repaired.
Red Pine.—New trestle. Tank repainted. Hoops re-rivetted. New floor in pump house. New tank pipe.
River John.—Repaired windmill and pump.
Rimouski.—New tank stove.
St. Hélène.—Reservoir cleaned out. New smoke pipe.
St. Moïse.—Steam pump repaired. Repaired boiler put in. New smoke and tank pipes.
St. Fabien.—Steam pump repaired. New fire grates.
St. Valier.—Steam pump repaired.
St. Luce.—Windmill pump repaired.
St. Pierre.—New floor in pump house. New stove. New smoke pipe. New water gauge. New boiler feed pipe. New fire grates.
St. Pascal.—Repaired reservoir and crane.
St. Charles.—Steam pump repaired.
Stellarton.—New tank pipe.
Truro.—New tank stove.
Trois Pistoles.—Tank repaired and repainted. Pump repaired. New tank trestle. Hoops re-rivetted.
Tatamagouche.—Reservoir cleaned out.
West River.—New smoke pipe.
Windsor Junction.—Boiler feed and exhaust pipes repaired.
West Cock.—New tank trestle. Tank repainted. New tank pipe. Steam pump repaired. Repaired boiler put in. New stove.

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

FRANCIS R. F. BROWN,

Mechanical Superintendent.

D. POTTINGER, Esq.,
General Manager Government Railways,
Moncton, N.B.

A.—INTERCOLONIAL RAILWAY.

STATEMENT showing the number of Locomotives and of the various classes of Cars on the 1st July, 1896, and on the 30th of June, 1896.

	The Various Classes of Cars.																	Locomotives.			
	First-Class Sleepers.	Second Class Sleepers.	Parlour	First Class Passenger.	Second Class Passenger.	Postal and Smoking.	Express and Baggage.	Box and Refrigerator.	Platform, 10, 15 and 20 tons.	Hoppers, 6 tons.	Gondolas, 20 Tons.	Coal Cars, 20 tons.	Cattle.	Vans.	Total.	Snow Ploughs.	Wing Ploughs.		Flangers.	Steam Ploughs.	Total.
On hand serviceable.....	204	15	7	5	92	94	24	39	2,051	2,179	976	329	739	96	99	6,745	44	10	21	2	77
Condemned, 1st July, 1896									20	90	23	48	10	7		198					
Total.....	204	15	7	5	92	94	24	39	2,071	2,269	999	*48	749	103	99	6,943	44	10	21	2	77
Changed from gondolas to 20-ton platform do coal cars to platform										48	2										
Total.....	204	15	7	5	92	94	24	39	2,071	2,319	999	329	747	103	99	6,943	44	10	21	2	77
Condemned, 1st July, 1896									20	90	23	48	10	7		198					
do during the year.....								2	114	77	134	49	45	1		422			1		
Less rebuilt.....	9							2	134	167	187	97	55	8		620			1		
To be rebuilt.....								2	110	59	136	48	18			373			1		
Serviceable and repairing.....	204	15	7	5	92	94	24	39	2,047	2,211	978	280	710	95		247					
Total.....	204	15	7	5	92	94	24	39	2,071	2,319	999	329	747	103		6,943	44	10	21	2	77

* Changed from gondolas to 20-ton platform boxed for coal.

JOHN SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1897.

Department of Railways and Canals

B.—INTERCOLONIAL RAILWAY. STATEMENT of Locomotive and Car Mileage, Year ended 30th June, 1897.

Months.	LOCOMOTIVE MILEAGE.		CAR MILEAGE.				Snow Ploughs.	Average Passenger.	Average Freight.
	Passenger.	Freight.	Passenger.	Express, Postal and Baggage.	Freight.	Total.			
1896—July	132,333	203,648	610,183	287,741	2,609,040	3,506,964	534	6.78	12.81
August	129,160	197,293	591,249	282,026	2,668,580	3,541,855	315	6.75	13.52
September	116,204	200,976	563,440	278,956	2,685,688	3,528,084	336	7.25	13.35
October	112,837	227,410	481,096	235,798	3,058,433	3,805,327	831	6.63	13.45
November	102,289	205,786	418,674	243,619	2,831,709	3,494,002	1,257	6.47	13.76
December	111,055	195,054	454,886	258,653	2,546,995	3,260,534	1,913	6.42	13.05
1897—January	112,008	178,791	431,055	240,979	2,113,797	2,785,831	5,250	6.00	11.82
February	101,129	180,494	393,212	220,178	2,253,100	2,866,490	7,461	6.07	12.49
March	109,803	230,968	451,454	246,721	3,060,787	3,758,962	23,517	6.36	13.25
April	109,727	220,614	455,430	247,241	3,032,351	3,735,022	203	6.40	13.74
May	105,270	198,096	451,405	235,828	2,597,279	3,284,512	383	6.52	13.06
June	111,931	186,407	494,848	264,898	2,496,452	3,256,198	65	6.79	13.39
	1,353,746	2,425,537	5,196,932	3,072,638	31,954,211	40,823,781	42,065	6.55	13.14

JOHN SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1897.

C.—INTERCOLONIAL RAILWAY.
ABSTRACT of Locomotive Returns for Year ended 30th June, 1897.

Months.	Hours in Steam.	Locomotive Mileage.	Consumption.				Average Consumption per 100 Miles.				
			Tons of Coal.	Pints of Oil.	Pints of Valve Oil and Tallow.	Pounds of Waste.	Miles run to 1 hour in Steam.	Pounds of Coal.	Pints of Oil, &c.	Pints of Valve Oil and Tallow.	Pounds of Waste.
1896—July.....	38,630	414,278	11,668	26,246	23,406	10,204	10.72	6,308	6.34	5.64	2.46
August.	37,394	402,062	11,833	25,246	22,635	10,133	10.75	6,592	6.28	5.62	2.52
September.....	36,289	389,354	11,693	24,688	20,263	9,636	10.72	6,727	6.34	5.20	2.22
October	38,901	414,617	12,791	25,018	19,621	10,321	10.65	6,910	6.03	4.73	2.48
November.....	35,479	378,342	12,461	23,330	17,737	9,302	10.66	7,377	6.16	4.69	2.46
December	35,470	378,390	12,687	23,560	18,541	9,912	10.66	7,510	6.22	4.89	2.62
1897—January.....	33,479	338,647	11,260	23,594	15,857	8,962	10.71	7,032	6.57	4.42	2.49
February	32,726	348,721	10,512	19,731	11,861	8,491	10.63	6,752	5.65	3.40	2.43
March.....	39,518	419,381	13,928	21,286	13,074	8,997	10.61	7,439	5.07	3.11	2.14
April	37,805	404,557	12,237	18,962	11,612	8,700	10.70	6,773	4.68	2.87	2.15
May.....	34,968	375,729	10,508	17,237	11,318	8,134	10.74	6,255	4.58	3.01	2.16
June	35,017	371,093	10,297	17,340	11,376	7,998	10.59	6,215	4.67	3.06	2.15
	435,676	4,655,171	141,875	266,238	197,301	110,790	10.68	6,826	5.72	4.24	2.38

JOHN SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1897.

D.—INTERCOLONIAL RAILWAY.

STATEMENT of the cost of Locomotive Power for each month from 1st July, 1896, to 30th June, 1897.

Months.	Miles run by Engines.	Mechanical Supt.'s Salary; Clerks and Office Expenses.	Enginemen's Wages.	Fuel.	Oil, Tallow and Waste.	Repairs to Engines, Tenders and Tools.	Water.	Engine-houses and Turntables.	Total.	Average per 100 miles.						Total.
										Mechanical Supt.'s Wages.	Fuel.	Oil Tallow and Waste.	Repairs.	Water.	Eng. houses & Turntab.	
1896—July.. Aug.. Sept.. Oct.. Nov.. Dec..	414,278	982 57	23,933 95	31,074 30	3,045 71	26,266 96	1,296 97	980 52	87,580 98	24 5 78 7 50	73 6 34	31	24 21 14	31	24 21 14	
	402,062	1,025 89	23,221 62	31,422 22	2,995 93	29,298 17	2,303 46	1,120 96	91,388 25	26 5 78 7 82	74 7 28	57	28 22 73	57	28 22 73	
	389,354	980 51	22,528 58	31,039 90	2,765 22	27,621 43	3,438 36	1,639 21	90,013 21	25 5 79 7 97	71 7 09	88	42 23 11	88	42 23 11	
	414,617	990 38	23,610 22	34,128 75	2,703 03	26,865 03	2,739 65	1,684 24	92,721 30	24 5 69 8 23	65 6 48	66	41 22 36	66	41 22 36	
1897—Jan.. Feb.. Mar.. April.. May.. June..	378,342	1,132 09	21,666 82	33,312 29	2,573 31	23,287 48	4,071 46	2,020 74	88,064 19	25 5 73 8 80	68 6 16	1 08	53 23 27	1 08	53 23 27	
	378,390	994 14	21,695 19	33,770 57	2,966 38	24,320 40	2,841 31	2,012 40	88,600 45	26 5 73 8 93	78 6 43	75	53 23 41	75	53 23 41	
	358,647	980 10	21,255 00	30,040 44	3,213 69	22,996 76	3,660 62	2,652 10	84,798 71	27 5 93 8 38	90 6 41	1 02	74 23 65	1 02	74 23 65	
	348,721	983 74	20,043 22	27,592 21	2,540 61	16,675 77	1,898 17	2,252 62	71,916 34	28 5 74 7 91	72 4 78	52	67 20 62	52	67 20 62	
Totals..	419,381	983 58	23,410 03	37,070 63	2,297 18	15,081 22	2,473 55	568 43	81,884 62	23 5 58 8 84	55 3 59	59	14 19 52	59	14 19 52	
	404,557	993 42	22,986 22	32,544 85	2,104 58	12,616 54	1,458 19	815 07	73,518 87	25 5 68 8 04	52 3 12	36	20 18 17	36	20 18 17	
	375,729	1,090 08	21,457 41	26,840 62	1,310 03	14,216 24	1,982 24	453 97	67,350 59	25 5 71 7 14	35 3 78	53	12 17 92	53	12 17 92	
	371,093	1,024 35	21,483 54	26,798 57	2,332 82	22,634 32	2,404 83	731 35	77,409 78	27 5 79 7 22	63 6 09	65	20 20 85	65	20 20 85	
Totals..	4,655,171	12,160 85	267,291 80	375,635 35	30,848 49	261,880 32	30,498 81	16,931 67	995,247 29	26 5 74 8 07	66 5 62	65	36 21 38	65	36 21 38	

Moncton, N.B., 30th June, 1897.

JOHN SUTTON,
Mechanical Accountant.

E.—INTERCOLONIAL RAILWAY.

GENERAL STATEMENT of the Expenses of the Mechanical Department, year ended 30th June, 1897.

The miles run by trains.....	3,779,283
do engines.....	4,655,171
do cars.....	40,823,781
do snow ploughs.....	42,065
	\$ cts.
Cost of locomotive power.....	995,247 29
Cost of car repairs :	\$ cts.
Repairs to passenger cars.....	84,793 82
do postal, express and baggage.....	20,976 44
do freight cars and vans.....	231,203 22
do snows ploughs and flangers.....	3,771 23
Oil and waste for packing.....	22,954 90
	363,699 61
	\$ cts.
The cost of locomotive power per 100 miles run by trains.....	26 33
do do do engines.....	21 38
do do do cars.....	2 44
	\$ cts.
The cost of repairs to cars and ploughs per 100 miles run by trains.....	9 02
do do do engines.....	7 30
do do do cars and ploughs.....	0 83
	\$ cts.
The cost of oil and waste for packing per 100 miles run by train.....	0 61
do do do engines.....	0 49
do do do cars and ploughs.....	0 05
	\$ cts.
The cost of repairs to cars per 100 miles run by them :	
Passenger.....	1 46
Postal, express and baggage.....	0 68
Freight cars and vans.....	0 72
Ploughs and flangers.....	8 96

Department of Railways and Canals.

RETURN OF ACCIDENTS AND CASUALTIES

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1896.						
July 6.	22:20		Shunting..		J. Walsh	121
do 7.	14:25	Special..	Freight	J. L. Chisholm.	L. Starratt	174
do 9.	15:00	15	do	Geo. C. Keys	G. Feetham	145
do 22.	13:30		Shunting..	E. S. Vye.	A. McCabe	60
do 27.	14:00		do		R. James	100
Aug. 3	20:10	46	Express	A. Bernier.	Jno. Devereaux.	159
do 11.	20:50	66	Accommodation.	W. Foster	A. Scott.	106
do 20.	10:30	5	Freight	R. A. Rainnie.	W. Gross	8
do 22.	16:40		Shunting..		Geo. Curry.	121
do 25.	17:30	Special..	Freight	H. McDormand.	D. W. Duncan	7
do 29.	18:40	do	Passenger	H. D. Fraser.	P. O'Toole.	101
do 31.	16:50	38	Freight	J. W. Henderson.	R. Bulmer.	109
Sept. 6.	8:50	34	Express	J. Coffey.	W. Wall.	148
do 8.	12:50	Q. C. R.	Shunting..	— Dawson	M. G. Couture.	9
do 16.	9:25	Special..	Freight	E. Rioux	L. Sheedy	193
do 17.						
do 20.	15:00	Special..	Freight	L. Belanger	F. W. Henry	78
do 22.	16:00	33	Express	W. J. Dickson	J. W. Nairn.	172
do 24.						
do 25.	12:25	31	Accommodation.	J. McFadgen	J. H. Moore.	44
do 28.	22:30	Special..	Freight	N. Hopper	R. Kennedy	178
Oct. 1.	7:00	3	Accommodation.	D. McQuarrie	R. Carr.	65
do 5.	19:00		Shunting..		J. Champion	122
do 13.	4:10	Special..	Freight	N. Hopper	H. McDonald.	179
do 14.	15:00	42	do	J. A. Bernier.	A. Mathews.	183
do 26.	1:20	Special..	do	T. C. Ayer.	A. Sharpe	152
do 30.	18:25	48	Accommodation.	Jos. Guay.	D. Taylor	33
					M. Normand	37
Nov. 2.	13:00	Special..	Working	J. C. Barnhill	E. Kennedy	115
do 2.						
do 6.	11:00	16	Freight	W. McClafferty.	Geo. Feetham	145
do 6.	15:00	Special..	do	J. B. Dubé	T. Matheson.	183
do 6.	22:00					
do 7.	18:23	2	Express	D. Rutherford	Wm. Wall.	148
do 10.	11:05	37	Freight	M. Cummings.	Jas. Stratton.	175
do 13.	10:00		Shunting..		T. O'Brien.	188
do 16.	9:30	Special..	Freight	T. C. Ayer.	W. E. Hunter	136
do 16.	14:30	6	do	R. A. Rainnie.	W. Gross	8

Department of Railways and Canals

RAILWAY.

line of the Intercolonial Railway during the Year ended 30th June, 1897.

Place of Accident.	Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Halifax.....	D. Dickson.....	Employee..	While uncoupling engine from cars.	Finger injured..	Accidental.
Windsor Junct'n	Henry Murray..	do ..	While coupling cars	Hand injured...	
do	Wm. Ellis	do ..	do	Finger injured..	
New Castle.....	E. S. Vye	do ..	do	do	
St. John	Geo. Fryers.....	do ..	do	Arm injured...	
Near Campbellton.	E. G. Henry.....	do ..	Stone thrown through window of engine cab.	Face cut.....	
New Glasgow...	Philip Ryan.....	Neither....	Attempting to jump on train in motion.	Fatal	
Near Norton....	A. Barnes	Employee..	While trying to fasten arm of hay press which was loose on flat car.	Back injured....	
Cotton Factory Siding, Halifax	Chas. Waurnell..	do ..	Fell off car in motion.....	Foot injured....	
Ferrona Junct'n.	Louis Douglas..	do ..	Caught between cars while shunting.	Slightly injured.	
Prince's Lodge..	Hugh McNeil..	Passenger ..	Fell off train in motion...	Face and hands scratched.	Accidental.
Kent Junction..	J. W. Henderson	Employee..	While coupling cars	Thumb injured..	
Truro	Jno. Hamilton..	Neither....	Jumped off train in motion.	Head & shoulder injured.	
Lévis	F. Couture	do	Walking on track	Fatal	
St. Henri.....	A. Després	Employee..	While coupling cars	Arm injured....	
Moncton	Frank Landry..	do	While working with a moulding machine.	Hand injured...	
1 mile east of Ste. Flavie.	A. J. McDonald	do ..	Gauge glass of engine bursting.	Shoulder injured	
Bible Hill	Mr. Pitcher.....	Passenger ..	Jumped off train in motion.	Face injured....	
Moncton Shope..	Jas. Anderson..	Employee..	Fell off roof of baggage car on which he was working.	Considerably injured.	
Shediac.....	J. McFadgen...	do ..	Fell while running to get on train.	Head injured...	
Miller's Siding..	Fred. Archibald.	do ..	While coupling cars	Hand injured...	Accidental.
Moncton.....	M. Hicks	do ..	While coupling engine to cars.	do	
Truro	Peter Carle.....	do ..	Jumped off car in motion..	Leg injured.....	
Elmsdale	A. Morgan.....	do ..	Fell off tender of engine...	Wrist sprained..	
Near Sandy Bay Siding.	Elie Brunelle...	Passenger ..	Jumped off train in motion.	Considerably injured.	
New Castle.....	David Taylor...	Employee..	Jumped off engine in motion.	Head injured...	
St. Michel	Mrs. Beauregard	Passenger ..	Fell off station platform after stepping off train.	Slightly injured.	
Ballast Pit, Windsor Junc.	Wm. Yorston...	Employee..	While assisting to put cars on track.	Finger injured..	
St. Moise	L. Durette.....	do ..	Handle of pumper broke causing him to fall off car, which passed over him.	Considerably injured.	
Windsor Junct'n	E. Mattatall	do ..	While unloading freight...	Foot injured....	Accidental.
½ mile east of Sayabec	T. Matheson	do ..	Run off of train	Slightly injured.	
do	A. Savidant	do ..	do	do	
do	C. Killam	do ..	While assisting to put cars on track.	Hips injured....	
Halifax	John Tobin.....	Neither....	Walking on track	Fatal	
Chatham Junct'n	C. Rushton.....	Employee..	While unloading freight...	Foot injured....	
Halifax	Jos. Carney.....	do ..	Car on which he was working shunted against another car.	Slightly injured.	
Harcourt. . . .	C. Dixon	do ..	While coupling van to snow plough.	Hand injured..	
Sussex.	W. H. Wilbur..	do ..	Struck by eng. while shunting.	Slightly injured	

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1896.						
Nov. 18..	12:45	Special..	Working.....	J. L. Barnhill.....	E. Kennedy	115
do 18..	15:05	33	Express	J. Coffey	Wm. Wall.....	148
do 19..	4:39	33	Express	M. Letarte.....	Jno. Cameron.....	153
do 24..	9:00		Shunting.....		Harry Como..	191
do 25..	21:05	Special..	Freight	Jas. Swetnam.....	{ Wm. Coffey.....	159
Dec. 1..	12:30	do ..	Working .	J. L. Barnhill.....	{ Geo. Morrison.....	136
do 3..					E. Kennedy	115
do 14..						
do 18..	19:35	4	Express	D. McQuarry	R. Carr.	65
do 31..		Special..	Freight	A. Calder.....	H. Stewart.....	166
1897.						
Jan. 15..	12:35	do ..	do	do	do	46
do 21..	13:00	55	do	Jas. Holmes..	Alex. Dunbar.....	15
do 22..	15:30	Special..	do	J. Buchanan.....	J. A. McDonald....	57
do 26..	12:25	25	Express	Jas. Millican...	Sam. Trider	150

RAILWAY

Place of Accident.	Name of Persons injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Waddell's Dump, Dartmouth Br. 2 miles west of Stewiacke. Causapscal.....	Murray Crockett	Employee..	While coupling cars.	Finger injured..	
	Henry Densmore	Neither...	Walking on track.....	Fatal.....	Accidental.
	J. W. Myles....	Employee..	Fell off tender of engine ..	Fatal; died 2 days after accident.	No inquest.
St. John.....	O. S. Irvine.....	do ..	While coupling cars.....	Head injured...	
Chatham Junction.	T. Anderson....	do ..	do ..	Hand injured...	
Dartmouth Branch.	John Tufts.....	do ..	Fell between two flat cars in motion.	Back injured....	
Red Pine Bridge	Fred. Mitchell..	do ..	Fell off bridge on which he was working.	Hip injured	
Near Trois Saumons.	Ed. Lavoie (deaf mute).	Neither ..	Found dead alongside of track; supposed to have been struck by a train.	Fatal.....	Found dead.
Anderson's Crossing, near Salisbury.	Mrs. Ryder.....	do	Crossing track in team.....	Seriously injured	
Antigonish	Alex. McDougall	Employee..	Fell off car in motion ..	Ankle and heel injured.	
Tracadie.....	Simon Petipas ..	do ..	Hand car run into by train.	Seriously injured	
Antigonish	D. R. Sutherland	do ..	While coupling cars.	Thumb injured..	
1½ miles west of Hopewell.	Hy. Shattick....	Neither.....	Walking on track.....	Back injured....	
	A. Edgecombe..	Mail Clerk..	Run off of train	Fatal	Attached.
	Miss Patriquin..	Passenger...	do	do	do
	Jno. Barnes.....	do ..	do	Slightly injured.	
	R. R. Wallace....	do ..	do	Face & finger cut	
	W. J. Wallace....	do ..	do	Face scratched..	
	R. F. Keith.....	do ..	do	Ankle sprained..	
	Robt. McNeil....	do ..	do	Face scratched..	
	J. W. Fenton....	do ..	do	Slight bruise on forehead.	
	Boswell White..	do ..	do	Slightly injured.	
	Miss Effie Sears.	do ..	do	General shaking up.	
	Hon. F. W. Borden.	do ..	do	Face and back injured.	
	Dr. Calkin.....	do ..	do	Slight shaking up	
	Ed. Reid.....	do ..	do	Face cut.....	
	Robt. McDonald	do ..	do	Arm injured....	
	Chas. Fawcett...	do ..	do	Slightly injured.	
	Walter Cahill...	do ..	do	Head injured...	
	H. H. Colpitts..	do ..	do	General shaking up.	
	Bazile Le Blanc.	do ..	do	Scalp bruise	
	H. M. Cole.....	do ..	do	Face cut.....	
	Ferd. Bourque..	do ..	do	Slight bruise about the chest.	
	E. White.....	do ..	do	Head cut.....	
	Miss Gallagher..	do ..	do	Slight bruise on wrist.	
	Mrs. Hodge.....	do ..	do	Head injured....	
	Eddie H. Davies (child).	do ..	do	Very slightly injured.	
	J. E. Buckley...	do ..	do	Legs injured....	
	Ed. Blanche....	do ..	do	Head injured....	
Palmer's Pond, near Dorchester.					

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1897.						
Jan. 26..	12 25	25	Express	Jas. Millican	S. Trider.....	150
Feb. 16..	14 50	Special..	Freight	Jno. Henderson.....	Jno. Stewart, jr.....	207
do 23..	3 40	33	Express	Geo. Walker.....	J. Cameron.....	153
Mar. 1..	9 20	.....	Pilot.....	Ls. Proulx	Ls. Dutil.....	126
do 6..	16 40	37	Freight	J. W. Henderson.....	J. Morton.....	.....
do 12..	16 30	.....	Engine.....	.....	Thos. J. Scott	13
do 18..	23 20	34	Express	M. Letarte.....	J. Cameron.....	152
do 19..	8 00	Special..	Working.....	S. Bernier.....	{ T. Matheson..... W. Murphy.....	77 30
do 25..	16 15	.....	Light Engine.....	.....	T. W. Henry.....	32
Apr. 2..	15 20	34	Express.....	M. Letarte.....	Ls. Sheedy	125
do 3..	.....	.....	.....	.....	.....	.....
do 13..	14 30	.....	Shunting .....	.....	A. Sproull.....	23
do 19..	19 00	Special..	Freight	Jas. Buchanan.....	Jas. O'Toole.....	178
do 26..	21 35	do ..	do	E. Rioux.....	L. Sheedy	205
May 4..	20 00	.....	Shunting .....	.....	T. Wilkins.....	35
do 20..	9 10	Special..	Freight.....	Ls. Belanger	F. Henry.....	11
do 23..	23 45	do ..	do	H. Begin.....	{ Ls. Sheedy..... A. Boisvert.....	5 205
do 24..	5 55	14	Accommodation.....	F. A. Davison.....	R. McDonald.....	134
do 30..	24 30	Special..	Freight.....	S. Bernier.....	Wm. Fraser.....	11
June 1..	17 30	.....	Shunting .....	.....	R. James.....	190
do 19..	1 15	Special..	Freight	J. B. Crockett.....	E. Rushton.....	207
do 21..	23 00	.....	.....	.....	.....	.....

Department of Railways and Canals.

RAILWAY.

line of the Intercolonial Railway during the year ended 30th June, 1897—*Concluded.*

Place of Accident.	Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Palmer's Pond.	Wm. Wiltshire..	Employee. C	Run off of train.....	Slight cut on chest.	
	J. S. Barbee....	P.R. do ..	do	Head and leg injured.	
	R. H. Webb....	do ..	do	Head and body injured.	
	A. Burch.....	do ..	do	Head and hand cut.	
	A. Nugent.....	do ..	do	Back injured....	
	Wm. Russell....	do ..	do	Back and arms scalded.	
	H. B. Peck....	Mail Clerk..	do	Face and body injured.	
	— Smith.....	Express Messenger.	do	Head and body injured.	
	J. W. Howard..	News Agent	do	Hips injured....	
	Percy Campbell.	Employee..	do	Legs injured....	
	Jas. Linkletter.	do ..	do	Ear cut.....	
	Isaac Campbell.	do ..	do	Legs and hips bruised.	
Palmer's Pond.	C. C. Thomson..	do ..	do	Arm injured....	Accidental.
	John Berry....	do ..	do	Slight shaking up	
	Jas. Millican....	do ..	do	Face and body bruised.	
	W. E. Dixon (deaf and dumb).	Neither....	Walking on track.....	Fatal	
Causapscal.....	G. Gagnon.....	Employee..	While trying to stop steam escaping from hose at coupling.	Hand injured...	do
Levis	Aug. Fafard....	Neither....	Crossing track in team	Fatal	
Hodgin's Platform, near Jacques River.	Jas. Young....	do ..	Walking on track.....	Leg and head injured.	Attached.
Campbellton....	Mrs. David Grégoire.	do ..	Horse ran away, throwing her out of sleigh and under engine.	Fatal	
Beau Rivage...	J. Cameron....	Employee..	Run off of train	Slightly injured.	
	O. Gilker	do ..	do	do ..	
	B. Mason	do ..	do	do ..	
1 mile E. of Maria	Wm. Murphy ..	do ..	do	Head and foot injured.	
Baie des Chaleurs Railway.	D. McLaughlin..	do ..	do	Leg and back injured.	
Dalhousie Junct.	T. McLean.....	do ..	While coupling engine to cars.	Finger injured .	Accidental.
St. Valier	Vital Roy	Neither....	Lying on track.....	Fatal	
Apohaqui.....	F. L. Gross....	Employee ..	While trying to extinguish fire in station.	Slightly injured.	
Pictou	Henry Ward....	do ..	Attempting to get on car in motion.	do ..	
Stellarton	E. Matatall....	do ..	Slipped off pilot while coupling engine to car.	Leg injured	No inquest.
St. Paschal.....	X. Michaud ..	Neither....	Crossing track.....	Fatal	
St. John	J. Maher.....	Employee ..	While coupling engine to car.	Thumb injured..	
Amqui.....	Jos. Martin....	do ..	do ..	Finger injured..	Found dead on track.
Chaudière	A. Côté.....	do ..	Supposed to have been struck by a train while on a hand car.	Fatal	
Stewiacke	Mrs. Andrews ..	Neither....	Jumped off train in motion.	Slightly injured.	Accidental.
Ste. Flavie.....	J. Deschamplains	Employee ..	While turning switch.	Ankle sprained..	
St. John	Thos. Connolly.. (aged 6 years.)	Neither....	Standing on track between cars.	Head and hand slightly injur'd	
Spring Hill.	H. Bray	Employee ..	While coupling cars.	Fatal	Accidental.
St. John	Joseph Higgins.	Neither....	Found lying alongside of track.	Slightly injured.	

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE GENERAL MANAGER,
MONCTON, N.B., 12th November, 1897.

SIR,—As directed by you, the Baie des Chaleurs Railway was maintained and operated from 26th December, 1896, to 31st May, 1897.

The length of railway was seventy-nine miles, extending from its junction with the Intercolonial Railway at Metapedia station to Caplin, the end of the line.

I inclose an account showing the gross earnings and working expenses for the five months.

The working expenses were.....	\$18,679 97
The gross earnings were.....	6,725 08
	<u>\$11,954 89</u>

The cost of cleaning snow and ice was \$4,812.24 and is included in the working expenses.

There was a great freshet and ice jam in the Restigouche river on the 28th April, 1897, and the cost of repairing the damages to the road bed from the causes was over one thousand dollars.

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

D. POTTINGER,

General Manager Government Railways.

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

INTERCOLONIAL RAILWAY.

OPERATING ACCOUNT—BAIE DES CHALEURS RAILWAY.

Five Months ended 31st May, 1897.

Expenditure.	Five Months ended 31st May, 1897.	Revenue.	Five Months ended 31st May, 1897.
	\$ cts.		\$ cts.
Locomotive power.....	6,198 00	Passenger traffic.....	3,079 91
Car expenses.....	2,503 28	Freight traffic.....	3,617 87
Maintenance of way.....	9,149 21	Express earnings.....	27 30
Station expenses.....	792 25		
General charges.....	37 23	Balance.....	6,725 08
			11,954 89
Total.....	18,679 97	Total.....	18,679 97

Certified correct,

T. WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N. B., 30th June, 1897.

Department of Railways and Canals.

WINDSOR BRANCH RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
MONCTON, N.B., 9th November, 1897.

SIR,—I have the honour to submit the following statements showing the results of the working of the Windsor Branch Railway for the year ended the 30th June, 1897 :—

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

I also send you the report of the chief engineer on the maintenance and condition of the permanent way and works.

This line, 32 miles in length, was operated during the year by the Dominion Atlantic Railway Company, on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings, the balance, one-third, being paid over to the Government, the latter maintaining the line.

There was an increase in the earnings accruing to the Government when compared with last year, as follows :—

Earnings in 1896-97.....	\$40,603 23
“ 1895-96.....	36,561 83
Increase.....	<u>\$4,041 40</u>

The earnings from passenger traffic increased five hundred dollars and thirty cents, and the earnings from freight traffic increased three thousand five hundred and forty-four dollars and seventy-eight cents.

There was a decrease in the cost of maintenance as follows :—

In 1895-96.....	\$16,476 46
1896-97.....	10,821 04
Decrease.....	<u>\$5,655 42</u>

The earnings and expenses compare as follows :—

Earnings.....	\$40,603 23
Expenses.....	10,821 04
Net earnings.....	<u>\$29,782 19</u>

The necessary repairs and renewals were made, and the permanent way and works are in good order.

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

D. POTTINGER,
General Manager Government Railways.

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

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE CHIEF ENGINEER,
MONCTON, N. B., 9th November, 1897.

SIR,—I have the honour to submit my report of the maintenance of the Windsor Branch for the year ending 30th June, 1897.

TRACK.

During the year, 7 sets of guard rail fasteners were put in, also two new $4\frac{1}{2}$ steel rail frogs.

TIES.

One thousand two hundred ordinary ties, and 4 sets of switch ties were renewed during the past year.

FENCING.

During the year, 1,439 rods of new barbed wire and woven fence was erected at various points throughout the branch. Heavy repairs were also made to existing fences.

WHARFS AND TRESTLES.

About 200 feet of the wharf at Windsor was renewed.

BUILDINGS AND PLATFORMS.

At Windsor, one side of the freight shed was re-shingled, and the passenger platforms renewed 300 by 12 feet.

At Ellershouse, the passenger platform was lowered two feet, and necessary repairs made to the station building.

Necessary repairs were made to all other station buildings throughout the line.

BRIDGES AND CULVERTS.

Renewed one hard pine bent and two stringers under Jordan Bridge.

A number of cattle guards were repaired throughout the branch.

One mile east of Beaver Bank, a box culvert was renewed with stone.

Near Mount Uniacke, a culvert which had broken down, was renewed with 72 feet of 24 inch iron pipe.

GENERAL.

Additional siding accommodation was provided to the extent of 930 feet.

Seven new farm gates and a number of farm crossings were renewed at various points throughout the branch.

Necessary repairs were made to the scales at Newport station.

The track on this branch is in good order throughout its entire length.

I have the honour to be, sir,

Your obedient servant,

WM. B. MACKENZIE,
Chief Engineer.

D. POTTINGER, Esq.,
General Manager Government Railways,
Moncton.

Department of Railways and Canals.

No. 1.—WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT, Year ended 30th June, 1897.

Previous Year.	Expenditure.	Year ended 30th June, 1897.	Previous Year.	Earnings.	Year ended 30th June, 1897.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
16,476 46	Maintenance way and works	10,821 04	12,878 28	Passenger traffic ..	13,378 58
20,085 37	Balance	29,782 19	22,528 03	Freight traffic	26,072 81
			1,155 52	Mails	1,151 84
36,561 83		40,603 23	36,561 83		40,603 23

E. & O. E.

T. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1897.

No. 2.—WINDSOR BRANCH RAILWAY.

MAINTENANCE Way and Works, Year ended 30th June, 1897.

Previous Year.		Year ended 30th June, 1897.
\$ cts.		\$ cts.
7,396 05	Repairs of track	5,691 11
3,869 15	Rails and fastenings	201 42
2,696 20	Ties	1,135 12
47 20	Bridges	94 81
28 07	Signals	19 34
3 58	Culverts, cattle guards, &c.	887 38
541 61	Wharf at Windsor	441 20
543 30	Buildings and platforms	383 57
5 12	Hand-cars and trollies	28 49
346 81	Removing snow and ice.	350 07
145 13	Tools and repairs of same.	136 07
433 13	Fencing	975 30
408 95	Accountant's office and expenses	430 86
12 16	Miscellaneous	46 30
16,476 46		10,821 04

E. & O. E.

T. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1897.

No. 3.—WINDSOR BRANCH RAILWAY.

DR. GENERAL BALANCE, Year ended 30th June, 1897.

CR.

1897.		\$ cts.	1897.		\$ cts.
June 30...	To old rails.....	10,694 28	June 30...	By Dominion Account....	12,874 68
	Stores department.....	2,180 40			
		12,874 68			12,874 68

E. & O. E.

T. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON N.B., 30th June, 1897.

No. 4.—WINDSOR BRANCH RAILWAY.

MONTHLY STATEMENT OF RECEIPTS—One-third Earnings.

Month.	Passenger Traffic.	Freight Traffic.	Mails.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1896—July.....	1,673 48	1,463 54	96 91	3,233 93
August.....	2,058 08	1,505 72	96 91	3,660 71
September.....	1,948 27	3,527 05	96 90	5,572 22
October.....	1,186 81	3,879 32	96 91	5,163 04
November.....	886 77	3,086 14	96 90	4,069 81
December.....	856 75	1,869 11	96 91	2,822 77
1897—January.....	672 47	1,884 23	94 45	2,651 15
February.....	535 21	2,206 19	94 45	2,835 85
March.....	685 03	1,954 64	94 46	2,734 13
April.....	889 28	1,865 83	95 68	2,850 79
May.....	877 03	1,451 76	95 68	2,424 47
June.....	1,109 46	1,379 28	95 68	2,584 36
Totals.....	13,378 58	26,072 81	1,151 84	40,603 23

E. & O. E.

T. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1897.

Department of Railways and Canals

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
MONCTON, N.B., 11th November, 1897.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway, for the fiscal year ended the 30th June, 1897.

I also inclose the report of the superintendent, including statements of the various accounts.

The mileage of railway in operation was the same as last year, 210 miles.

There was no expenditure on capital account during the year, the total cost of the railway on the 30th June, 1897, being \$3,750,565.38.

The working expenses for the year were	\$240,489 90
The gross earnings were.....	153,443 13
	<hr/>
	\$ 87,046 77

In comparison with the previous year, there was an increase in the working expenses of \$15,351.34, and an increase of earnings of \$6,966.59.

The increased earnings were in all classes of traffic; passenger traffic having increased \$336.95, freight traffic, \$4,480.74, and mails and sundries, \$2,148.90.

The number of passengers carried decreased 1,088, and the weight of freight increased 5,756 tons.

There was an increase in the quantity of oats, potatoes and roots, oysters, salt and eggs carried; and a decrease in flour and meal, fish, coal, starch, butter and cheese, and products of the forest.

The increase of expenditure was caused by the unusual expense of replacing the buildings and rolling stock destroyed by fire at Tignish on 30th August, 1896, and by the higher price paid for new rails.

Twelve and a-half miles of track were relaid with new steel rails of fifty pounds a yard, replacing iron rails weighing forty pounds a yard.

Three wooden bridges were replaced with steel ones.

One first-class passenger car, six box freight cars, three stock cars, eight platform cars, one snow plough and one flanger car were rebuilt in the railway shops.

The necessary repairs and renewals were made, and the railway and rolling stock are in a state of efficiency.

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

D. POTTINGER,
General Manager Government Railways.

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

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,
CHARLOTTETOWN, P. E. I., 30th September, 1897.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway for the fiscal year ended 30th June, 1897.

I also inclose the following statements prepared by the Accountant and Auditor, and Mechanical Accountant :—

- No. 1. Capital account.
2. Revenue account.
3. Locomotive power (abstract No. 1).
4. Car expenses (abstract No. 2).
5. Maintenance of Way and Works (abstract No. 3).
6. Station expenses (abstract No. 4).
7. General charges (abstract No. 5).
8. General stores account.
9. General balance.
10. Comparative statement of averages.
- A. Monthly statement of the cost of locomotive power.
- B. Statement of performance and consumption of locomotives.
- C. Monthly statement of car mileage.
- D. Statement showing number of locomotives, cars, snow-ploughs and flangers.
- E. Comparative statement of the expenses of the Mechanical Department.

The mileage of railway in operation during the year was the same as the preceding year, 210 miles.

CAPITAL ACCOUNT.

Total total expenditure on capital account to 30th June, 1896, was.....	\$ 3,750,565 38
No addition being made during the year, the total expenditure to 30th June, 1896, remains the same as the previous year.....	3,750,565 38

REVENUE ACCOUNT.

The earnings from freight traffic show a gratifying increase, as compared with the two preceding years. While there was little or no demand for potatoes, considerable quantities of oats were sent to the English markets, a large portion of which was carried to the principal shipping ports by rail. There is very little change to note in the passenger business.

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

Gross earnings.....	\$ 153,443 13
Working expenses.....	240,489 90
	<hr/>
	\$ 87,046 77

Department of Railways and Canals.

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

In 1896-97.....	\$ 153,443 13
In 1895-96.....	146,476 54
	<hr/>
	\$ 6,966 59

The earnings from passenger traffic compare as follows :—

In 1896-97.....	\$ 62,695 07
In 1895-96.....	62,358 12
	<hr/>
	\$ 336 95

The earnings from freight traffic compare as follows :—

In 1896-97.....	\$ 69,872 66
In 1895-96.....	65,391 92
	<hr/>
	\$ 4,480 74

The earnings from mails and sundries compare as follows :—

In 1896-97.....	\$ 20,875 40
In 1895-96.....	18,726 50
	<hr/>
	\$ 2,148 90

The numbers of passengers carried compare as follows :—

In 1896-97.....	121,498
In 1895-96.....	122,586
	<hr/>
	1,088

The weight of freight carried compares as follows :—

	Tons.
In 1896-97.....	52,151
In 1895-96.....	46,395
	<hr/>
	5,756

WORKING EXPENSES.

The working expenses are \$15,351.34 in excess of the previous year. Much more, however, than the usual amount of work was performed during the year.

A disastrous fire which started in the village of Tignish on the 30th August, 1896, destroyed the following railway property : Engine-house and contents, including Engine No. 6, coal shed and hoisting apparatus, 300 tons coal, agent's dwelling and car sheds combined, 6 box cars, 1 flanger car and one snow-plough, the whole valued at \$11,000 or \$12,000. All this property has been replaced with the exception of the flanger. The yard at Tignish has been entirely remodelled, and the several new buildings much more conveniently located than those they replaced. A new first class car of modern design and finish, was built to replace one of the old coaches. Several platform and stock cars were also built, and necessary heavy repairs were made to a large number of box cars, thus adding largely to the expenditure under this head.

The cost price of steel rails purchased during the year exceeded that of the same quantity bought the preceding year by \$5,239.

The old wooden bridges at Bradalbane, Peakes and Naufrage were replaced by steel spans, and that at Aliberton was replaced by a double cedar box culvert.

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

In 1896-97	\$240,489 90
1895-96	225,138 56
	<hr/>
	\$ 15,351 34

The averages compare with the previous year as follows :—

Per mile run by engines :—

	Cents.
In 1896-97.....	70·82
1895-96.....	59·38

Per mile run by trains :—

In 1896-97.....	94·67
1895-96.....	91·60

Per mile of railway :—

In 1896-97.....	\$1,145 19
1895-96.....	1,072 09

TRACK.

One thousand tons steel rails, exclusive of fastenings, were laid during the year to replace $12\frac{1}{2}$ miles old iron rails. Eight miles of the new rails were laid between Piusville and Alberton, and $4\frac{1}{2}$ miles between Mt. Stewart and Peakes. Steel rails now extend from Charlottetown west to Alberton, and from Royalty Junction east to within two miles of Peakes, the number of miles of track relaid with steel rails at the close of the year being 139, leaving 71 miles old iron rails still to be replaced.

All the tracks in Tignish yard, with the exception of a private siding, were taken up and relaid. One thousand cubic yards of earth were used in grading new tracks and round new buildings in Tignish yard. The turntable was moved and rebuilt.

At Souris a new foundation was put under the track scales, and six sets switch gear were renewed in yards relaid with steel rails.

TIES.

There were renewed during the year 65,000 ordinary ties, 35 sets switch ties and 25 headblocks and frames, besides 2,350 culled ties being used in yards and sidings.

BALLASTING.

During the year 13,540 cubic yards of ballast were distributed where most required.

FENCING.

Fifteen and a quarter miles of old fence were replaced by 49,305 feet woven wire and 31,138 feet barbed wire fence. 5,740 feet snow fence were rebuilt and 1,429 feet repaired. 100 panels portable snow fence were built. One hundred farmers' gates were replaced by woven wire gates, and in repairing old fence along the line a large amount of material was used and labour expended.

SIDINGS.

The curve at Colville station was moved in 12 feet, and the siding taken up and relaid on the opposite side of the track in order to afford better accommodation to the public.

The siding at St. Louis was lengthened 300 feet.

Department of Railways and Canals

BRIDGES AND CULVERTS.

At Bradalbane, the old wooden bridge was replaced by a forty-four foot steel girder, resting on cedar abutments built to close up two spans.

The old wooden bridge at Peakes was replaced by a 36 foot steel span with standard top, resting on cedar abutments, shortening the original structure 30 feet.

The centre span of wooden bridge at Naufrage was replaced by a 44-foot steel girder, and standard deck put on.

A pile bent was put under bridge at Marie.

A pile bent was also put under Midgell bridge.

St. Peter's bridge was painted. Bridge at Five Houses was also painted. A standard deck was put on Pawe's bridge.

Two stringers, hammer beam and struts of Emerald bridge were renewed.

The bridge on overhead public road crossing at Souris was rebuilt.

The old wooden bridge at Alberton was replaced by a double box cedar culvert.

All other bridges requiring minor repairs have been attended to.

Twenty-five cattle guards were rebuilt.

Eight timber culverts were rebuilt and one replaced with a 12-inch iron pipe culvert.

BUILDINGS AND PLATFORMS.

At Tignish a new station and agent's dwelling combined, an engine-house with three pits and a coal shed capable of holding 500 tons coal, were erected to replace the buildings destroyed by fire.

A new flag station and platform were built at Duvar, and station painted.

At Harmony flag station and platform were rebuilt, and station painted.

Platform renewed at Portage.

At Ellerslie platform was replaced.

At Miscouche platform was renewed.

Platform was renewed at Travellers Rest.

Platform at Clyde was replaced.

Platform was renewed at New Annan.

At St. Teresa platform was renewed.

At Brackley Point the platform was replaced.

The platform at Union was replaced.

Platform at Douglass was renewed.

Repairs were made to station platform wherever necessary.

Bloomfield station was re-painted outside.

At Tignish, Wellington, Miscouche, Summerside, Kensington, North Wiltshire, Royalty Junction and York, the offices and waiting rooms were whitewashed and otherwise renovated.

Hunter River Station was re-painted outside.

A new kitchen 14 x 20 was built at Morell and the station and dwelling painted outside and inside.

At Mount Stewart and Port Hill the ceilings of freight shed were sheathed.

The warehouse on wharf at Georgetown was raised two feet, and the timber foundation under same was renewed.

Seventy feet of the train shed at Georgetown was cut off, hauled to the wharf and attached to the warehouse thereon. A new three-inch plank floor was laid in this building, and a timber foundation placed under it. The roof was also re-shingled, and the building otherwise suitably fitted up for warehouse purposes.

The roof of engine-house at Georgetown was repaired. One side of the roof of Georgetown station was re-shingled, a new end put on building and refitted, the baggage room was moved, and floor relaid.

The agent's dwelling at Royalty Junction was raised, sills renewed, and the house painted outside, and the inside painted and thoroughly renovated.

The roofs of Cape Traverse station and baggage room were re-shingled.

Roof of engine-house at Cape Traverse was repaired, a well was bored and pump put in for use of agent.

The cattle pen at Alberton was rebuilt and enlarged.

A new pitch and gravel roof was put on O'Leary station and an addition of 30 feet was made to the freight shed, thus affording much needed warehouse accommodation.

The roof of engine-house at Summerside was partially re-shingled.

Coal shed at Summerside was raised two feet, the floor renewed with three-inch plank, and the sides rebuilt.

New water closets were supplied at Georgetown, Cardigan, Cape Traverse, Tignish and Bedford.

At Tignish a bored well with pump was put down.

The agent's dwelling at Alberton was raised, and the foundation rebuilt.

The roof of engine-house at Souris was partially re-shingled.

A new chimney, replacing three old ones, was built at Kensington station.

One side of roof of Port Hill station was re-shingled.

Roof of engine-house at Summerside was partially re-shingled.

At Charlottetown the roof of station was repaired by having 20 squares 3 ply roofing put on. The roof of freight house was partially re-shingled, 30 M. shingles being used. The paint shop was extended several feet, the skylights repaired and the roof partially re-shingled. The floors in roundhouse and machine shop were partially renewed with three-inch plank. Four new skylights were placed in roof of machine shop, and five skylights in roof of car shop.

A second floor was placed in a portion of the freight shed, for the storage of light goods.

WHARFS.

In repairing Summerside wharf there were used 250 tons hemlock timber, 200 tons stone, 14 cars brush, 300 cubic yards clay, and 40 long piles.

Fifteen tons stone and 15 tons timber were used in repairing Alberton wharf.

Twenty thousand superficial feet 3-inch hemlock plank were used on wharf at Charlottetown.

In repairing wharf at Georgetown, 100 cubic yards ballast, 2 cars brush and 15 tons stone were used.

One hundred tons stone, 50 cubic yards clay and 500 feet 3-inch plank were used in repairs to Souris wharf.

ROLLING STOCK.

Following is a summary of the principal work done in the shops of the Mechanical Department :—

Locomotive repairs.

Eight engines received a general overhaul, one of which—the engine which went through the fire at Tignish—was largely rebuilt, and six engines received specific repairs. Engines were supplied with the following new parts: 1 driving axle, 8 eccentrics and straps, 2 pistons and rods, 4 crank pins, 4 cylinder covers, 4 guide bars, 1 reversing lever, 1 quadrant, 1 tumbling shaft, 1 engine truck, 4 tender trucks, 1 bell, 1 whistle, 2 lubricators, 2 pop safety valves, 2 boiler feeds, 1 tube sheet, 300 boiler tubes, 7 smoke stacks, 1 cab, 4 pilots, and 12 running boards.

Fourteen boilers were tested, 6 fire boxes patched, 500 tubes pieced, 4 smoke boxes patched, 16 pairs driving tires turned, 300 chilled wheels boxed and pressed on axles, 10,460 bolts forged and threaded and 2,170 lbs nuts tapped.

Car Shop.

One first class car, 6 box cars, 3 stock cars and 8 platform cars were rebuilt during the year. Three first class cars and 3 second class cars received a thorough overhauling,

Department of Railways and Canals.

two of the latter were furnished with new standard trucks, and new perforated seats and had new headlining put in.

Four first class and 6 second class cars received general repairs.

Fifty-five box cars received general overhaul, 9 of which had new roofs put on and standard drawbars were supplied to 7.

Twenty-five box cars and 25 platform cars received general repairs.

One snow-plough was rebuilt, and 3 received general overhaul, new trucks being put under one of them.

One flanger car was rebuilt and one conductor's van was fitted up as a flanger to replace that burned at Tignish.

The following, besides a lot of other work not elsewhere referred to, was done for the road and traffic departments: 4 hand cars and 5 trollies rebuilt, 3 hand cars and 1 trolley repaired, 4 freight trucks, and 2 baggage trucks built, 13 loading platforms and cattle stages built.

Paint Shop.

Two first class and 5 second class cars were painted and varnished.

Five first class and 2 second class cars were cleaned and varnished.

Thirty-five box and 8 platform cars were painted.

Two snow-ploughs and 2 flangers were painted.

Seven locomotives and tenders were painted and varnished, and 4 locomotives and tenders cleaned and varnished.

Brass Foundry.

Output during the year, 2,950 lbs. brass castings, 3,600 lbs. brass bearings, 300 lbs. battery zincs.

STORES.

The value of stores on hand on 30th June, 1897, was :—

General stores	\$ 39,854 16
Fuel	2,707 38
Rails and fastenings.	51,237 11
Old material serviceable	3,362 14
	<hr/>
	\$ 97,160 79

There were purchased during the year stores to the value of \$63,179.73.

GENERAL.

The rolling stock, roadbed and buildings have been maintained in excellent condition.

I inclose a return of minor casualties which occurred during the year.

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

G. A. SHARP,
Superintendent.

D. POTTINGER, Esq.,
General Manager Government Railways,
Moncton, N.B.

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

DR.

CAPITAL ACCOUNT.

CR.

1896.		\$ cts.	1896.		\$ cts.
June 30	To cost of road and equipment to date.....	3,750,565 38	June 30	By Dominion of Canada....	3,750,565 38
1897.			1897.		
June 30	To expenditure, year ended 30th June, 1897.....		June 30	do do	
		3,750,565 38			3,750,565 38

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

DR.

REVENUE ACCOUNT for year ended 30th June, 1897.

CR.

Previous Year.	Expenditure.	Year ended 30th June, 1897.	Previous Year.	Receipts.	Year ended 30th June, 1897.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
54,165 88	Locomotive power.....	55,991 60	62,358 12	Passenger traffic.....	62,695 07
34,221 54	Car expenses	41,967 07	65,391 92	Freight traffic	69,872 66
99,186 00	Maintenance of way and works	102,344 47	18,726 50	Mails and sundries.....	20,875 40
27,802 13	Station expenses.....	28,858 47	146,476 54	..... Total receipts.....	153,443 13
9,763 01	General charges.....	11,328 29	78,662 02	Balance.....	87,046 77
225,138 56	..... Totals.....	240,489 90	225,138 56	..... Totals.....	240,489 90

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

Department of Railways and Canals

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

LOCOMOTIVE POWER—(Abstract No. 1).

Previous Year.	Details.	Year ended 30th June, 1897.
\$ cts.		\$ cts.
754 36	Mechanical superintendent's salary, clerks, office and travelling expenses...	770 23
16,768 09	Wages of drivers, firemen and cleaners.....	18,313 54
13,355 93	Fuel.....	13,605 62
2,203 22	Oil, tallow, waste and small stores.....	2,220 88
19,329 96	Repairs to engines, tenders, and engine tools.....	19,134 27
617 62	Water, including pump and tank repairs.....	508 57
1,136 70	Miscellaneous.....	1,438 49
54,165 88	Totals.....	55,991 60

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

CAR EXPENSES—(Abstract No. 2).

Previous Year.	Details.	Year ended 30th June, 1897.
\$ cts.		\$ cts.
9,397 04	Repairs to passenger cars.....	8,988 98
2,436 17	do postal and baggage cars.....	1,434 46
3,858 18	do freight cars and vans.....	10,701 01
863 63	do snow-ploughs and flangers.....	1,303 43
14,076 57	Wages of conductors, train baggage-masters and brakemen.....	15,594 87
517 61	Oil and waste for packing.....	642 74
2,368 04	Small stores and fuel.....	2,428 10
704 30	Miscellaneous.....	873 48
34,221 54	Totals.....	41,967 07

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Previous Year.	Details.	Year ended 30th June, 1897.
\$ cts.		\$ cts.
296 84	Engineer's salary, clerks, office and travelling expenses	298 22
36,593 80	Wages in repairing roadway, fences and semaphores	37,794 51
17,071 86	Rails, chairs and spikes	19,262 81
24,540 34	Ties	21,330 73
8,109 78	Timber and lumber for repairs to bridges, cattle-guards, fences, &c.	8,035 04
1,904 31	Repairs to wharfs	1,587 90
7,078 24	do buildings and platforms	10,793 58
1,099 07	do tools	1,011 49
2,491 76	Clearing ice and snow	2,230 19
99,186 00	Totals	102,344 47

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

No. 6.—PRINCE EDWARD ISLAND RAILWAY.

STATION EXPENSES—(Abstract No. 4).

Previous Year.	Details.	Year ended 30th June, 1897.
\$ cts.		\$ cts.
20,999 74	Salaries and wages of station-masters, agents, clerks, telegraph operators, station baggage-masters, yardmasters, switchmen, watchmen and labourers	22,180 51
6,802 39	Fuel, oil, light, stationery and other incidental expenses	6,677 96
27,802 13	Totals	28,858 47

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

Department of Railways and Canals

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL CHARGES (Abstract No. 5).

Previous Year.	Details.	Year ended 30th June, 1897.
\$ cts.		\$ cts.
3,836 86	Superintendent's and train despatchers' salaries, clerks, office and travelling expenses	4,271 66
4,765 63	Accountant and auditor's, paymaster's and cashier's salaries, clerks, office and travelling expenses	4,765 95
301 50	Advertising	798 59
295 02	Damages to men, animals and goods	523 37
319 16	Telegraph expenses (not including pay to operators)	382 67
244 84	Miscellaneous	586 05
9,763 01	Totals	11,328 29

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of General Stores Account, Year ended 30th June, 1897.

1896.	Dr.	\$ cts.	\$ cts.
June 30...	To balance brought forward.....		115,228 03
1897.			
June 30...	To purchases during the year	63,179 73	
	Charges from other departments.....	18,028 20	
	Pay-rolls.....	1,219 33	
			82,427 26
1897.	Cr.		197,655 29
June 30...	By issues during the year		100,494 50
	Balance		
	{ Ordinary stores..... \$39,854 16		
	{ Fuel..... 2,707 38		
	{ Rails and fastenings on hand..... 51,237 11		
	{ Old material, serviceable..... 3,362 14		
			97,160 79

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

No. 9.—PRINCE EDWARD ISLAND RAILWAY.

DR.	GENERAL BALANCE.		CR.		
	\$	cts.	\$	cts.	
General stores.....	97,160	79	Dominion account.....	103,401	22
Cash.....	1,554	26	Accident insurance.....	2,625	65
Stations.....	930	96			
Post Office Department.....	4,744	90			
Militia Department.....	354	89			
Anglo-American Telegraph Co.	46	43			
Judge Weatherbe.....	30	00			
Sidney Grey.....	25	00			
Railway extension, Charlottetown....	812	83			
Belfast Branch Railway.....	261	43			
Intercolonial Railway.....	105	38			
Total.....	106,026	87	Total.....	106,026	87

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

Department of Railways and Canals.

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT of Averages, for Years ended 30th June, 1897 and 1898.

Details.	1897.	1896.
Mileage of railway open	210	210
Engine mileage	339,551	324,522
Train do	254,029	245,766
Car do	1,319,903	1,235,772
Receipts per engine mile	Cents. 45·19	45·14
do mile of railway	Dollars. 730·68	697·51
Percentage of passenger earnings to gross receipts	40·86	42·57
do freight do	45·54	44·64
do other do	13·60	12·79
Expenses per engine mile:—		
Drivers, firemen and cleaners' wages	5·39	5·16
Fuel	4·01	4·12
Oil, tallow, waste and small stores	0·66	0·68
Repairs to engines	5·63	5·96
Water and tank repairs	0·15	0·19
Miscellaneous	0·42	0·35
Mechanical superintendent's salary, office and travelling expenses	16·26	16·46
	0·23	0·23
Total	Cents. 16·49	16·69
Locomotive power per engine mile	16·49	16·69
Car expenses do	12·36	10·54
Maintenance, way and works do	30·14	30·57
Station expenses do	8·50	8·57
General charges do	3·33	3·01
Total per engine mile	Cents. 70·82	69·38
Locomotive power, per train mile	22·04	22·04
Car expenses do	16·52	13·92
Maintenance of way and works per train mile	40·29	40·36
Station expenses per train mile	11·36	11·31
General charges do	4·46	3·97
Total per train mile	Cents. 94·67	91·60
Working expenses per mile of railway	Dollars. 1,145 19	1,072 09

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1897.

A.—PRINCE EDWARD

MECHANICAL

STATEMENT of Cost of Locomotive Power

Months.	Miles run by Engines less Ballasting.	Cost of				
		Enginemen's Wages.	Fuel.	Oil, Tallow, Waste, &c.	Repairs.	Water, including Tank and Pump Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1896—July.....	32,127	1,585 04	1,134 66	214 47	1,723 00	85 37
August.....	27,447	1,418 12	1,003 02	183 24	1,492 58	14 10
September.....	31,235	1,645 35	1,166 74	238 64	1,371 68	24 94
October.....	34,222	1,609 44	1,282 94	208 62	1,732 82	23 40
November.....	29,558	1,414 67	1,278 16	180 22	1,875 85	5 60
December.....	31,554	1,642 01	1,397 52	206 56	1,985 17	174 72
1897—January.....	23,388	1,536 15	893 46	163 24	1,779 70	.....
February.....	21,665	1,426 71	1,029 40	161 06	1,664 35	22 85
March.....	27,268	1,611 74	1,173 12	167 91	1,514 90	2 90
April.....	24,246	1,496 21	1,011 50	149 48	1,131 34	3 49
May.....	26,373	1,515 52	1,192 08	160 93	1,409 49	.....
June.....	30,463	1,412 58	1,043 02	186 51	1,453 39	151 20
Totals.....	339,551	18,313 54	13,605 62	2,220 88	19,134 27	508 57

Department of Railways and Canals

ISLAND RAILWAY.

DEPARTMENT.

for the Year ended 30th June, 1897.

		Average per Mile run.						
Miscellaneous, including Expenses of Office and Engine Houses.	Total.	Engine- men.	Fuel.	Oil, Tallow, &c.	Repairs.	Water.	Miscella- neous.	Total.
8 cts.	8 cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
102 36	4,844 90	4 93	3 53	0 68	5 36	0 26	0 32	15 08
162 23	4 273 29	5 16	3 65	0 66	5 44	0 05	0 60	15 56
185 14	4,632 49	5 26	3 73	0 76	4 39	0 08	0 60	14 82
233 59	5,090 81	4 70	3 74	0 61	5 06	0 07	0 69	14 87
170 05	4,924 55	4 78	4 32	0 61	6 34	0 02	0 59	16 66
245 00	5,650 98	5 20	4 43	0 65	6 29	0 55	0 78	17 90
210 43	4,582 98	6 56	3 82	0 71	7 60	0 00	0 91	19 60
267 52	4,571 89	6 58	4 75	0 74	7 68	0 10	1 25	21 10
193 53	4,664 10	5 91	4 30	0 61	5 55	0 02	0 71	17 10
134 86	3,926 88	6 17	4 17	0 62	4 66	0 01	0 56	16 19
174 93	4,452 95	5 74	4 52	0 61	5 34	0 00	0 67	16 88
129 08	4,375 78	4 60	3 42	0 64	4 77	0 49	0 44	14 36
2,208 72	55,991 60	5 39	4 01	0 65	5 63	0 15	0 66	16 49

S. F. HODGSON,

Mechanical Accountant.

B.—PRINCE EDWARD

MECHANICAL

STATEMENT of the Performance and Consumption

MONTH.	Hours in steam.	Train Mileage.				Mileage by Engines.			
		Passenger.	Freight and Mixed.	Ballasting.	Piloting.	With train.	Light.	Shunting.	Total.
1896—July	3,602	12,940	11,871	236	33	25,080	105	7,198	32,383
August	3,564	9,507	11,174	2,150	.....	22,831	309	6,687	29,827
September.. . . .	3,858	12,231	11,736	2,918	305	27,190	164	7,034	34,388
October.	4,086	12,623	13,908	2,903	16	29,450	177	7,753	37,380
November.	3,514	10,060	12,594	1,368	.....	24,022	.....	6,939	30,961
December.	3,809	6,657	16,419	312	.....	23,388	71	8,407	31,866
1897—January	3,251	2,780	13,997	132	110	17,019	152	6,349	23,520
February.	3,061	2,560	12,723	.....	320	15,603	166	5,896	21,665
March	3,759	3,346	14,603	.....	2,224	20,173	230	6,865	27,268
April.	3,321	3,514	13,960	.....	132	17,606	.....	6,640	24,246
May.	3,711	2,710	15,299	2,043	198	20,250	104	8,242	28,596
June.	3,516	10,206	12,907	1,328	366	24,807	39	7,045	31,891
Totals	43,052	89,134	161,191	13,390	3,704	267,419	1,517	85,055	353,991

Department of Railways and Canals.

ISLAND RAILWAY.

DEPARTMENT.

of Locomotives for the Year ended 30th June, 1897.

Total Mileage.		Average of cars per Mile run with train.	Average Mileage.		Consumption.				Consumption per 100 miles run by Engines.			
Cars.	Snow Ploughs.		Miles to one hour in Steam.	Of cars to one of Engine.	Bushels of Coal.	Pints of Oil.	Pounds of Tallow.	Pounds of Waste.	Bushels of Coal.	Pints of Oil.	Pounds of Tallow.	Pounds of Waste.
123,269	.....	4·92	8·99	3·80	12,761	2,734	378	654	39·40	8·44	1·16	2·02
128,617	.....	5·63	8·37	4·31	13,044	2,570	348	629	43·73	8·61	1·16	2·10
140,697	.....	5·23	8·91	4·09	13,155	3,068	370	664	38·25	8·92	1·07	1·93
163,180	.....	5·54	9·14	4·35	14,928	2,748	315	628	39·91	7·35	0·84	1·68
131,740	.....	5·48	8·81	4·25	14,414	2,517	354	557	46·55	8·13	1·14	1·79
123,104	.....	5·26	8·36	3·86	14,299	2,388	330	623	44·87	7·49	1·03	1·95
77,134	1,851	4·50	7·23	3·28	9,092	2,024	255	504	38·65	8·60	1·08	2·14
76,512	3,367	5·00	7·07	3·53	10,322	2,196	323	471	47·64	10·13	1·49	2·17
93,124	5,579	5·18	7·26	3·41	8,340	2,212	253	493	30·58	8·11	0·92	1·80
93,600	.....	5·35	7·30	3·86	7,255	1,984	145	405	29·92	8·18	0·59	1·67
136,163	.....	6·79	7·70	4·79	9,530	2,632	42	459	33·32	9·20	0·14	1·60
124,861	.....	5·11	9·04	3·91	9,765	3,059	10	541	30·62	9·59	0·03	1·69
1,412,001	10,797	5·35	8·22	3·99	136,905	30,132	3,123	6,628	38·67	8·51	0·88	1·87

S. F. HODGSON,
Mechanical Accountant.

C.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

MONTHLY STATEMENT of Car Mileage for Year ended 30th June, 1897.

Month.	First Class.	Second Class and Baggage.	Postal and Smoking.	Box and Stock.	Platform.	Total.
1896—July.....	26,678	23,588	22,150	38,747	12,106	123,269
August.....	22,965	20,920	20,753	32,882	31,097	128,617
September.....	31,134	25,435	22,813	34,804	26,511	140,697
October.....	27,506	23,414	29,459	50,024	32,777	163,180
November.....	21,460	17,698	24,423	51,335	16,824	131,740
December.....	22,339	18,665	21,477	54,170	6,453	123,104
1897—January.....	16,475	16,122	12,885	26,557	5,095	77,134
February.....	14,927	14,192	11,591	24,071	11,731	76,512
March.....	17,949	16,567	13,243	31,738	13,627	93,124
April.....	18,008	12,996	15,804	39,173	7,619	93,600
May.....	16,789	15,820	18,237	60,188	25,129	136,163
June.....	24,732	21,647	19,962	42,094	16,426	124,861
Total.....	260,962	227,064	232,797	485,783	205,395	1,412,001
Less—Ballasting..			13,375	332	78,391	92,098
Balance.....	260,962	227,064	219,422	485,451	127,004	1,319,903

S. F. HODGSON,

Mechanical Accountant.

D.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

STATEMENT showing the number of Locomotives, and of the various classes of Cars and other Rolling stock, on the 30th June, 1897.

	Locomotives.	Classification of Cars.													Total.		
		First Class.	Second Class.	Combined, First, Second and Baggage.	Combined, Second & Baggage.	Postal & Smoking.	Combined, Postal & Baggage.	Pay Car.	Vans.	Box Freight.	Stock.	Platform.	Total.	Snow Ploughs.		Flangers.	
On record, 30th June, 1896, serviceable..	20	16	6	1	6	1	3	2	1	3	165	10	119	333	8	5	13
do do condemned..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	6	.....	2	2
Total stock, 30th June, 1896.....	21	16	6	1	6	1	3	2	1	3	165	10	125	339	8	7	15
Condemned on hand, 1st July, 1896.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	6	.....	2	2
do during the year.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3	2	6	.....	.....	.....
Burnt in Tignish fire, August 30th, 1896.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	6	1	1	2
Rebuilt.	2	.....	1	.....	.....	.....	.....	.....	.....	.....	6	3	8	18	1	3	4
	1	1	.....	.....	.....	.....	.....	.....	.....	.....	6	3	8	18	1	.....	1
ADD—Serviceable and repairing.....	20	16	5	1	6	1	3	2	1	3	165	10	125	338	8	4	12
Total on record, 30th June, 1897....	21	17	6	1	6	1	3	2	1	3	165	10	125	340	8	7	15

S. F. HODGSON,

Mechanical Accountant.

Department of Railways and Canals

E.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

COMPARATIVE STATEMENT of the Expenses of the Mechanical Department for the Years ended 30th June, 1896 and 1897.

	1896.	1897.
The miles run by trains were.....	245,766	254,029
do engines were.....	324,522	339,551
do cars were	1,235,772	1,319,903
do snow ploughs were.....	19,420	10,797
	\$ cts.	\$ cts.
The cost of locomotive power was.....	54,165 88	55,991 60
do repairs to cars was.....	15,691 39	21,124 45
do do passenger cars was.....	9,397 04	8,988 98
do do postal and smoking cars was.....	2,436 17	1,434 46
do do freight cars and vans was.....	3,858 18	10,701 01
do labour, oil and waste for packing was.....	517 61	642 74
do repairs to snow ploughs and flangers was.....	863 63	1,303 43
The cost of locomotive power per 100 miles run by trains was.....	22 04	22 04
do do do engines was.....	16 69	16 49
do do do cars was.....	4 38	4 24
The cost of repairs to cars per 100 miles run by trains was.....	6 38	8 31
do do do engines was.....	4 83	6 22
do do do cars was.....	1 27	1 60
The cost of labour, oil and waste for packing per 100 miles run by trains was..	0 21	0 25
do do do engines was.....	0 16	0 18
do do do cars was....	0 04	0 04
The repairs to passenger cars per 100 miles run by trains were.....	3 82	3 53
do postal and smoking cars were.....	0 99	0 56
do freight cars and vans were.....	1 57	4 21

S. F. HODGSON,

Mechanical Accountant.

PRINCE EDWARD ISLAND RAILWAY.

RETURN of Accidents and Casualties which have occurred in Canada on the line of the Prince Edward Island Railway during the year ended 30th June, 1897.

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1896.												
July	9 11.30 a.m.	Special	Freight	Stanley	Good	12	Emerald	T. R. Stanley	Employee	Ankle sprained while alighting from train.	Ankle sprained	
Aug. 10	8.30 p.m.	3	Express	McKenna	Armour	21	Port Hill	N. D. Armour	do	Knee sprained while shunting.	Knee sprained	
Nov.	2 9.00 p.m.		Shunting		McArthur	2	Summerside	J. H. Burns	do	Slipped while shunting and sprained knee.	Knee sprained	
Dec.	5 4.00 p.m.		Shunting		Lappin	9	Charlottetown	F. McKee	do	Knee and shoulder injured by fall while shunting.	Knee and shoulder injured.	
Dec. 19	6.30 a.m.	6	Accommodation.	Stanley	Good	12	Albany	S. Bolger	do	Finger lacerated while putting baggage off train.	Hand injured	
Dec. 28	2.20 p.m.	1	Accommodation.	McKenna	McLaine	21	Port Hill	A. Flynn	do	Side injured by fall while alighting from engine.	Side injured	
1897.												
Mar. 29	9.30 a.m.	2	Accommodation.	McKenna	Hunter	7	Northam	H. P. Wright	do	Muscles of back sprained while shunting.	Back injured	
April 6	4.00 p.m.	9	Accommodation.	MacDonald	Sutherland	17	Mt. Stewart	J. E. McKenna	do	Leg sprained while getting off box car.	Leg sprained	
April 20	5.45 p.m.	1	Accommodation.	Tanton	Yeo	3	Harper's	Angelina Arsenault	Passenger	Side badly bruised—thrown off seat by car leaving track.	Side injured	
April 28	5.30 p.m.	1	Accommodation.	McKee	Yeo	3	Tignish	Jas. Enman	Employee	Finger lacerated while coupling cars.	Hand injured	
April 29	6.30 a.m.	2	Accommodation.	McKee	Yeo	3	St. Louis	E. Martin	do	Bruised groin while loading boat in box car.	Body injured	

Department of Railways and Canals

No. 2.

CANALS.

SAULT STE. MARIE CANAL.

SAULT STE. MARIE, 2nd August, 1897.

SIR,—I beg to submit my annual report upon the operation of the Sault Ste. Marie Canal for the year ended 30th June, 1897. As the canal was only in operation some 87 days during the autumn of 1895 this is in reality the first full year's business to report upon. The canal was closed upon the 10th day of December, 1896, and reopened on the 21st day of April, 1897, simultaneously with the St. Mary's Canal on the American side of the river.

During the fiscal year ended on the 30th of June, 1897, there had been made 2,908 lockages, passing 4,560 registered and unregistered craft, with a total tonnage of 3,692,604 tons, allowing an average time of $17\frac{1}{2}$ minutes to a lockage, of this tonnage 14.76 per cent was Canadian.

The new 800 feet lock on the American side of the river called the "Poe" lock (after the late Gen. Poe who had charge of its construction) was opened for traffic on the 3rd day of August, 1896, and very much affected the amount of tonnage passing through our canal, the traffic falling from 1,080,966 tons in July down to 587,195 tons in August, a decrease of nearly fifty per cent; but owing to the unsatisfactory working of some of the machinery of the new American lock and as the novelty of passing through it was off, the percentage of craft passing through our canal increased and at the present time we have a fair share of the business.

The amount of freight passing through the St. Mary's River to and from Lake Superior is very considerable, amounting for the season of 1896 to 16,239,061 tons of freight carried in 18,615 vessels, with a total registered tonnage of 17,249,418 tons, or nearly twice as much as passes through the Suez Canal which is open 365 days in the year whilst the canals here are only operated on an average of 230 days in the year. The statistics of the American and Canadian locks are taken from verified reports of cargoes furnished by captains of the vessels using the locks. By an arrangement made with the officials of the American canal a daily exchange of vessel reports are made and a full record of all the Lake Superior traffic is thus secured.

The new 20 foot channel constructed in the Mary's River by the American Government has allowed an increased loading of vessels to a deeper draught than formerly and cargoes of over 6,000 tons are quite common. The deepest draught of any vessel passing through the canal so far has been 18 feet.

Slight damage only has been done by vessels to the piers or lock.

The machinery in the power house has been thoroughly overhauled and repaired, the turbines and pumps including the power generators are doing their work well and are in first class condition. The incandescent dynamo for lighting the buildings has proved to be too small for the work required of it, especially during the long nights in the autumn when the strain on it is very heavy. I strongly advise that the smaller machine be replaced by a larger one. The electrician reports as follows on the arc dynamo: "Our greatest trouble in the power house during the last year has been with the arc dynamo. You are aware that this machine is a Wood No. 7 with a capacity of 40 lamps and we are running on it now 33 arc lamps with 22 incandescent lamps of 32 candle power each and in order to reach all these we have 7.3 miles of wire, including 4,250 feet of submarine cable. This is too much for a small machine of this delicate

type and it has proved itself to be by the many times it has failed to do the work during the last year. The machine at different times has burnt 7 coils out of one armature and two out of another. It is unadapted to work in this country where we have so much wind, rain and darkness. This machine is often called upon during the fall months to run from 13½ to 14½ hours and I would strongly advise you to make a change at once. There are other machines in the market of the 'open coil' type such as the F. H. and Brush both made in Canada, of these two the Brush is the best, being more adapted to be run by a water wheel where there is a change in speed and much lightning. Another advantage with this machine (Brush) is that an armature can be taken out and another put in, in a very short time, while with the one we have from 2½ to 3 hours is quick time to make the change and then the greatest care has to be used or the armature shaft will be bent rendering it unfit for use. I am quite sure that if you were to adopt this machine you would have far less expense in maintaining your lighting system and range lights, besides making it a sure thing. As the machine stands now we are sure to have the same trouble in the future that we have had in the past." In connection with the arc machine, I may remark that as our range lights are lighted from this dynamo and as it is of the greatest importance that when lighted that they be kept going continually after starting up at night, as with the strong currents which cross both of our channels it would be very dangerous to vessels in the channels if the lights were to go out, and moreover in the case of an accident happening to the present armature, the time taken to change it is much too long, with care and trouble we have only had two real serious delays so far this season, and luckily no vessels happened to be in either of the approaches at the time. All the machinery outside of the power house has been overhauled and repaired. The draw rods on the valves have been straightened, but as they are bending again, it would appear as if they were too light for the work required of them and during the coming winter they will need to be taken out and strengthened.

The machinery as a whole is in good working order.

The gates were repaired, painted and strengthened under a contract with Messrs. J. & R. Miller and are now very satisfactory.

The sweep scow was hauled out and thoroughly repaired by having a new deck, some new timbers and recaulked from top to bottom. The small derrick scow was recaulked. The engine on the sweep scow was overhauled and put in good working order.

The motor houses had two good coats of paint laid on both inside and out.

The interior walls of the power house have had a finishing coat of plaster put on and all the wood work has been repainted, much improving its appearance.

The arc lamps were thoroughly repaired, and, so far this season, have given good satisfaction.

The superintendent's residence has been completed and is now occupied, and the sewer and water pipes from it are in course of being laid. A portion of the canal grounds has been graded and levelled which adds greatly to their general appearance.

I have again to call attention to the pier of the railway swing bridge standing in the centre of the canal. Several vessels have struck it this season doing more or less damage to themselves though none to the pier.

The elbow at the lower entrance to the canal near the end of the south pier should be taken off so as to widen the channel where vessels make the turn in going out and coming into the canal if or when this dredging is done the south pier should be extended out some five hundred feet or more so as to give more room for vessels to tie up at nights after locking down whilst waiting for daylight to enable them to proceed down the St. Mary's River. On several occasions this season we have had vessels bound down lying at both piers below the lock making it difficult for vessels up bound to enter the lock.

It would be a manifest advantage to vessels using the canal at night if a light were placed on the upper red turning buoy and I am satisfied more vessels would use our canal if this were done.

Owing to the strong currents crossing our channels it is of the utmost importance for the safety of vessels that the buoys marking the channels should be kept in position,

Department of Railways and Canals.

but owing to the large number of rafts being towed through them, it has been very difficult for the Marine Department under whose charge these buoys are to retain them in place, and several vessels have struck by reason of buoys being out of their proper location, but fortunately they have suffered very little damage.

Experience shows the long narrow form of lock adopted to be the best suited to the traffic.

That the operation of the lock by electricity is vastly superior to that by hydraulics, is proved by the quicker despatch in locking vessels, and the ease in operating our lock as compared with the locks on the American side, both of which are operated by hydraulic power, our lock having been in operation without interruption or without causing delay to vessels from the date of its having been opened for traffic in 1895 up to the present time.

I have the honour to be, sir,

Your obedient servant,

J. C. BOYD,

Superintendent.

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

SOULANGES CANAL.

ENGINEER'S OFFICE,
COTEAU LANDING, P.Q., 28th August, 1897.

SIR,—I have the honour to report as follows :—

The total value of work let and re-let on this canal is, at contract rates, about \$3,750,000.

The subjoined list gives the names of the contractors and the dates of the various contracts :—

Sections Nos. 1 and 2, Archibald Stewart, 24th September, 1892.

Section No. 3, J. & M. O'Leary, 27th March, 1893.

Sections Nos. 4, 5, 6 and 7, 1—George Goodwin; 2—Andrew Onderdonk; 17th April, 1897.

Section No. 8, Charles H. Raynor, 29th December, 1892.

Section No. 9, Randolph Macdonald, 30th January, 1893.

Section No. 10, Rogers & Taylor, 24th December, 1892.

Section No. 11: 1—George Goodwin; 2—Thomas Feeney; 3—Poupore & Fraser (Transfer); 11th May, 1892.

Section No. 2: 1—O'Brien & Son; 2—George Goodwin; 3—M. J. Hogan; 5th April, 1897.

Section No. 13, Randolph Macdonald (Manning & Macdonald), 26th September, 1892.

The above contracts do not include the cost of cement, superstructure of bridges, the lock gates and machinery, or the power house and electrical approaches for operating the canal.

For a description of the line under construction see my previous annual reports 1892-1896.

The condition of the works on the 31st July, 1897, may be briefly described as follows :—

Sections 1 and 2.—Work was begun on these sections in the fall of 1892. Up to the end of July, 1897, the progress made in the three chief items was as shown :—

Description of Item.	Approximate Total Quantity.	Done in 1896-7 (to 31st July.)	Total to 31st July, 1897.	Required to Complete.
Earth excavation	600,000	16,200	274,600	325,400
Rock do	60,000	500	53,950	6,050
Masonry of all kinds including concrete	83,140	3,640	10,140	73,000

There is a large amount of stone cut and piled up at Rockland quarry.

The foundations of Locks Nos. 1 and 2 are in. Masonry is in progress on Lock No. 1, but neither on Lock 2, or any of the other structures, has building been begun. The excavation of the reach between Nos. 2 and 3, is yet unfinished, and the foundations of Lock 3, and the Quinchien Road bridge have not been commenced.

Department of Railways and Canals

The concrete walls of the entrance piers have been built upon the cribwork for about 700 feet, but not coped. These are included in the total quantity of masonry shown in the above table.

Value of work and materials to 31st July, 1897, \$477,222.05, of which \$269,780.50 is for materials.

Section No. 3.—The earthwork of this section is practically completed: also the protection lining. The superstructure of the road bridge at St. Antoine is being erected. The macadamized road on the north side of the canal is well advanced and the fencing done. There remains the sodding and trimming of the slopes, which is in progress. This section has been carried on in a quite satisfactory manner by the Messrs. O'Leary.

Value of work and materials to 31st July, 1897 \$186,343.76

Sections Nos. 4, 5, 6 and 7.—These sections were re-let to Andrew Onderdonk, (17th April, 1897). A track had been laid from the Grand Trunk Railway to the site of lock No. 4, a distance of about $7\frac{1}{2}$ miles. This will serve to bring materials on to the work as well as to have the earth for making up the unfinished banks on both sides to the east of the St. Féréol Road. About 14,000 cubic yards of excavation were taken out to the 31st July. An effort will be made to get in the foundations of lock No. 4 this fall. The bottom is soft and must be piled. The question of progress in earthwork can generally be determined by multiplying plant: but as elsewhere on canal work it is the masonry of the locks which is of chiefest importance.

Arrangements have been made to get the stone from a quarry near Crookston, Ont. Piles are about being delivered at lock No. 4, but as there are over 40,000 cubic yards of masonry of all kinds to be done, very much more rapid progress will have to be made to ensure the completion of the whole work at an early date. The concrete of the St. Féréol road bridge has been resumed and is nearly finished. The foundations for the St. Dominique bridge are being prepared. Stone for protection lining and concrete which forms a large item will be hauled by cars from sections 11 and 12 during the coming winter, and some of it placed in position.

Value of work and materials to 31st July \$7,568.15

Section No. 8.—The masonry of the St. Emmanuel road bridge is nearly completed. The culvert at the River à la Graise has been in use for some time. The protection lining is progressing rapidly and the work of the contract may yet be almost finished this season although the slides at the west end have given a good deal of trouble.

Value of work and materials to 31st July, 1897 \$223,508.15

Section No. 9.—Between sections 8 and 9, a dam of natural earth was left across the prism. To the west of this for about 3,700 feet the material was taken out by a dredge built on the spot and launched into a cut prepared to receive it and filled by surface drainage. From this canal was formed. The soft blue clay was dropped by the dipper into cars,—hauled out to the river at Pointe au Diable—and dumped there. This plan although doubtless economical is attended with risks. In excavating under water the sides were in some places made nearly vertical, and as they had for the time being to be left rough the contractor dug below bottom line in order to give space in which to dispose of the slope dressing. But this took away the support of the toes in material known to be very liable to slide. The water in the cut kept up the sides although completely saturated. But when it was suddenly withdrawn slides of vere considerable extent occurred as might have been expected. These will however be remedied and there is no reason why the section cannot be completed next season. There are no structures on it.

Value of work and materials to 31st July, 1897 \$108,096.80

Section No. 10.—The concrete of the bridge at the River Rouge road is well advanced. The excavation and stone protection lining are in progress. The works can be completed this season or at farthest early next year. The culvert at the Rouge answers to the purpose well.

Value of work and materials to 31st July, 1897..... \$239,151.93 .

Section No. 11.—The Delisle culvert is at last nearly finished. The diversion channel is being cleared out and the water of the river will be passed through it shortly. The work of this section has changed hands several times and the progress has been, and is, quite slow. The amount of rock is, however, nearly four times that shown by the test pits. These did not catch its irregular surface, which cropped up between or on one side of them. About 10,000 cubic yards of rock and 100,000 of earth have yet to be taken out. The work will be completed during next season, but must progress faster to ensure this.

Value of work and materials to 31st July, 1897..... \$249,303.95

Section No. 12.—Mr. M. J. Hogan is the third contractor who has undertaken this work. His contract is dated 5th April, 1897. His arrangements are, so far, quite satisfactory and it appears to me probable that he will finish in the time specified. Up to the 31st July, about 40,000 cubic yards of earth and some rock had been taken out. This is only a beginning—but there are two steam shovels at work—5 locomotives and a sufficient length of track, number of dump cars, &c., to ensure rapid progress in the immediate future. The work was left in very bad condition, but it is now in good business like shape. There are over 100,000 cubic yards of rock to be excavated.

Value of work and materials to 31st July, 1897..... \$9,120.00

Section No. 13.—Work on this section progresses continuously but slowly. The entrance piers outside the temporary dam at the head of the canal are well advanced and will be finished early next year. The channel between them is dredged to full depth and a shoal outside removed.

The prism between stations 732-52 has been pumped out, and the retaining walls west of the guard lock are in progress. Stone for the latter is being prepared at Point Ann quarry near Belleville. There are about 41,000 cubic yards of masonry on this section. About 8,000 of this are done, leaving 33,000 to complete. There are say 13,000 cubic yards of building stone on the ground.

The canal excavation is well advanced. Some stone lining and macadam has been done. On this section the rock crops up where it was not anticipated and the clay is very hard material, thickly interspersed with boulders. All the structures will be on solid foundations. Although the work is somewhat behind hand it is in such a shape that it can be pushed ahead and finished next year.

Value of work and materials to 31st July, 1897..... \$397,815.26

Out of a total of say $6\frac{1}{2}$ millions of earth about 5 millions (5,005,054) cubic yards were excavated up to the 31st ultimo. A little more than half of the work (143,400 cubic yards) was removed at the same date.

There are about 200,000 cubic yards of masonry of all kinds and concrete, 41,208 of this is done chiefly in bridges, entrance walls, &c. The only lock masonry built consists of part of the bottom courses, culverts, &c., of lock No. 1.

Taking the actual working days of a building season at 150, and the masonry now remaining to be done at 160,000 cubic yards, it will require a future daily rate of over 600 cubic yards to finish the whole by the 31st October of next year. The aggregate daily average during July was about 250 yards on all the sections where building was going on.

Department of Railways and Canals

A summary of the progress estimates for work and materials up to 31st July, 1897, compares with similar figures to the 30th June, 1896, as follows :—

No. of Section.	Contractors.	To 30th June, 1896.	To 31st July, 1897.	1896-7.	Masonry and Concrete.	
					Built.	To be Built.
		\$ cts.	\$ cts.	\$ cts.	c. yds.	c. yds.
1 & 2	A. Stewart	443,881 90	477,222 05	33,340 15	10,140	73,000
3	O'Leary Bros	157,956 76	186,343 76	28,387 00	3,100	500
4, 5, 6 & 7	G. Goodwin	298,535 25	326,246 75	27,711 50	2,201	40,000
	A. Onderdonk		7,568 15	7,568 15	603	
8	C. H. Raynor	188,995 37	233,508 15	44,512 78	4,733	2,200
9	R. Macdonald	99,920 50	108,096 10	8,875 60		
10	Rogers & Taylor	198,249 43	239,151 93	40,722 50	6,522	2,000
11	Poupore & Fraser	201,587 70	249,303 95	47,716 25	6,071	100
12	O'Brien & Goodwin	38,211 52	38,211 52		15	
	M. J. Hogan		9,120 00	9,120 00		
13	R. Macdonald	323,777 97	397,815 26	74,037 29	7,823	33,000
		1,950,596 40	2,272,587 62	321,991 22	41,208	150,800

Assuming that the approximate value of the work sections 1 to 13 as partly re-let will now be increased to say \$3,750,000, it will be seen that the balance to complete is about \$1,478,000. This will necessitate a rate of expenditure about four times that of the past fiscal year, for the period from 31st July, 1897, to 31st October, 1896.

It will be observed that the masonry and concrete done is 41,208 cubic yards, and the masonry to be done is shown at 150,800. This statement applies only to existing contracts. There will be a considerable amount of masonry at the regulating weir for the summit level—power house, &c., at the crossing of the Rivière à la Graisse—so that it is probable the total quantity will not fall short of 200,000 cubic yards,

The superstructure of the Canada Atlantic Railway bridge has been erected and in use for a considerable time. There are five road bridges over the canal. At one of these (St. Antoine), the superstructure is being set up. It is expected that four of these bridges will be completed and brought into use this year.

Contracts have been let, so far, for about 75,000 barrels of Portland cement. That used has hitherto been principally of Belgian manufacture. But an excellent article is now being turned out in Canada which will doubtless soon be more largely used in our public works. In addition to the above quantity, a contract has been given for some 22,000 barrels of Thorold cement, to be delivered at various points along the line of the Soulages Canal.

I may state in conclusion that the weather here has been wet and unfavourable so far during the present season. Last month the value of work and materials on all the nine contracts (sections 1 to 13 inclusive), was less than \$50,000. The fact taken in connection with the foregoing tables and figures will make it plain that in order to secure the completion of existing contracts within a reasonable time, a greatly increased rate of progress must be at once established and uninterruptedly maintained.

I am, sir,

Your obedient servant,

THOMAS MONRO, *M. Inst. C.E.*,

Engineer Soulages Canal.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer

Railways and Canals.

MONTREAL DIVISION.

SUPERINTENDING ENGINEER'S OFFICE,
MONTREAL, 31st August, 1897.

SIR,—I have the honour to submit the annual report on the works under my charge for the fiscal year ended the 30th June, 1897.

The various canals in this division were closed and opened to navigation as shown in the table below :—

	Closed.	Opened.
Lachine Canal	30th Nov. '96.	1st May, '97.
Beauharnois Canal	do	do
Ste. Anne Lock	23rd Nov. '96.	27th Apl. '97.
Carillon and Grenville Canals	28th Nov. '96.	26th Apl. '97.
Chambly Canal	30th Nov. '96.	3rd May, '97.
St. Ours Lock	27th Nov. '96.	11th Apl. '97.

LACHINE CANAL.

REPAIRS.

Besides the maintaining in good order of the locks, lockgates, bridges, towpaths, fences, sidewalks, buildings, &c., some heavier work was performed here as enumerated hereafter.

The wharf on the north side of basin No. 2, where all the market boats have their berths, was raised a couple feet for a length of some 300 feet and the planking renewed.

Two of the flour sheds on the same basin also had their flooring replaced, and all the posts carrying the roof were lengthened.

Another wharf on the eastern side of St. Gabriel Basin No. 2, was partly rebuilt from one foot below the water line to the top and the timber required to complete the work purchased.

The slope wall from Côte St. Paul to Lachine required a great deal of attention last spring. While the canal was unwatered in April a considerable length, especially on the north bank, was gone over and temporarily repaired. The stone forming these walls is in small blocks having scarcely any bond with each other and very liable to be displaced by frost every winter. It is the intention to overhaul the walls at an early date and rebuild them where necessary with larger stone, a greater slope being given them, a least from the level of the water to the top of the bank.

During the month of April, a good deal of work was done on lock walls, lock bottoms and supply weirs, the weirs at Lachine and St. Gabriel receiving special attention. Two valves there had to be renewed and the others extensively repaired.

During the same period two conduits for the passage of electric cables were laid across the canal by the Lachine Rapids Hydraulic Co.; one above Wellington Bridge and the other at Côte St. Paul. Particular precautions were taken at the latter point where the north bank of the canal is high and not overstrong. The work was carefully watched and I am pleased to say that since the admission of the water into the canal, no appreciable leakage has been noticed. Another similar conduit laid by the Chambly Manufacturing Co., some 75 feet above bridge No. 1 has been equally successful.

One accident only has to be recorded for the last fiscal year. It took place on the 10th November, 1896 when the str. "Princess" of the Ottawa River Navigation Co.,

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through a misunderstanding of signals, ran into the lower gates of the new lock at Côte St. Paul, straining them and breaking the foot board as well as the top of the heel post. While these gates were being removed and repaired the whole of the traffic was handled through the old lock.

The mishap was probably due to the want of sufficient light at the entrance to the lock, but I am happy to say that the extension of the electric lighting circuit to and beyond this point has removed a cause of serious danger both to the lock gates and the boats using the canal.

REPAIRS TO VESSELS.

The \$2,000.00 appropriated towards maintaining the dredging fleet in good repair have been used for that purpose. Besides the usual overhauling, painting and caulking of the various vessels composing the fleet, the steam derrick boom and the crane of the steam dredge were partly renewed; the hull of the tug "Josephine" was also entirely renewed and a new sounding scow built.

INCOME.

Electric light power-house and station.

The converting of the old Tate's saw-mill into an electric light station has been under way for some time. During the last fiscal year the wooden flume inside the building was entirely rebuilt and its foundation sunk two feet deeper in order to give a better clearance for the water under the turbines. A "Hercules" wheel of a modern pattern was preserved but placed in a more advantageous position and a "New American" turbine substituted for the old "Leffel" wheel formerly running the saw-mill. The two present wheels can develop 275 H.P. at the highest state of the river, and are amply sufficient for the present and probably the future needs of the canal.

The electric machinery was transferred from the old to the new station during June and the lighting service is now complete.

Electric Light Circuit.

In connection with the above, the electric light system was extended from St. Gabriel lock to Côte St. Paul bridge, a distance of over two miles. Another circuit was also established around the various bassins on the north side of the canal where it replaces the gas lamps formerly used. The system now comprises some 120-2000 C. P. arc lights distributed along the towpaths, and around the bridges, locks and basin, as well as a long Mill street where they have superseded the incandescent lamps which never were satisfactory,

A number of incandescent lamps using the same current as the arc lights are also provided in the flour and other sheds as well as in the shops on Mill street.

Boundary Stones.

The boundaries of the lands acquired by the department in connection with the collecting drain along the canal have been marked out by means of 40 stone bornes which were recently planted under the supervision of Mr. L. G. Papineau, P.L.S.

CAPITAL.

Dredging to 20 feet between Lock Nos. 2 and 3.—This work was continued from the 1st July to the 17th October, 1896, some 1,400 feet of channel being excavated during that time on a width of 150 feet from a point opposite Seminary street to the line of Montmorency street. The 36,000 cubic yards of material thus removed were deposited in the piers then being built in the Montreal harbour by the Harbour Commissioners.

Deepening to 14 feet navigation between St. Gabriel and Lachine Locks.—This deepening has been under contract with Messrs. McNamee & Mann since 1895. At the end of 1896 the channel from Côte St. Paul to Lachine had been excavated to more than half its total width. A good deal of excavation has also been executed in the reach between Côte St. Paul and St. Gabriel locks where no rock is encountered.

Operations were stopped on the 25th of November last and resumed on the 6th May this year. During the time the canal was unwatered in April the contractors destroyed by blasting and removed a very large number of boulders which had escaped the dredges and had been piled up by them along the slope walls and around the bridge piers.

While this was going on, some excavation was done by day's labour at the Canadian Pacific Railway bridge near Lachine. This work has to be executed with great care in order not to disturb the pivot pier of the bridge. It will be resumed and probably completed next spring.

LAKE ST. LOUIS CHANNEL.

Mr. L. S. Pariseau is in charge of this work. The contractors had three dredges at work here during last year. The channel is now practically completed to its full width and depth for a distance of over 3,000 feet, and about two-thirds of the work embraced in the contract is done.

BEAUHARNOIS CANAL.

REPAIRS.

The various structures on this canal have received the customary attention during the year.

On the 11th May last the str. "Ocean" ran into the lower gates of lock No. 11, and so damaged them that they had to be almost entirely rebuilt, one of the upper gates was also thrown down but only received very slight injuries. The reach between locks Nos. 11 and 12 emptied into the one below it but caused little damage to the banks except in the vicinity of the following lock where some 150 feet in length of the north bank was washed away on its outer slope on a width of about ten feet.

Fortunately a pair of spare gates was at hand and repairs were commenced at once. After twenty-eight hours of hard and uninterrupted work the canal staff had the lock in such a shape that boats could be passed through.

Spare gates are now provided for all the locks but one, a pair was built during last winter for the guard lock at Valleyfield, and the last pair will be put under way in a month or two.

Among other important works done here during the year, I may mention the renewal of the bridges over the waste-weirs at locks Nos. 7-10 and 12, and extensive repairs to the swing bridges at St. Timothée and Valleyfield; the overhauling of a long ditch running from a culvert between locks Nos. 12 and 13 to the river, and the rebuilding of the abutments of two small bridges, one on the public road at St. Timothée on the south side of the canal, and the other over the ditch just mentioned.

During the winter months, some 2,000 cubic yards of stone were purchased and broken for the purpose of macadamizing the road along the south side of the canal between St. Timothée and Valleyfield.

This road will probably be completed during the present season. A portion of the stone thus procured has been used in repairing the road along the Hungry Bay dyke, which is now in a very fair condition.

The walls along both sides of the upper entrance were partly rebuilt at low water, last fall, and the banks which were dangerous made safe.

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INCOME.

Telephone Line.—An agreement was entered into last spring between the department and the Bell Telephone Co., by which this company's metallic telephone circuit running along the canal from Melocheville to Valleyfield was transferred to the Beauharnois Canal.

The company at the same time undertook to replace all the old instruments on our line with new bridging apparatus and to renew the cable crossing the canal at Melocheville.

This has been satisfactorily done and the canal telephone service which was heretofore very poor is now as good as can be desired.

Cleaning and deepening entrances to the canal.—Dredge No. 3 was sent up to Melocheville in October, 1896, and between that date and the setting in of the winter performed considerable work in the lower entrance to the canal.

The channel at that point was deepened about three feet and the excavated material deposited in rear of the entrance guide piers on the south side in order to render them capable of resisting the pressure of floating ice during the spring floods. About 3,600 cubic yards of clay, boulders and rock was removed from the 18th October to the latter days of November when the dredge returned to Montreal.

The improvement of the channel above the upper entrance was commenced on the 9th June last and is still going on. This work will be completed during the present season.

STE. ANNE'S LOCK.

REPAIRS.

Among the repairs executed here during the last fiscal year nothing is worth mentioning except the pointing of 1,200 lineal feet of the entrance retaining walls and the renewal of some 600 feet of the eastern pier of the south channel. These piers have now been entirely renewed from the level of the water to the top and will not require any extensive repairs for a number of years.

CARILLON AND GRENVILLE CANALS.

REPAIRS.

The most important items of repairs performed here during the year were :—

At Carillon.—The renewal of the guard pier on the south side of the lower entrance; the repairing of a culvert in connection with the old canal feeder and of the bulkhead closing the old canal.

At Grenville.—The completing of three pairs of spare lock gates and the building of a puddle wall lined with plank at Cameron's farm where the bank leaked very badly.

Besides these all the structures, towpaths, fences, buildings, &c., were kept in good order.

INCOME.

A small building 30 x 18 x 12 feet, of solid brick with stone foundation and concrete floor was erected at Carillon for the purpose of storing oils, paints, glass and shelf goods of every description.

The two guide piers at the upper entrance to the Carillon Canal which were carried away during the spring of 1896, had been intended to be rebuilt at low water this spring. The timber was framed and the stone for filling procured during the winter, but the unusually high water has prevented the putting in place of the piers before the end of the fiscal year.

A pair of spare gates for Lock No. 4, Grenville Canal, was constructed during the winter months. All the locks on this section, except one are now provided with spare lock gates and the last pair will be built during the present year.

CAPITAL.

On the 9th April last a contract for the deepening and widening of the lower portion of the Grenville Canal, was signed by Messrs. Pigott & Ingles, of Hamilton. Work was commenced with a small force on the 8th May, but up to the 30th June the estimates returned only amounted to about \$1,000.

The contractors have opened several places on farms along the canal, in the hope of finding stone for the slope walls, but so far without success. Mr. H. G. Stanton is in charge of this contract.

CHAMBLY CANAL.

The usual repairs to locks, lock gates, bridges, buildings, towpaths, slope walls, &c., were performed here during the year.

A rather important piece of work was done last fall at the lower entrance lock.

The face stones in the wing walls at this point had become detached from the backing, and were in danger of collapsing and caving the gates down. Fortunately the part of the walls under water was perfectly sound.

By means of iron straps and long bolts, the copings were secured to the courses underneath and made fast to a heavy piece of oak at the rear of a retaining wall about 20 feet from the face of the lock. By a somewhat similar arrangement of straps and rods, the face stones were reconnected with the backing and the voids filled up.

The east wing wall has thus been made safe, but owing to the lateness of the season the west wall could not be touched.

It will be treated in the same manner at low water next fall.

A back leak through the sill of the combined locks Nos. 7 and 8 was stopped by removing and rebuilding with the greatest care the masonry comprising it. The lower sill of lock No. 8 was also grouted, and both are now water-tight.

The superstructure of two swing bridges was renewed during the year, and the abutments of bridge No. 2 were rebuilt.

The wharf along the public road in the town of Chambly Basin was also almost entirely rebuilt while the canal was unwatered last spring.

During the month of April and the first days of May, the Chambly Manufacturing Company laid a concrete conduit across the canal for the purpose of carrying the wires from their works on the Richelieu River to their line, bringing the current to Montreal.

The work was done with great care and the canal banks restored to their former position.

INCOME.

Rubble Wall.—This wall is intended to support the canal bank along the public highway near St. Johns. It was commenced three years ago. Some 3,050 lineal feet were built last season.

Culvert at Wood's Creek.—The object of this work is the carrying off of the creek's waters under the canal to the Richelieu River.

These waters are becoming daily more and more contaminated as the town expands, and their admission into the canal as formerly, is no longer practicable.

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The culvert, which is entirely built of concrete, comprises four arched conduits 154 feet long, with inlet and outlet, the walls of which are also of concrete. The passage-ways have an aggregate area of 59 square feet.

Considerable difficulty was experienced in executing the work owing to the unsteady nature of the ground which is a mixture of very soft, soapy clay and quicksand. On that account the structure could not be completed before the opening of navigation. There still remains to build the inlet and 35 feet of the culvert proper. Operations will be resumed as soon as the water can be let out of the canal next fall.

The little steam derrick and dredge combined provided for the Chambly Canal last year, were found very useful in connection with this work.

ST. OURS.

Beyond the ordinary repairs necessary to keep the lock in good working order, there is nothing worth recording here except the renewal of one of the guide piers below the lock.

Owing to high water in the Richelieu River last summer, it has been necessary to postpone the repairing of some portions of the submerged dam connected with the lock, and judging by the present high state of the river, it will likely be impossible to do anything this year.

However there is no danger either of the dam giving way or of the navigation being impeded through this cause.

In concluding I am happy to state that no serious accidents, breaks or interruptions of traffic have occurred on the canals under my charge during the last fiscal year.

Below will be found the usual statements of high and low water, fines and damages.

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

ERNEST MARCEAU,
Suptg. Engineer.

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

LACHINE CANAL.

STATEMENT showing the depth of the river water on mitre sills of old Lock No. 1 at lower entrance, and Lock No. 5 at upper entrance, during the fiscal year ended 30th June, 1897.

MONTHS.	OLD LOCK NO. 1, LOWER SILL.		OLD LOCK NO. 5, UPPER SILL.	
	Highest.	Lowest.	Highest.	Lowest.
1896.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July.....	16 9	16 1	10 10	10 2
August.....	16 0	14 10	10 2	9 7
September.....	15 3	14 5	9 9	9 1
October.....	15 3	14 4	9 6	9 0
November.....	17 3	14 6	10 8	9 0
December.....	31 1	15 11	11 9	9 7
1897.				
January.....	30 0	25 2	10 11	9 2
February.....	26 5	22 3	11 1	8 11
March.....	26 7	22 2	11 2	8 8
April.....	32 8	18 10	13 10	11 4
May.....	23 6	21 4	14 4	13 4
June.....	21 6	18 4	13 8	11 9

LACHINE CANAL.

STATEMENT showing the depth of the river water on mitre sills of new Lock No. 1 at lower entrance, and new Lock No. 5 at upper entrance, during the fiscal year ended 30th June, 1897.

MONTHS.	NEW LOCK NO. 1, LOWER SILL.		NEW LOCK NO. 5, UPPER SILL.	
	Highest.	Lowest.	Highest.	Lowest.
1896.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July.....	18 11	18 3	15 10	15 2
August.....	18 2	17 0	15 2	14 7
September.....	17 5	16 7	14 9	14 1
October.....	17 5	16 6	14 6	14 0
November.....	19 3	16 8	15 8	14 0
December.....	33 6	18 1	16 9	14 7
1897.				
January.....	32 2	27 4	15 11	14 2
February.....	28 7	24 5	16 1	13 4
March.....	28 9	24 4	16 2	13 8
April.....	34 10	21 0	18 10	16 4
May.....	25 8	23 6	19 4	18 4
June.....	23 8	20 6	18 8	16 9

Department of Railways and Canals.

BEAUHARNOIS CANAL.

STATEMENT showing the depth of the river water on mitre sills of Lock No. 6 at lower entrance, and Lock No. 14 at upper entrance, during the fiscal year ended 30th June, 1897.

MONTHS.	LOCK NO. 6, LOWER SILL.		LOCK NO. 14, UPPER SILL.	
	Highest.		Lowest.	
	Ft. In.	Ft. In.	Ft. In.	Ft. In.
1896.				
July.....	10 11	10 3	11 5	11 2
August.....	10 4	9 7	12 2	11 0
September.....	9 8	9 3	11 2	10 6
October.....	9 5	9 0	10 10	10 2
November.....	10 5	9 0	10 9	10 0
December.....	13 3	9 8	10 8	10 1
1897.				
January.....	19 3	11 3	10 11	10 4
February.....	15 5	12 6	10 9	10 1
March.....	16 0	12 0	11 6	10 4
April.....	13 0	11 0	12 10	11 3
May.....	14 3	12 10	12 0	11 4
June.....	13 1	11 4	11 10	11 5

STE. ANNE'S LOCK.

STATEMENT showing the depth of river water on mitre sills of Ste. Anne's Lock during the fiscal year ended 30th June, 1897.

MONTHS.	LOCK NO. 1, LOWER SILL.		LOCK NO. 1, UPPER SILL.	
	Highest.		Lowest.	
	Ft. In.	Ft. In.	Ft. In.	Ft. In.
1896.				
July.....	10 9	9 11	12 6	11 9
August.....	10 0	9 6	11 8	10 10
September.....	9 5	9 2	10 10	10 6
October.....	9 4	9 0	11 2	10 9
November.....	10 11	0 2	13 6	11 8
December.....	11 9	10 3	13 3	11 8
1897.				
January.....	11 6	10 2	12 1	10 6
February.....	11 6	9 5	12 1	10 9
March.....	11 6	9 6	12 7	10 10
April.....	13 11	14 4	17 0	12 5
May.....	14 6	13 6	17 9	16 5
June.....	13 6	11 10	16 5	13 8

CARILLON CANAL.

STATEMENT showing the depth of river water on the mitre sills of Locks Nos. 1 and 2, Carillon Canal, during the fiscal year ended 30th June, 1897.

MONTHS.	LOCK NO. 1, LOWER SILL.		LOCK NO. 2, UPPER SILL.	
	Highest.	Lowest.	Highest.	Lowest.
1896.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July	13 10	13 0	14 0	13 0
August	12 11	12 1	12 10	11 10
September	12 1	11 8	11 9	11 4
October	12 5	12 0	12 7	11 5
November	14 9	12 4	15 6	12 3
December	15 4	13 6	17 9	13 0
1897.				
January	14 7	13 7	17 0	13 0
February	14 4	11 10	16 3	12 5
March	14 3	12 4	13 0	12 6
April	19 5	14 4	20 9	13 5
May	20 5	18 8	21 2	19 9
June	18 7	15 2	19 6	15 10

GRENVILLE CANAL.

STATEMENT showing the depth of river water on mitre sills of Locks Nos. 3 and 7, Grenville Canal, during the fiscal year ended 30th June, 1897.

MONTHS.	LOCK NO. 3, LOWER SILL.		LOCK NO. 7, UPPER SILL.	
	Highest.	Lowest.	Highest.	Lowest.
1896.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July	16 10	15 6	14 2	13 0
August	15 4	14 0	13 0	11 2
September	14 0	13 8	11 3	10 11
October	14 6	13 10	11 11	11 0
November	18 6	14 5	15 6	11 9
December	21 6	18 6	15 8	14 1
1897.				
January	20 0	17 0	14 1	13 6
February	19 0	17 0	13 5	11 8
March	19 0	17 0	13 10	11 3
April	24 8	17 6	21 6	14 0
May	25 6	23 1	22 4	20 2
June	22 11	18 4	20 0	16 4

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CHAMBLY CANAL.

STATEMENT showing the depth of river water on mitre sills of Lock No. 9, at lower entrance, and Lock No. 1, at upper entrance, during the fiscal year ended 30th June, 1897.

MONTHS.	LOCK NO. 9, LOWER SILL.		LOCK NO. 1, UPPER SILL.	
	Highest.		Highest.	
	Lowest.		Lowest.	
1896.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July.....	10 8	9 6	8 10	7 9
August.....	9 4	8 6	8 0	7 5
September.....	8 8	8 0	8 0	7 0
October.....	8 8	8 0	8 2	6 10
November.....	12 2	8 4	8 8	7 5
December.....	12 0	10 3	8 8	7 11
1897.				
January.....	12 6	11 0	8 2	7 10
February.....	12 4	10 11	8 1	7 10
March.....	16 4	11 8	9 7	7 10
April.....	16 11	13 11	11 10	9 7
May.....	17 2	14 10	11 10	10 6
June.....	15 4	13 8	11 1	10 3

ST. OURS LOCK.

STATEMENT showing the depth of river water on mitre sills of St. Ours Lock during the fiscal year ended 30th June, 1897.

MONTHS.	LOCK NO. 1, LOWER SILL.		LOCK NO. 1, UPPER SILL.	
	Highest.		Highest.	
	Lowest.		Lowest.	
1896.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July.....	9 4	7 10	9 7	8 6
August.....	8 2	6 11	8 9	7 11
September.....	8 3	7 8	7 4	6 6
October.....	8 0	6 6	8 6	2 8
November.....	10 9	6 11	10 10	8 1
December.....	11 8	8 9	9 7	8 6
1897.				
January.....	11 4	9 0	9 0	7 9
February.....	9 10	8 6	8 5	8 1
March.....	16 3	8 7	12 7	8 1
April.....	17 2	14 0	13 10	12 0
May.....	17 10	14 10	14 2	12 3
June.....	15 2	11 9	12 5	11 1

LACHINE CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ended
30th June, 1897.

Date.	Name of Vessels.	Name of Owners.	Fines.	Damages.	Total.
1897.			\$ cts.	\$ cts.	\$ cts.
June 17...	Steamer "Spartan".....	Rich. & Ont. Nav. Co.....		44 50	44 50
				44 50	44 50

JOHN O'NEILL,
Collector.

BEAUHARNOIS CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ended
30th June, 1897.

Date.	Name of Vessels.	Name of Owners.	Fines.	Damages.	Total.
1896.			\$ cts.	\$ cts.	\$ cts.
July 2....	Scow—No name.....	Captain Wm. Henry.....		5 00	5 00
1897.					
May 11...	Steamer "Ocean".....	Captain Trowell.....	20 00		20 00
	do	do		602 08	602 08
			20 00	607 08	627 08

S. A. BRODEUR,
Collector.

CHAMBLY CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ended
30th June, 1897.

Date.	Name of Vessels.	Name of Owners.	Fines.	Damages.	Total.
1896.			\$ cts.	\$ cts.	\$ cts.
Oct. 30....	Boat "E. C. Baker".....	Captain W. Butler.....	5 00		5 00
			5 00		5 00

M. D. S. MARTEL,
Collector.

Department of Railways and Canals.

TRENT CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

PETERBOROUGH, 1st September, 1897.

SIR,—I have the honour to submit the annual report on the works under my charge for the fiscal year ended 30th June, 1897.

The Trent Canal is a term applied to several water stretches between the Bay of Quinté on Lake Ontario and Georgian Bay on Lake Huron, which, however, in their present condition do not form a continuous line of navigation. The object of the present works is to connect these several water stretches so as to make a continuous line of navigation for barge traffic of six feet draught between Lake Ontario and Georgian Bay. The total distance between these two points is about 200 miles, but by utilizing the numerous lakes and rivers and taking advantage of the lay of the land to make flooded reaches it is hoped that no more than 15 to 20 miles will be actual canal. Champlain in his memorable march through Canada followed the line of this proposed canal, and it has since been used by the Indians and fur traders in their excursions between the upper lakes and tide water. The Imperial Government as far back as 1835 chose this route as being the most natural and feasible to make a water way between Lake Ontario and Lake Huron, and they spent a considerable amount of money to accomplish this object. The works then constructed have ever since been utilized. When the two divisions at present under construction are completed, there will be a continuous direct line of navigation of about 160 miles in length, and about the same distance of lateral navigation between Heeley's Falls and the ports on Lake Simcoe.

MAINTENANCE.

Owing to the immense country drained and the country becoming every year more cleared the proper regulation of the water under the present system becomes more difficult. On account of the new works at present being constructed between Lakefield and Peterborough it was necessary to interfere somewhat with the regular flow of the river in order that the works might be proceeded with. Navigation closed on the central reach 28th November, 1896, and opened again the 19th April, 1897. On the lower reach navigation closed on the 26th November and opened again the 13th April, 1897. The water was maintained at a navigable height on all the reaches except that above Bobcaygeon, where owing to the leakage of a private dam and the flow of water coming down from above being reduced for a time the water fell for a few days below the ordinary height.

The number of lockages was 2,648, which, however, does not fairly represent the traffic on the canal, as on some of the larger stretches the routes do not pass through any locks, so no records are kept.

REPAIRS.

The following repairs were executed :—

Peterborough.

The guard booms and piers to the upper entrance of the lock at Peterborough were overhauled and put in first class condition. The sluices of the dam were also repaired.

Hastings.

The landing pier at the lower entrance, 300 feet in length, was entirely rebuilt. A new landing pier 150 feet in length was also built at the upper entrance. A new abutment was also built at the north end of the dam and part of the flat dam was replanked and gravelled.

Lakefield.

The plank on the landing pier, most of which was completely rotten, was renewed as it was dangerous to land upon. It is proposed to fill this pier in with rock and quarry waste and gravel.

Burleigh.

The landing pier at the upper entrance was repaired and the lock gates painted.

Lovesick.

The lock gates at Lovesick were given a coat of paint.

Buckhorn.

Some of the portion piers above the dam, which were injured by the ice, were repaired as well as the booms.

Bobcaygeon.

The lock wall on the north side was pointed and the rear of the wall was built up with a dry wall and filled in solid with stone and gravel. The projecting platform at the end of this wall was removed and built up solid and the pier extended to meet the old pier on the north side. This has made a great improvement at the lower entrance pier. The tops of the piers of the dam were planked over in order to prevent small fish being thrown into the piers where they rotted, and the smell therefrom was a great nuisance to the residents of the village.

Fenelon Falls.

The swing bridge was replanked with 3 inch plank.

Minor repairs were also done at Lovesick and Young's Point. A number of new buoys were placed in the channel and others were put in to replace those that had been removed.

INCOME.

Peterborough.

The line of guard booms and piers at the upper entrance to the lock was extended as far as the Grand Trunk Railway bridge. This extension was much needed to prevent vessels drifting over the dam in a heavy side wind.

Burleigh.

A new landing pier was built above the swing bridge, in order to provide snubbing ground for down vessels when the lock was occupied. This pier has been greatly appreciated since its construction.

Lindsay.

A fish pass was constructed in the dam at Lindsay for the purpose of allowing the fish to pass up into Lake Scugog.

Chisholms.

An appropriation was made for the building of a dam at this station. Considerable preparation was made and material was purchased, when an order was received to stop further work.

Department of Railways and Canals

Hastings.

Thousands of boulders were removed from the channel above Hastings and the channels thus cleared were buoyed out. A channel also 700 feet wide, with 7 feet depth of water was blasted out of the solid rock but was not removed. This will be completed when the dredge can be used for this purpose.

Dredging at Bobcaygeon and Katchewanoe Lake.

Very little could be done at these places in the way of dredging as the dredge was employed during the whole season at Rosedale.

Two new drill scows were built in preparation for the work as soon as the dredge can be obtained for this work.

CAPITAL.

Dredging mouth of Otonabee River.

The "City of Peterborough" with a scow on which a heavy drag was suspended, was employed in cleaning out the channel through the accumulation of sawdust deposited there by the saw mills.

Rosedale.

Between Balsam Lake and Cameron Lake the river is very shallow with a rock bottom on which there is not more than three and a half feet of water. A channel 4,600 feet, 90 feet in width and 7 feet in depth is being excavated. The rock was drilled by means of four steam drills on scows, then blasted, and is now being dredged. This channel forms part of the main line of the canal and without it the canal was practically divided except for very light draught vessels. This work is nearly completed, and the traffic has already considerably increased, though it is still impossible for the large vessels to pass through owing to the small size of the lock at this point which is the property of the Ontario Government.

The present swing bridge, which also is the property of the Ontario Government, is not of the required width, neither is it on the line of the new channel. The Dominion Government has made a grant to build a new steel bridge, with piers of concrete, which will be a great improvement to the present one.

CONSTRUCTION.

Section No. 1, Simcoe-Balsam Lake Division.

The work on this section has been continuously prosecuted throughout the year by the contractor Andrew Onderdonk. Nearly all the rock and earth has been completed. All the cribwork for the entrance pier at Balsam Lake on the south side has been built and placed in position, but it is not yet filled with stone. One crib has also been built and put in line on the north side of the entrance. This work cannot be proceeded with at present owing to the very high water. The deviation of the Grand Trunk Railway at the canal crossing has been made, but nothing has been yet done in raising the track of the main line, though I understand the contractor has made the necessary arrangements with the railway authorities to have this done. The following structures have yet to be built—two guard gates, two regulation weirs, concrete piers for one highway swing bridge, one highway and one railway high level bridge. The work on this section has been carried on most satisfactorily.

Section No. 1, Peterborough-Lakefield Division.

The work on this contract has been proceeded with steadily by the contractors, Messrs. Brown, Love & Aylmer. The work on this section consists for the most part in excavating five short cuts across the points of land at the bends of the river, and the

construction of the necessary locks (five in number) to overcome the difference of levels, and of four dams to hold the water on the several reaches and of the raising of roads in lieu of those which will be flooded. The excavation for the several cuts, locks and dams on this section is about completed, with the exception of that at Lakefield which is rock and will be proceeded with during the winter and be completed in the spring. Locks No. 4 and 5 have been completed, being built wholly of concrete. Lock No. 4 was completed last fall and had gone through winter showing no defects whatever. These are the first locks which have been built wholly of concrete in Canada, and their present condition proves the adaptability of the use of concrete in the construction of locks. Such concrete as is suitable for lock construction is only obtained by the greatest care in the selection of the cement and other constituents of the concrete and in the mixing and laying. If any one of these particulars is neglected failure is sure to follow. The neglect of one or more of these particulars has probably led to prejudice against the use of concrete in engineering works.

Dam No. 3 was about completed last fall, and dam No. 4 was about two-thirds completed, the high water up to the 30th of June prevented their completion. The following work is yet to be done, viz., the completion of dams Nos. 3 and 4, the construction of dams at Nos. 2 and 5, and of locks Nos. 1, 2 and 3, and the gates for all the locks, two entrance piers and the abutments for a high level bridge at Lakefield, one guard gate and the raising of the Grand Trunk Railway track near Lakefield. The work is proceeding very satisfactorily on this section.

Section No. 2, Peterborough-Lakefield Division.

The contractors on this section are Messrs. Corry & Laverdure. The excavation on this section is fairly well advanced, being about half completed. The great part of the excavation yet to be done is in connection with the hydraulic lock and that near the Warsaw and Norwood Roads. The works completed are as follows:—

The entrance piers and piers for Grand Trunk Railway swing bridge (except pivot pier) at Nassau, the piers for the Warsaw and Norwood Road Bridges, the Maria Street Bridge, the pipe culvert near the Norwood Road, the waste weir and embankment near Nassau, about half the earth excavation and about all the rock work. The works yet remaining to be done are the dam and pivot pier for highway bridge at Nassau, one ordinary lift lock at Ashburnham, the concrete in connection with the hydraulic lift lock, three guard gates and about 200,000 cubic yards of earth work. The superstructures for the bridges are not yet included in this contract, but the superstructures for the Maria Street and Warsaw Road bridges have been completed by the Central Bridge Works of Peterborough.

PLANT.

The dredge "Otonabee" has been in constant use at Rosedale except for a couple of months (August and September). It is rather lightly constructed for this class of work and has to be constantly repaired and strengthened.

TUG "EMPIRE."

The tug "Empire" has been fully employed during the year in attending the dredge, in buoying out the navigation channel, delivering of timber for the different works of repair, hauling gravel for the staunching of dams, &c.

Three new drill scows were built, two at Bobcaygeon and one at Hastings. A new double hoisting engine and boiler was purchased, also a new boiler for the steam drills.

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

RICHD. B. ROGERS,
Superintending Engineer.

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

Department of Railways and Canals

STATEMENT showing the highest and lowest Water Level at each Lock on the Trent Canal for the fiscal year ended 30th June, 1897.

Station.	1896.											
	July.		August.		September.		October.		November.		December.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
Hastings.....	7 11	7 7	6 11	6 11	7 4	6 10	7 1	6 10	7 8	7 1	7 8	7 8
Peterborough.....	7 10	5 9	7 5	5 6	7 5	5 6	7 7	5 6	8 1	6 11	7 10	7 10
Lakefield.....	6 3	5 11	5 9	5 8	5 9	5 8	5 9	5 6	8 1	5 6	7 1	5 6
Young's Point.....	6 7	6 3	6 0	5 9	5 11	5 6	5 9	5 7	8 3	7 1	8 4	7 1
Burleigh Falls.....	6 7	5 9	6 0	5 6	5 10	5 6	5 9	5 6	8 3	5 9	8 4	5 6
Lovesick.....	6 9	5 9	5 11	5 6	5 9	5 6	5 6	5 6	6 10	6 6	6 10	6 6
Buckhorn.....	6 9	6 7	6 4	5 9	5 7	5 7	5 7	5 6	6 8	6 6	6 10	6 6
Bobcaygeon.....	7 6	6 10	6 11	6 5	6 2	5 7	6 9	6 2	7 4	6 11	7 4	6 7
Fenelon Falls.....	8 0	6 0	7 6	6 0	6 7	5 11	7 10	5 11	8 2	6 11	7 10	6 0

Station.	1897.											
	January.		February.		March.		April.		May.		June.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
Hastings.....	7 2	6 9	7 0	6 9	7 10	7 0	8 10	9 7	9 0	8 9	8 0	8 0
Peterborough.....	6 6	5 11	5 10	5 8	7 11	7 0	9 2	8 0	9 2	9 0	9 6	9 1
Lakefield.....	6 1	6 0	5 7	5 6	6 9	6 1	7 5	6 8	7 7	6 7	6 2	5 11
Young's Point.....	7 0	6 0	6 5	6 6	6 7	6 3	9 1	8 6	9 5	8 9	8 1	7 4
Burleigh Falls.....	5 6	6 11	6 3	6 3	.....	7 11	.....	9 4	.....	9 8	.....	8 3
Lovesick.....	5 6	5 6	5 8	5 6	7 4	5 8	8 6	6 3	8 8	6 5	7 10	6 5
Buckhorn.....	5 11	5 7	6 5	6 4	6 4	5 5	7 7	6 5	7 8	6 9	6 9	6 7
Bobcaygeon.....	5 11	5 9	5 10	5 6	6 10	5 5	7 1	6 10	7 2	6 10	7 3	6 11
Fenelon Falls.....	5 6	6 1	6 1	5 11	6 4	5 10	7 4	6 0	7 2	5 10	6 9	6 0

RICHARD B. ROGERS,
Superintending Engineer.

RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

OTTAWA, 12th July, 1897.

SIR,—I have the honour to submit herewith my annual report on the works performed on the Rideau Canal, under my charge, during the fiscal year ended 30th June, 1897.

Navigation closed at Ottawa, 23rd November, 1896.

Navigation closed at Kingston Mills, 28th November, 1896.

Navigation opened at Ottawa, 1st May, 1897.

Navigation opened at Kingston Mills, 1st May, 1897.

On all the levels both ascending and descending, the water was maintained throughout the whole season of navigation, so as to give continually the required depth on the lock stills.

Below the locks at Kingston, however, the same trouble occurred as during the last three or four years, on account of the lowness of the water in Lake Ontario.

However, last winter the chief point of obstruction known as the "Basket" shoal was blasted out and a channel formed through it, so that no more trouble need be feared at this point, as there now exists the same depth of water over this shoal as there is on the lower still of the locks at Kingston Mills.

Some complaints were also made about the shoal near Manotick known as the "White Horse," but provision has been made in the estimates for its removal, and it will be blasted out this coming winter.

The spring freshet this year was particularly light, and no damage was done at any of the stations either by water or ice.

The principal repairs and other works performed at the various lock stations and bridges along the line of navigation are as follows:—

OTTAWA.

One pair of lock gates renewed. The stone for rebuilding lock still No. 3 was purchased by contract with Mr. Michael Stafford of Hull, but on account of the unsatisfactory manner in which he carried out his contract, the stone arrived too late for building into the sill, but was cut by our own masons ready to go in as soon as navigation closes. The nine pairs of lock gates at this station were painted by contract with Mr. James G. Howe of Ottawa. The projections of rock along the west side of the wharfs above the locks were blasted off and removed.

The whole of the roadway round the basin behind the wharfs was excavated to a depth of about two feet, and macadamized, making a solid and permanent road, where formerly, in wet weather, loaded wagons were unable to pass. The uncompleted portion of the sheet piling on the east side of the Deep Cut was finished by contract with Mr. J. R. Booth of Ottawa.

The lock house and collector's office was painted and cleaned inside and out, and the walls outside the building covered with fine broken slate quarry waste.

STEWARTON BRIDGE.

The steel swing span was raised and repaired, and the whole bridge, tool house and bridge tender's cottage painted (two coats) by contract with Mr. John Waller.

Department of Railways and Canals.

BANK STREET BRIDGE.

An accident occurred to this bridge last month, owing to the main beam supporting the ballast pocket under the short arm of the swing giving way. I, however, put men to work at once to make temporary repairs, and there was no delay to navigation or bridge travel. The whole bridge is to be rebuilt this year.

HARTWELL'S LOCKS.

Three pieces of coping were put in the middle lock. Lock walls grouted and repaired. Four new chain blocks. Fencing on south side of towpath road repaired, and towpath road gravelled from Bank Street Bridge to Hogsback. Store house and lock labourer's cottage repaired.

HOGSBACK LOCKS.

Protection boom repaired. Bulkhead re-planked and small repairs to apron below same. One new ice breaker crib built, and two others raised three courses and filled with stone. Rest pier of swing bridge repaired. Lockmaster's house re-shingled, and store house and swing bridge painted.

BLACK RAPIDS LOCK.

Extensive repairs were made to this station, which was badly shaken by the freshet in 1896. The long dam was rebuilt of 10-in. by 12-in. timber. The embankments and weirs repaired, four new stop logs supplied, and stone placed below slopes of dam. The works here are now in better shape than they have been for years.

LONG ISLAND LOCKS.

New coping course placed on sill No. 3, which sill has since been burst up by the water, but is now bolted down with oak straps and $1\frac{1}{2}$ -inch rock bolts. Bulkhead replanked and hand railing renewed. Top of dam and lock walks gravelled. Stone placed on dam.

MANOTICK BRIDGE.

Swing span rebuilt, and whole bridge painted.

WELLINGTON BRIDGE.

Whole bridge painted.

BECKETT'S LANDING.

Planking and hand rail repaired, whole bridge painted.

BURRITT'S RAPIDS LOCK.

New store house built 24 ft. by 16 ft., bulkhead and waste weir rebuilt, new ice breaker crib built and 5 new stop logs supplied. The old wooden swing bridge in the village was taken down and replaced by a new steel span, the work being done by contract with the Central Bridge Company of Peterborough, Ont. A new wooden fence on both sides of the bridge approaches was built by contract with Mr. Patterson of Burritt's Rapids. The bridge-tender's house is now being repaired.

NICHOLSON'S LOCKS.

Lockmaster's house shingled. Sundry small repairs to locks. Swing bridge replanked. About 800 feet of the dry stone wall on the west side of the upper cut was taken down and rebuilt by contract with Mr. M. Driscoll of Merrickville.

CLOWE'S QUARRY LOCK.

Sundry small repairs made to station.

MERRICKVILLE LOCKS.

One pair of lock gates renewed. South bulkhead rebuilt. Long dam replanked on back. Sundry small repairs made to masonry of locks. Four new chain blocks supplied.

MAITLAND'S LOCK.

Swing bridge painted. New stop log carrier built and flooring of bulkhead and swing bridge renewed. The upper cut at this station is usually very low towards the autumn and should be deepened at least two feet for a distance of at least 1,000 feet by blasting.

EDMOND'S LOCK.

One new swing bar. Long dam repaired with oak blocks.

OLD SLY'S LOCKS.

One pair of lock gates renewed. One new swing bar on middle gates. Lockmaster's house shingled. Four new chain blocks supplied. Four new ice breaker cribs built in front of weirs and new boom placed between them.

SMITH'S FALLS COMBINED LOCKS.

One pair of locks gates renewed. One new swing bar. South side of basin sheeted with two rows of inch boards. Back of dam replanked with 3-in. pine plank. Swing bridge replanked. The old wooden swing bridge across the middle lock was removed and the road closed, as the new crossing at the detached lock is now completed.

SMITH'S FALLS DETACHED LOCK.

The work of making a crossing at this lock, which was commenced last year, is now completed, the approaches and roadway between the canal and the by-wash, also the masonry abutments for the by-wash bridge, sidewalks, fencing, etc., having been built by contract with Mr. H. Grant of Ottawa, and the steel span across the by-wash being built by contract with contract with the Central Bridge Company of Peterborough. A portion of this new roadway crossing, the property of Mr. G. H. Gould, was expropriated by order of the department; Mr. Gould subsequently being awarded the sum of \$1,350 for the land so taken.

POONAMALIE LOCK.

Sundry small repairs were made to station and gravel placed on embankment.

PERTH BRANCH.

Lockmaster's house at Beveridge's lock station painted, also store-house. Plank purchased by contract with Mr. M. Ryan of Smith's Falls, for re-flooring four bridges and basin wharfs in Perth. The bridge plank is not yet delivered, but the wharf plank has been supplied and laid.

OLIVER'S FERRY BRIDGE.

Small repairs made to flooring and approaches raised and graded.

Department of Railways and Canals.

NARROWS LOCK.

Lock house was painted, kitchen built to lock labourer's house. Upper and lower piers were renewed from water line up. Small repairs to lock and swing bridge and gravel on dam.

NEWBORO' LOCK.

The old wooden Howe truss high level bridge across the cut was taken down and replaced with a steel structure, the work being done by contract with the Central Bridge Company of Peterborough. The approaches on each side were raised and the grade reduced, and fenced on both sides. The permanent bulkhead across the mouth of the cut was raised two courses, and a concrete apron laid under water on the up stream side of the sill and wings, and sundry small repairs to lock, &c.

CHAFFEY'S LOCK.

The approaches to the swing bridge across the lock were raised and rebuilt. The by-wash bridge was repaired. A new store house built 16 x 24. Four new chain blocks and sundry small repairs made to station.

DAVIS'S LOCK.

Preparations are being made to rebuild the upper wing walls of the lock. Sundry small repairs were made to station.

JONES'S FALLS LOCKS.

The long bridge across the old river was rebuilt by our own carpenters, the timber having been supplied by contract with Messrs. W. C. Edwards and Company, Limited, of Ottawa. The bridge across the waste weir was rebuilt. One pair of lock gates renewed. Three new sluice frames and two new swing bars, lockmaster's house was repaired and sundry small repairs made to station. Timber was purchased to rebuild Morton dam, and the work will be proceeded with this autumn.

BRASS'S POINT.

The bridge floor was relaid throughout with 3-inch white pine plank.

UPPER BREWER'S MILLS LOCKS.

Bridge across old river repaired and planked. Two culverts repaired and swing bridge raised. New house built for lock labourer, which is finished all but the plastering which has been let to Mr. A. Newlands of Kingston.

BREWER'S LOWER MILLS LOCK.

Swing bridge rebuilt. Gravel placed on dam and on lock walks. Sundry small repairs to station.

KINGSTON MILLS LOCKS.

Swing bridge and fencing painted. Small repairs made to station. Mr. F. Keenan of Kingston Mills, was awarded the contract for supply and delivery on the embankments of 250 cubic yards of stone. The "Basket" shoal about $\frac{1}{2}$ mile below the locks was removed last winter by submarine blasting (the material being red granite) the debris being removed by our dredge in April, and the new channel thus made has been buoyed out, and I do not think any more trouble will be experienced at this point

as there is slightly more water over this shoal now than on the lower still of the locks at Kingston Mills. The cut from the foot of the locks to the "Basket" shoal was dredged out last summer, and navigation at this point is better now than it has been for years.

GENERAL.

The contract for the annual supply of white oak timber (about 4,500 cubic feet) was awarded to Mr. Thomas McTiernan of Ottawa. Six hundred barrels of "Josson" Portland cement were purchased from Mr. DeSola of Montreal. Three thousand pounds of white lead were purchased by contract with Mr. Jas. G. Howe of Ottawa. Our portable pumping engine was thoroughly overhauled and repaired, and a new set of wheels with 5-inch tires purchased for it and a new shed built to receive it at Ottawa.

DREDGING PLANT.

The dredge "Rideau" was fitted out in March, and commenced removing the blasted rock at the "Basket" on 1st of April, and had the channel clear for boats by 1st May. A new pair of swing cylinders were finished by Raney, Salley & Co., of Kingston, and the usual spring repairs, such as caulking, painting, &c., were made.

The tug "Shanly" was caulked from her keel upwards and painted inside and out. New wire guards were placed on the cabin and fore-castle skylights. A new boat was purchased to replace the old one, which was useless.

Two of the dump scows were partially rebuilt, and are now as good as new; the other two were caulked.

The dredge was employed last year in deepening the approaches to the wharfs at the port of Westport, and in deepening the cut below Kingston Mills, and removing rock at Basket shoal.

The entire dredging plant, consisting of dredge, tug, four side pocket, and one flat scow are in first-class working order.

I append hereto a table showing the highest and lowest water during each month of the year at Ottawa and Kingston Mills lock stations.

I have the honour to be, sir,

Your obedient servant,

ARTHUR T. PHILLIPS,

Acting Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer

Railways and Canals.

Department of Railways and Canals

RIDEAU CANAL.

TABLE showing monthly, the Highest and Lowest Water on the Lower Sills of the Locks at Ottawa and Kingston Mills, respectively, from July 1st, 1896, to June 30th, 1897.

OTTAWA.				KINGSTON MILLS.			
Highest.		Lowest.		Highest.		Lowest.	
	Ft. in.		Ft. in.		Ft. in.		Ft. in.
July 1	11 8	July 31.....	9 10	July 1.....	7 8	July 18 to 31....	7 2
Aug. 1	9 10	Aug. 31.....	7 10	Aug. 1 to 3.....	7 2	Aug. 30 to 31....	7 0
Sept. 3 and 4...	7 11	Sept. 17 and 18..	6 7	Sept. 1 and 2...	6 11	Sept. 13.....	6 2*
Oct. 15 to 22...	8 11	Oct. 1.....	7 9	Oct. 1.....	6 6	Oct. 28.....	5 11†
Nov. 26.....	13 9	Nov. 1 to 4.....	8 7	Nov. 1 to 16....	6 3	Nov. 30.....	6 0
Dec. 4.....	13 7	Dec. 18 and 19..	12 4	Dec. 12 and 13..	6 6‡	Dec. 31.....	6 0
Jan. 1 and 2....	12 6	Jan. 21 to 31....	10 4	Jan. 17.....	6 4	Jan. 15.....	5 11
Feb. 14 to 26....	10 3	Feb. 5 to 12....	10 2	Feb. 17.....	6 5	Feb. 11 and 12..	5 10
March 31.....	12 8	March 1 to 11....	10 4	March 13.....	7 2	March 1 and 2....	6 0
April 30.....	21 5	April 10.....	12 0	April 27.....	7 6	April 3.....	6 7
May 2 and 3....	22 9	May 31.....	20 1	May 28 to 31....	8 0	May 1.....	7 1
June 1.....	19 9	June 30.....	14 10	June 1 to 9....	8 0	June 26 to 30....	7 10

* Strong northerly wind, which lowered the water on the sill for the day, it went up to 6' 6" the next day.

† Strong north wind, water rose to 6' 2" next day.

‡ South wind, water fell to 6' on 15th.

ARTHUR T. PHILLIPS,

Acting Superintending Engineer

RIDEAU CANAL OFFICE,

OTTAWA, 12th July, 1897.

ST. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,

CORNWALL, 1st July, 1897.

SIR,—I beg to forward this my annual report for the fiscal year ending 30th June, 1897, upon construction as connected with the enlargement of the canals in my charge.

CORNWALL CANAL.

(Opened for traffic, 1843.)

The canal has a total lockage of 48 feet and surmounts the Long Sault rapids.

It extends from the town of Cornwall westwards to the village of Dickinson's Landing, a distance of $11\frac{1}{2}$ miles.

It is located on the north side of the St. Lawrence, on ground sloping rapidly towards the river, and at a considerable elevation above it.

The works of enlargement, now under construction, consist in deepening, widening and straightening the original channel, in strengthening and protecting the embankments, and in the construction of new and enlarged locks, supply weirs, bridges, &c.

Also in addition to the above and not included in the original contracts, the construction of dams across the north or Sheik's Island channel, with the necessary regulating weir, &c., on the island, designed to perfect the channel and do away with the existing ruinously and imperfectly constructed embankments west of the village of Mille Roches, embraced in contracts 6 and 7, and part of 5 and 8, which have been abandoned.

This improvement in the alignment was considered necessary, for the reason that the class of vessels for which the enlarged canal is designed, would have great difficulty in navigating it, and that on some of the curves west of Mille Roches, it would be practically impossible for those of full canal size to pass each other while under headway.

The enlargement at the lower or eastern entrance (section No. 1) was commenced in 1876, and with the exception of some work on old lock No. 17, and the weir and head-race to the mills, was completed in 1882.

Section No. 10, upper entrance, which was commenced in 1884, was completed in 1895, and the final estimate forwarded to the department.

In 1888 the remainder of the work required to complete the enlargement was placed under contract, and with the exception of the abandoned section No. 6 and 7 and section No. 8, which has been completed, is still in progress.

And in 1893 the contract for section No. 4 was extended to include the construction of Sheik's Island dams, which are now completed, and the contracts for section Nos. 6 and 7, and parts of sections Nos. 5 and 8 affected by their construction cancelled.

STATEMENT of Work under existing contracts and in progress.

Locality.	Section.	Contractors.	Date of Contract.
Cornwall.....	2	Wm. Davis & Son.....	Nov. 5th, 1888.
Lock 19.....	3	do.....	do
Maple Grove.....	4	do.....	do
Sheik's Island Dams.....	5	do.....	June 19th, 1893.
Mille Roches.....	6	The Gilbert Blasting & D. Co.....	Nov. 2nd, 1888.
Moulinette.....	7	do.....	do
Sand Bridge.....	8	do.....	do
Long Sault.....	9	do.....	do
Dickinson's Landing.....	10	Jocks, Delorimier & Broder.....	April 7th, 1884.

NOTE.—Section No. 2 includes the completion of section No 1. Section No. 4 includes the Sheik's Island dams. Section No. 8 adjoins section No. 10.

Department of Railways and Canals.

The water was drawn off the canal by the 8th March, and so continued until the 30th April following; this enabled the contractors to proceed with work which could not be carried on during navigation.

The stone delivered during the year was procured from the Mille Roches quarries.

SUMMARY OF YEAR'S WORK.

Section No. 1.

The coping and parts of the top courses of old locks 15, 16 and 17, at lower entrance, have been renewed, and the upper recess and wing walls of old lock 16 raised to the level of coping of lock 17 (10 feet), in order that the basin between these locks, when completed, may be used as a dry dock.

The necessary excavation and raising, strengthening and protecting the banks are in progress.

The banks along the raceway to the mills, at lower entrance, have been raised and protected with stone.

Section No. 2.

Part of the south-east retaining wall of the Cornwall swing bridge, displaced by improper dumping from derrick, has been rebuilt and strengthened by the contractor.

All the banks on this section have been completed and protected with stone, except for a short distance in front of the town of Cornwall and below the weir at lock 18.

The pitched stone slope wall on the outer or river slope of the embankment or tow-path above lock 18 has been completed.

A considerable quantity of dredging still remains to be done in the reach above lock 18, in order to reduce the bottom to the required level.

Section No. 3.

The coping and part of the upper courses of the old lock 19 have been renewed, and the repairs and renewals to the foundation of the lock completed.

Glance piers of cribwork at the head and foot of lock 19 have been built.

The slopes of banks throughout the section within the prism of canal have been completed and protected with stone.

The pitched stone slope wall on the outer or river slope of the embankment below lock 19 is being proceeded with.

Very little dredging remains to be done on this section to give the required depth of water.

Section No. 4.

The banks on this section have been completed and protected with stone on the canal side, with the exception of some short stretches above lock 20.

Dredging on the section is practically completed.

The water was let out of the canal on the 8th March last, between which date and the 30th April the "Guard Gates"—a structure situated about 1,200 feet west of the locks (No. 20) and supply weir at Maple Grove; and rendered necessary by the opening of the Sheik's Island channel—was commenced and completed with the exception of a pair of lock gates and some protection to slopes now in progress.

Section No. 5.

Work on this section is practically completed; the banks have been raised, trimmed and protected with stone, and very little dredging remains to be done, to give the required depth of water throughout the section.

The old culvert or tunnel under the canal at Mille Roches has been removed, and the new embankment or tow-path has since been completed throughout.

Section No. 8.

This section is now completed.

Sheik's Island Dams.

The lake formed by these dams has been in use since last season, that part of the old canal lying between the dams comprising part of section No. 5, sections Nos. 6 and 7 and part of No. 8 having been abandoned except for local purposes.

The salient points in the lake have been buoyed to mark the channel; lights will also be provided at the upper and lower entrances.

Two openings have been dredged across the tow-path of the old canal opposite Moulinette to give access to the wharfs and front of the village.

The superstructure of the swing bridge across the canal at Mille Roches, also that of the bridge formed over the island weir in connection with the Sheik's Island dams has been completed and brought into use.

WILLIAMSBURG CANALS.

FARRAN'S POINT.

(Opened for traffic, 1847.)

This canal is about $\frac{3}{4}$ of a mile in length and has a lockage of $3\frac{1}{2}$ feet.

It overcomes a short swift rapid above the village of Farran's Point, which is situated about 5 miles west of the village of Dickinson's Landing, the head of the Cornwall canal.

The contract with the Gilbert Blasting and Dredging Co., dated 12th May, 1896, to restore the prism of canal to its original dimensions, has been completed.

The enlargement of this canal having been authorized, tenders were advertised for on the 9th May, 1897. On the 1st June a contract was entered into with the Canadian Construction Company, the work to be completed 31st January, 1899.

The delivery of materials and plant was commenced on the 4th June.

The work commences at Farran's Point, the entrance of the canal, and extends west to Empey's Bay, a distance of about 7,000 feet.

The works contemplated in the proposed scheme of enlargement consist in forming a new lower entrance, north of that at present in use, and beyond the influence of the "Big Eddy" at the foot of the rapid, also of a new lock extending from deep water west to a point about 200 feet above the old lock, and nearly parallel to it, of the deepening and straightening of the present channel to the head of the old canal and its extension through Point Avoyon to Empey's Bay.

The old lock will not be interfered with beyond such necessary repairs as may be required to continue it in use.

RAPIDE PLAT CANAL.

(Opened for traffic, 1847.)

The lockage of this canal is $11\frac{1}{2}$ feet.

It overcomes the rapid known as "Rapide Plat," and extends from the village of Morrisburg west to Flagg's Bay, about $3\frac{1}{4}$ miles.

The works now under contract and in progress are as follows:—

Location.	Section.	Contractors.	Date of Contract.
Morrisburg..	1	Poupore & Fraser.....	January 26, 1891.
New Road	3	Poupore & Fraser.....	January 26, 1891.

NOTE.—The change in alignment, east of lock 24, formerly section No. 4, is included in section No. 3'

Department of Railways and Canals.

The work of enlargement now in progress consists of the deepening and widening of the old channel and in constructing a new and enlarged lock, supply weir, and entrance pier at the village of Morrisburg.

The enlargement was commenced in 1884, on section No. 4, the upper or western entrance, and completed and brought into use in 1888.

Section No. 1.

This section extends west along the river front of the village of Morrisburg and includes the lift lock.

Since the work was commenced a change in the proposed alignment of the lower end of this section was made, by placing the centre line of the new lock parallel to that of the old lock No. 23, thereby improving the direction of the river entrance, and enabling upward bound vessels to avoid the strong current.

Dredging at the lower entrance is almost completed.

The pier constructed of cribwork at the lower entrance of the new lock was completed and brought into use on the 28th November last.

The lock gates were placed in position on the 15th of July, 1896, and on the 24th the new lock (23) was brought into use.

The masonry wall connecting the foot of the old and new locks was completed on the 29th September, 1896.

Masonry for the south retaining wall at the head of the new lock, which was in progress July 1, 1896, was carried on until 15th September, 1896, and resumed on 22nd March, 1897, and completed on the 6th May, 1897.

Dredging operations on this section were resumed on the 17th July, 1896, carried on until 19th August, 1896, resumed on 2nd December, 1896, and closed for the season on the 9th December, 1896. Again resumed on 30th March, 1897, and are now in progress.

The greater part of the excavated material was placed in embankment in rear of the lock and south retaining walls.

Mooring posts of oak have been placed in positions on either side of the new lock and at lower entrance.

The masonry wall connecting the head of the old and new locks was commenced on 8th May, 1897, and is now in progress.

The removal of the old weir and head-race to the mills which was commenced on the 30th April, 1897, was completed on 19th May, 1897.

Masonry of the new supply weir and wall connecting same with head of old lock was commenced on 24th June, 1897, and is now in progress.

The removal of the coping and portions of the upper courses of the old lock 23 was commenced on 9th May, 1897, and is now in progress.

The removal of the foundation and mitre sills of old lock 23 was commenced on the 11th June, 1897. This work which is designed to increase the depth of water on the lower mitre sill consists of excavation, concrete filling, placing new timbers, and new mitre sills, removing part of the upper breast wall, underpinning the lower recess and tail-bay walls, with rubble masonry and concrete, and raising and repairing the lower gates. When completed these alterations will afford 3 feet more of water on the lower sill, or nine feet at lowest water.

Generally the work on this section is nearing completion.

Section No. 3.

This section commences a short distance above Mariatown and extends west to the vicinity of the guard lock, No. 24, and includes the widening and deepening of the east end of section No. 4, and also the formation of spoil grounds and other works in the vicinity of Flag's Bay.

Dredging operations on this section which are now in progress, are nearly completed.

The greater part of the dredged material is being utilized in raising, widening and strengthening the tow-paths and embankments.

The formation of the north slope of this section, above water, was completed on the 28th June, 1897.

The banks on this section are being protected with stone on canal side, which work will shortly be completed.

Generally the work on this section is in a condition to insure its completion by the end of the present season.

GALOPS CANAL.

POINT IROQUOIS DIVISION.

(Opened for traffic, 1847.)

This canal, as originally constructed, was about three miles in length, with a lockage of 5 feet 7 inches at lock 25, in the village of Iroquois, from whence it extended westwards to Presqu'Île and Sparrowhawk's Point, surmounting the Point Iroquois rapids and intermediate stretches of swift water.

About ten years after the completion of these works, some important changes were made, viz. :—The lower mitre sill of lock 25 was lowered 3 feet 2 inches, and means afforded of regulating the depth of water on the upper sill, and consequently in the canal, by connecting it with the Galops division at lock 26 by an embankment in the river.

This division is now termed the Iroquois section, and is under contract.

JUNCTION DIVISION.

(Opened for traffic, 1856.)

The junction division commences at Presqu'Île, and extends up stream to lock 26 at the village of Cardinal.

It consists chiefly of an embankment about $2\frac{1}{2}$ miles in length formed in the river and connects the Galops and Point Iroquois divisions, and thereby, as previously stated raises the water and affords a means of controlling the level on the Iroquois division.

This division is embraced in the Cardinal section and is under contract.

GALOPS DIVISION.

(Opened for traffic, 1846.)

This the original Galops canal, had a lockage of 6 feet 8 inches and extended upwards from the village of Cardinal, about 2 miles to the Galops rapids, which it was designed to overcome and which commence about seven miles east of the town of Prescott.

The eastern half of the old canal now forms part of the Cardinal section.

The western portion is known as the upper entrance—under contract with Murray & Cleveland.

Some years after the completion of the canal the pier head was extended up stream by cribwork and the lockage or fall increased by $11\frac{1}{2}$ inches, now still further increased by a recent additional extension to complete the upper entrance.

The new Galops locks (No. 27, guard lock, and 28, lift lock) are situated side by side, and are the most westerly of the St. Lawrence navigation.

Department of Railways and Canals.

UPPER ENTRANCE, GALOPS CANAL.

The works now under contract and in progress and for which Messrs. Murray & Cleveland are the contractors, were commenced in 1889.

The contract was entered into on the 14th November, 1888, to be completed on the 15th June, 1891.

It embraces the construction of a lift lock connecting with the river below the rapid, and of a guard lock and supply weir, and the removal of the old guard lock, &c., also the deepening, widening and strengthening of the channel from the upper entrance to Round Bay, a distance of about one mile.

Work as under has been done during the year :—

About 13,000 cubic yards of rock and 60,000 cubic yards of earth have been excavated from the canal prism.

The upper entrance pier on the south side of the canal has been extended up stream 300 feet. It is formed of cribwork 30 feet wide up to a level of one foot below lowest water, filled with and protected by the blasted rock from the excavation.

The foundation for a masonry retaining wall and ice breaker has been laid on this cribwork.

An entrance pier of cribwork 315 feet long and 30 feet wide and carried up to a level of one foot lowest water, has been placed below the lift lock on the south side of lower entrance and on this a foundation has been formed for a retaining wall.

About 5,000 cubic yards of embankment have been made in connection with entrance pier.

The north wall of the old guard lock No. 27 has been removed.

The drilling and blasting operations in the rock cut in the vicinity of old guard lock 27, are being successfully continued.

Cribs are being framed for the extensions of the north wall of the guard lock to connect with the main land.

By special efforts on the part of the contractors a new channel through the rock cut south of the old guard lock was opened for navigation on the 28th October, 1896. This enabled the heavily laden grain barges drawing nine feet to avoid the low water in the Galops rapids.

A communication was received in May, 1897, from the forwarding companies to the effect that they did not intend running the Galops Rapids during the season and asking that the channel south of old guard lock be protected by booms or otherwise rendered safe for the purpose of navigation, which was accordingly done.

On the 1st June both the dredges employed on this work were removed to the new works on "North Channel" St. Lawrence River.

GALOPS CANAL ENLARGEMENT.

IROQUOIS SECTION.

The enlargement of the eastern portion of what is known as the Galops Canal having been authorized, tenders for the Iroquois section were advertised for on the 17th April, 1897. On the 20th May a contract was entered into with Messrs. Larkin & Sangster, the work to be completed January 31, 1899.

The delivery of materials and plant was commenced on the 17th May.

The contract begins at "Iroquois," the eastern entrance of the canal, and extends westerly to Presqu'Isle, a distance of about 16,000 feet.

By the proposed scheme of enlargement it is designed to raise the normal level of the existing canal 6 feet; that is to the height of the lowest known stage of water in the River St. Lawrence above the guard lock, and thus, on the main line of navigation dispense with the lift lock No. 26 at Cardinal, which will hereafter be connected directly with the river for the convenience of the village of Cardinal, the mills and the coasting trade.

CARDINAL SECTION.

Tenders for the Cardinal section were advertised for on the 17th of April, 1897. On the 10th of May a contract was entered into with Messrs. Wm. Davis & Sons, the work to be completed January 31, 1899.

The work was commenced on the 3rd of June, and plant and materials delivered shortly after the contract was awarded.

The contract embraces the old "Junction" and the eastern half of the "Galops" divisions; it commences at Presqu'Isle and extends west through the rear of the village of Cardinal to Gates' Point, the eastern end of the upper entrance contract now under construction, a distance of about 17,000 feet.

The proposed scheme of enlargement contemplates abandoning the use of lock 26 on the main line in future and raising the normal level of the existing canal 6 feet above the lowest known stage of the River St. Lawrence at the upper entrance.

RIVER ST. LAWRENCE.

NORTH CHANNEL.

This work having been authorized, tenders were advertised for on the 10th April, 1897. On the 14th May a contract was entered into with Mr. M. A. Cleveland, the work to be completed January 31, 1899.

Work was commenced on June 1st.

The proposed channel, which will be 200 feet in width, begins about three-quarters of a mile above the upper entrance of the Galops Canal, and is practically an extension of canal navigation for about three miles west to the deep water in the Prescott reach, opposite Johnstown.

In connection with this contract, it is proposed to form a dam across the "Gut" channel between "Adams'" and "Galops" Islands, by utilizing the rock excavated from the east end of the channel.

ST. LAWRENCE RIVER AND CANALS.

It is proposed, as opportunity offers, to continue the surveys of the Morrisburg reach, and also of the shoals in Lake St. Francis.

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

TOM S. RUBIDGE,
Superintending Engineer.

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

Department of Railways and Canals

SL. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,
CORNWALL, 1st July, 1897.

SIR,—I have the honour to submit the following report on the maintenance of the canals in my charge for the fiscal year ended 30th June, 1897.

The St. Lawrence district extends from the province line, Lake St. Francis, to the harbour of Presqu'île on Lake Ontario, and embraces the Cornwall, Williamsburg and Murray Canals, also the improvement of the channel way in the intermediate navigable reaches.

CORNWALL CANAL.

The navigation for the season of 1896 closed on the 5th of December.

The canal, which was unwatered on the 8th March, 1897, for the purposes of construction and also for ordinary repairs, was re-opened for traffic on the 1st of May following.

At the lower entrance, both new and old locks were dismantled and prepared for winter in the usual manner.

Navigation has been satisfactorily maintained, and water for manufacturing purposes has not been interfered with, notwithstanding the prevailing low stage of the river, of which there is every indication of a continuance.

The usual works of renewal and repair at the workshops were carried on during the winter and all necessary repairs to the various structures made during the period the canal remained unwatered in the spring.

As a rule, unwatering when necessary during the season of navigation has only been resorted to during off hours on Sunday, or in urgent cases by arrangement with the forwarders.

At the old lower entrance the locks Nos. 15, 16 and 17 have been thoroughly repaired and are now brought into frequent use.

The basin below lock 17 has been enlarged, the material excavated being used to raise the banks of the head-race to the mills; and whilst the repairs to lock 16 were in progress the masonry of the upper recess was raised to the level of coping of lock 17. This with a view to ultimately convert the basin into a dry dock.

One pair of gates has been raised and repaired and erected in the upper recess of lock 16.

New hanging gear has been fitted on all gates of the old entrance locks.

No accidents interfering with navigation have occurred.

Three pairs of spare gates for new locks 15 and 17, built under contract by J. & R. Miller were delivered at Cornwall in June, 1896.

A new pontoon gate lifter in place of the "John Page," wrecked in July, 1895, and built under contract by Messrs. J. & R. Miller was delivered at the foot of the canal in July last. The machine was tested by hanging the gates of lock 23, and when in use has worked very satisfactorily.

During the season of navigation the banks, ditches and structures generally were kept in repair.

During the winter of 1896-97 the new road connected with the lower Sheik's Island dam was macadamized and a considerable amount of stone delivered for protection to outside slopes in the newly formed lake.

A new set of crabs for operating the gates, have been placed on the guard lock, No. 21.

An iron railing has been placed on the lower dam to protect the road.

A new telephone cable under the canal near the workshops has been laid and extensive repairs made to the telephone line generally.

The Cornwall bridge, the regulating weir at the guard lock and some other minor structures have been painted.

A new watch house has been built at the Mille Roches bridge.

The repairs scow has been partially rebuilt.

Extensive repairs and renewals will have to be provided for at the following works, viz :—The ice breaker at the foot of the canal. Repairs to all recesses of new locks 15 and 17, this will involve their unwatering and necessitate the use of the old lower entrance locks.

A new regulating and supply weir, for the lower mills, at lock 17.

The collector's office and the existing lock houses at lower entrance. The question of building lock houses at all new locks is again submitted for consideration.

The superannuations of the past year are as follows, viz :—

Wm. Tackaberry, lock and harbour master at lower entrance, 1st July, 1897.

The office of superintendent having been abolished the services of Mr. A. P. Ress were dispensed with on the 31st March, 1897, since which date all duties connected with the maintenance of the canal have been performed by Inspector Ramsay of the construction staff, a practical man of long experience on canal work.

The following is a list of fines imposed during the past year, viz :—

1896...	July 20th...	Damages....	Barge "Bella"....	\$20 00	paid.
do ...	August 3rd...	Fine.....	Tug "St. George".	5 00	do
do ...	do 21st...	Damages....	Str. "Melbourne".	15 00	do
do ...	do 26th...	Fine.....	Barge "St. Louis".	3 00	do
do ...	do 27th...	do	Tug "Perthia"....	5 00	do
do ...	Sept. 12th...	Damages....	Str. "Passport"...	10 00	not paid.
do ...	Nov. 11th...	Fine.....	Barge "MarieStella"	5 00	paid.
do ...	do 11th...	Damages....	Barge "Thurst"...	15 00	do
do ...	do 11th...	do	Barge "St. B."...	4 00	do
do ...	do 12th...	Fine.....	Tug "Antelope"...	10 00	do
do ...	do 12th...	do	Barge "National".	5 00	do
do ...	do 16th...	Damages....	Barge "Winnipeg"	10 00	do
do ...	do 20th...	do	Str. "Niagara"...	20 00	do
do ...	do 20th...	do	Str. "Hamilton"...	18 00	do
do ...	do 23rd...	Fine.....	Barge "Ireland"...	10 00	do
do ...	do 23rd...	Damages....	do do	25 00	do
do ...	Dec. 9th...	Fine.....	Tug "Beaver"....	10 00	do
1897...	June 29th...	Damages....	Str. "Alexandria".	50 00	do
do ...	do 29th...	do	Str. "Cuba".....	11 50	do
do ...	do 29th...	Fine.....	do do	5 00	do
do ...	do 29th...	do	Tug "Beaver"....	2 00	do

The highest water recorded during the season of navigation at lock 15, lower entrance, was 10 ft. 1 in., and the lowest 8 ft. 7 in.

The highest water during the season of navigation at lock 21, upper entrance, was 9 ft. 11 in., and the lowest 7 ft. 8 in.

The above levels with reference to the mitre sills of old locks 15 and 21 respectively.

The highest and lowest water recorded during the year ending 30th June, 1897, at locks 15 and 21 is as under, viz :—

Lock 15 : highest, 26 ft. 8 in., January ; lowest, 8 ft. 4½ in., December.

Lock 21 : highest, 9 ft. 11 in., June ; lowest, 7 ft. 11 in., February.

Department of Railways and Canals

WILLIAMSBURG CANALS.

The several divisions of these canals, viz., Farran's Point Canal, Rapide Plat Canal and the "Pt. Iroquois," the "Junction" and the "Galops," collectively styled Galops Canal, were closed for navigation on the 5th of December, 1896, and reopened for the season of 1897 on the 25th of April.

The buoy service from Sheik's Island, Cornwall Canal, to Prescott was duly performed, the buoys having been taken up at the close of the season of 1896 and replaced at the opening of navigation in 1897.

No accidents have occurred during the past year.

The low water which prevailed up to the close of the season of 1897 caused much inconvenience to navigation, particularly at locks 23 and 25 and in the reach above lock 26 at Cardinal. At the opening of navigation, 1897, the water was somewhat higher and is continuing to rise; it will probably attain its normal height of 9 or 10 feet on mitre-sills about midsummer, after which the low water stage of the river may be looked for.

With the exception of extensive repairs to the government wharf at lock 25, opposite the grist mill, the work of the maintenance staff has been general and only ordinary repairs have been made to the various structures, lock gates, bridges, &c., and to the banks, booms and entrance piers.

The lowest water on the mitre sill of old lock 23, the governing point on the canals during the season of navigation was 5 ft. 9 in.

The following is a statement of fines imposed and collected for the year ending 30th June, 1897:—

August 10, 1896—Fine, Barge "Dorchester".....	\$ 5 00
do 15, 1896—Damages, Str. "Cuba".....	35 00
do 24, 1896—Fine, Barge "Helma".....	5 00
September 15, 1896—Damages, Str. "Spartan".....	162 95
October 9, 1896—Fine, Str. "Alexandria".....	5 00

The office of the superintendent was abolished on the 31st March, 1897, and the work of maintenance on the canals continued by Mr. R. Armstrong, the foreman of the repairs staff.

FARRAN'S POINT CANAL.

Some minor repairs have been made to the lock and gates.

The contract entered into with the Gilbert Blasting and Dredging Co., for restoring the prism of canal to its original depth, has been completed.

RAPIDE PLAT CANAL.

The new lock 23 was brought into use on the 24th of July, 1896 and locking through the old lock discontinued for the rest of the season.

In April, 1897, a dam was formed at the head of the old lock by the contractors to enable them to complete the masonry of the lock and supply weir, &c. A dam was also constructed across the old entrance in connection with the work of lowering the mitre sill, &c.

The dam at the head of the lock shuts off the supply of water to the mills, they have, therefore, been obliged to stop whilst the work is in progress.

Minor repairs have been made at lock 24 to fencing, ditches, snubbing posts, &c.

New watch houses have been provided and placed at locks 23 and 24, under contract with B. S. Wickware.

The ordinary repairs to banks have been made.

GALOPS CANAL.

Iroquois Division.

Temporary repairs have been made on the booms above lock 25, also to the rip-rap protection.

The repairs to entrance pier opposite Beach's grist mill have been completed.

Junction Division.

The embankment has been kept in good repair and rip-rap renewed when required.

Galops Division.

At lock 26 a pair of spare gates have been placed in the upper recess.

The use of the swing bridge has been discontinued since May, 1896, when it was condemned. It is not proposed to make any repairs as the wood work is rotten. If a bridge is considered necessary it should be replaced by one of iron.

The dredging commenced by Wm. Davis & Sons last fall has been discontinued.

Upper Entrance.

Some minor repairs have been made to the gates of locks 27 and 28.

The banks and ditches have been kept in good condition generally.

During the winter general repairs were made to the buoy boat and scows. Buoys painted and prepared for spring and a number of spare buoys provided and ironed. A pair of gates from the old guard lock were also repaired and adapted for use in lock 26.

The ranges in connection with the new channel through the Galops rapid have been repaired and painted.

A shed at lock 26 has been repaired and converted into a collector's office.

Many minor repairs have been made to the workshops at Cardinal, also on the works from time to time as required.

The lowest water on the mitre sill of old guard lock 27 during navigation was 10 feet 4 inches, and the highest was 7 feet 6 inches.

MURRAY CANAL.

The canal was closed for navigation on the 3rd December, 1896, and opened again on the 5th April, 1897.

The number of vessels that passed through the canal for the years 1896-97 was 629.

No accidents have occurred and no fines have been imposed during the year ending 30th June, 1897.

The bridge structures have been thoroughly overhauled and repaired and machinery cleaned, tightened, &c.

The floor planking on the highway swing bridges is in very bad condition and needs extensive repairs.

Extensive repairs are also required to the superstructure of piers at both entrances to the canal.

The scow, workshops and offices have been repaired and painted, and a woodshed and fence built.

A considerable quantity of broken stone has been deposited around foundation of the railway and Trenton Road bridges to prevent a repetition of the scouring of last year.

Extensive repairs have been made to the rip-rap on north bank of canal.

Department of Railways and Canals.

Generally the banks have been maintained in good condition, the main ditches kept open, and new back ditches formed where required.

A wharf or landing stage is urgently required at the collector's office near the Smithfield Road bridge.

All vessels are now obliged to stop at the bridge where the canal is narrow, thus entailing considerable delay to traffic through the canal, as well as to travel on public highway, by reason of the bridge being kept open much longer than otherwise would be necessary.

The lights at the entrances to the canal are not suitable for the purpose, and new and more powerful range lights are required at each entrance.

The highest water recorded during the year was 13 feet, and the lowest 10 feet 8 inches.

I append a statement showing the highest and lowest water during the past year on each of the canals in my district, also a condensed statement of the highest and lowest water during the season of navigation from the year 1891 to 1896, both inclusive.

I have the honour to be, sir,

Your obedient servant,

TOM S. RUBIDGE,
Superintending Engineer.

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

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, for the Year ending 30th June, 1897.

CORNWALL CANAL.			WILLIAMSBURG CANALS.												LAKE ONTARIO.								
MONTH.	Lock 15.			Lock 21.			Lock 22.			Lock 23.			Lock 24.			Lock 25.			Lock 27.			Murray Canal.	
	High.		Low.	High.		Low.	High.		Low.	High.		Low.	High.		Low.	High.		Low.	High.		Low.	High.	Low.
	Ft. in.		Ft. in.	Ft. in.		Ft. in.	Ft. in.		Ft. in.	Ft. in.		Ft. in.	Ft. in.		Ft. in.	Ft. in.		Ft. in.	Ft. in.		Ft. in.	Ft. in.	
1896.	9 10		9 5½	9 6		8 11	8 10		8 3	8 1		7 5	8 4		7 5	10 10		9 10	9 5		8 4	12 5	12 3
	9 6½		9 2½	9 4		8 9	8 9		8 2	8 1		7 2	8 3		7 3	10 9		9 6	9 4		8 3	12 4	11 10
	9 3		8 10	9 2		8 1	8 3		7 5	7 9		6 3	7 8		6 2	10 9		8 0	8 9		8 0	12 0	11 5
	9 2		8 6½	8 5		7 10	7 9		7 1	7 0		6 0	7 6		5 8	9 4		8 2	9 4		7 6	11 1	11 2
	9 7		8 7	9 3		7 8	8 9		6 11	8 2		5 9	8 5		5 7	11 3		8 3	9 9		7 6	11 6	11 1
	12 7		8 4½	8 10		7 1	8 3		6 6	7 0		5 2	7 6		5 3	9 3		7 2	8 7		7 2	11 6	11 0
1897.	26 8		8 11	8 7		7 3	8 3		6 6	7 0		5 3	7 2		5 0	9 3		6 8	8 1		7 6	11 3	10 8
	19 9		14 0	7 11		7 1	8 3		6 4	6 6		5 0	6 3		5 0	8 6		6 7	7 11		7 3	11 2	10 10
	18 8		11 3	9 4		7 3	11 0		6 10	7 9		5 8	7 7		5 5	9 9		7 2	8 9		7 5	12 0	11 0
	10 11		9 6	9 6		8 8	9 6		8 0	8 4		6 0	9 0		7 2	11 2		9 2	10 4		8 2	12 6	12 0
	10 0		9 9	9 10		8 7	9 10		8 4	8 10		7 7	9 1		7 8	11 7		10 0	9 7		8 9	12 10	12 7
	10 1		9 8	9 11		9 5	9 6		9 0	8 11		8 5	9 3		8 5	11 8		11 2	10 0		9 5	13 0	12 9

Department of Railways and Canals.

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, May to November in each Year.

YEAR.	CORNWALL CANAL.						WILLIAMSBURG CANALS.					
	Lock No. 15.			Lock No. 21.			Lock No. 22.			Lock No. 23.		
	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.
	Month.	Ft. in.	Month.	Month.	Ft. in.	Month.	Month.	Ft. in.	Month.	Month.	Ft. in.	Month.
1891.....	May.....	11 10	Nov ..	8 9 $\frac{1}{2}$	May.....	11 11	Nov ..	8 2	May.....	10 11	Nov ..	7 6
1892.....	August..	12 1	May ..	9 4	August..	10 10	do ..	8 10	July.....	10 3	do ..	7 10
1893.....	May.....	12 5	Nov ..	9 7	May.....	11 9	do ..	9 0	May.....	11 1	Nov ..	8 3
1894.....	June.....	11 0	do ..	9 2	June.....	10 11	do ..	8 6	June.....	10 6	do ..	7 10
1895.....	May.....	9 10	do ..	8 0	May.....	9 4	do ..	7 4	May.....	8 9	do ..	5 10
1896.....	May.....	10 2 $\frac{1}{2}$	Oct ..	8 6 $\frac{1}{2}$	May.....	9 11	do ..	7 8	May.....	9 4	do ..	6 11

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, May to November in each Year—Concluded.

YEAR.	WILLIAMSBURG CANALS—Concluded.						LAKE ONTARIO.					
	Lock No. 24.			Lock No. 25.			Lock No. 27.			Murray Canal.		
	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.
	Month.	Ft. in.	Month.	Month.	Ft. in.	Month.	Month.	Ft. in.	Month.	Month.	Ft. in.	Month.
1891.....	May.....	12 0	Nov ..	6 9	May.....	13 11	Nov ..	9 0	May.....	12 0	Nov ..	11 5 $\frac{1}{2}$
1892.....	Sept....	10 0	do ..	7 0	July.....	12 8	do ..	9 4	July.....	13 6	do ..	12 1
1893.....	May.....	11 2	August.	7 4	May.....	13 10	do ..	10 0	June.....	14 9	do ..	12 2
1894.....	June.....	10 5	Nov ..	6 9	July.....	13 3	do ..	9 1	do ..	14 0	do ..	12 2
1895.....	May.....	8 3	do ..	4 5	May.....	10 10	do ..	6 8	May.....	12 5	do ..	12 4
1896.....	do ..	9 3	do ..	5 7	do ..	12 0	do ..	8 3	do ..	12 10	do ..	11 1

WELLAND CANAL.

ST. CATHARINES, ONT., 23rd October, 1897.

SIR,—I have the honour to report upon the operation and maintenance of the Welland Canal and its branches for the fiscal year ended 30th June, 1897.

The Welland Canal system is as follows:—

Main Line of Canal—from Port Dalhousie to Port Colborne.

Length in miles	26 $\frac{3}{4}$
No. of lift locks.....	25
“ guard “	2
“ aqueducts.....	1
“ highway bridges	17
“ railway “	6
“ ferries	3

Constructed for 14 feet of water upon the mitre sills.

Old Canal—from Port Dalhousie to Allanburgh; now used chiefly for water power.

Miles	12 $\frac{1}{2}$
No. of lift locks.....	25
“ guard “	1
“ highway bridges.....	13
“ railway “	1

Nine feet of water available at present.

Welland Canal Feeder—from Junction with Main Line of Canal to Grand River at Dunnville.

Length in miles.....	21
No. of locks.....	2
“ highway bridges.....	9
“ railway “	2
“ ferries.....	1

Five feet of water available at present.

Stromness Branch—from Stromness, on the Feeder, to Port Maitland, on Lake Erie.

Length in miles	1 $\frac{3}{4}$
No. of locks	1
“ highway bridges	1

Five feet of water available at present.

Chippawa Branch—from Port Robinson, on the Main Line of Canal, to the Niagara River at Chippawa.

Length in miles.....	8 $\frac{1}{4}$
No. of locks.....	1
“ highway bridges.....	3
“ railway “	3

Nine feet of water available at present.

Department of Railways and Canals

During the last half of the season of 1896 the low water which prevailed throughout the entire line of navigation was felt at Port Dalhousie and Port Colborne to the extent of reducing the draught of vessels from 14 feet to 13 feet 9 inches, and occasionally when the winds were up the lake to 13 feet 6 inches.

At the beginning of the present season of navigation the lakes had nearly regained their normal level, and vessels drawing 14 feet found no difficulty in passing through the canal at the opening of navigation and up to the end of the fiscal year.

The interruptions to navigation were unimportant until the morning of 21st May, 1897, when the steamer "J. H. Outhwaite" of Cleveland, upward bound, carried away the four gates of lock No. 7, causing an entire stoppage of navigation until the forenoon of 26th May.

A cash deposit of \$9,975 was made by the owners on account of the estimated cost of repairing damage, and the vessel was allowed to proceed when locking was resumed.

The damage was consequent on the speed of the vessel being too fast, which gave no time to recover from a slip of the lines.

During the year four members of the operative staff were superannuated, at the ages of 66, 71, 73 and 74.

Two of the positions so made vacant were not filled again, the office of superintendent being abolished with the superannuation of that official, and the duties being taken by the superintending engineer.

In the other case, the duties of a water regulator at Allanburg, who was superannuated, were added to those of the lockman at the adjacent lock and bridge.

RENEWALS UNDER INCOME APPROPRIATIONS.

The work of renewing with concrete the timber superstructure of the east pier at Port Dalhousie was continued, a contract having been entered into with Messrs. Battle & Newman for that purpose.

The timber superstructure was removed to a foot below "low water mark," at which level blocks of concrete, 4 ft. x 4 ft. x 6 ft., made with Portland cement, were laid to form both faces of the pier, the space between the two lines of blocks being filled with concrete, made with natural hydraulic cement, manufactured in the locality.

The length of pier renewed under Messrs. Battle and Newman's contract was 789 feet, the contract being completed as specified.

In the harbour at Port Dalhousie, the low water made it desirable to remove accumulations of silt, &c., and this was done by Messrs. Hingston & Woods, whose dredge was brought from Port Dover for the purpose.

The tow-path bridges over the reservoir entrances from lock 16 to 23 were renewed, steel beams being used in place of the timber stringers which originally carried the floor.

Materials were also obtained for renewing the remainder of the tow-path bridges which needed renewal.

On lock 24 level, the west side wall was raised an average of 14 inches and coped, for a distance of 850 feet to admit of the narrow embankment in rear of it being raised also.

It had been in contemplation to renew certain portions of the side walls of this level, but the urgency of an early opening of navigation made it undesirable to unwater the level, and commence work under doubtful conditions for completion, which work if commenced would have to be completed before the canal could be opened.

At Port Colborne, accumulations of sand between the piers, were dredged out by Messrs. Hingston & Woods, who did similar work at Port Dalhousie.

On the old canal, a pair of spare gates for lock No. 2 were built, and the bridge which carried the main road over the race between Nos. 1 and 2 levels was taken down, as soon as a timber truss bridge of 60 feet span and wide enough for two teams to pass had been constructed to replace it.

On the Welland raceway, the original timber bridge with two bents, on the line of West Main street was replaced by a steel truss bridge of 60 feet span.

On the Feeder, the drainage on the north side was materially improved, and the timber swing bridge at Stromness Basin was rebuilt.

REPAIRS.

The locks, weirs and bridges, and other structures, have been replaced from time to time, as required, the ditches have been cleaned out, and embankments raised and made good where needed, the cost of this last item being much increased by the tow-path in certain localities being used as a highway.

These small repairs, requiring daily attention, have fully occupied the repair gangs, and consumed large quantities of materials in keeping the works in serviceable condition.

The canal was closed December 15, 1896, and was opened for navigation April 20, 1897.

Appended will be found a statement of damages to canal property, and amounts paid, or due for the same, and to whom paid.

Also a statement of fines collected from vessels or canal employees for breaches of canal rules and regulations.

Also a statement of the highest and lowest recorded depths of water monthly, on the mitre sills of the locks at Port Dalhousie and Port Colborne.

I have the honour to be, sir,

Your obedient servant,

W. G. THOMPSON, M. Inst. C.E.,
Superintending Engineer.

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

Department of Railways and Canals.

STATEMENT of Damages to Welland Canal property, during the Fiscal Year ended 30th June, 1897, and amount paid on account of damages in the same year.

Date of Damage.	Name of Vessel.	AMOUNT OF DAMAGES.		Date Paid.	WHERE PAID. Collector's Office.
		Paid.	Unpaid.		
1895.		\$ cts.	\$ cts.	1896.	
Aug. 29	Steamer Nicaragua	12 10		Sept. 3 ...	Port Colborne.
1896.					
May 8	do do	6 23		do 16	do Dalhousie.
do 10	Brigantine F. D. Ewens	11 34		1897.	
do 11	Steamer Ionia	19 04		May 17	do do
				do 11	do Colborne.
do 12	do Sequin	16 02		1896.	
				July 1	do Dalhousie.
do 21	do Outhwaite	9,975 00		1897.	
do 26	Brigantine G. M. Morley	50 00		May 26	Deposited on acct.
				do 10	Port Colborne.
do 30	Steamer Sequin	10 51		1896.	
June 3	Brigantine Neelon	15 13		July 1	do Dalhousie.
				Aug. 15	do do
.....	do Lisgar	15 10		1897.	
				April 29	do do
June 8	Schooner Emerald	2 81		1896.	
do 17	Brigantine Ceylon	14 94		July 15	do Colborne.
do 22	Schooner St. Louis	17 28		do 22	do Dalhousie.
do 30	Steamer Omaha	19 40		do 21	do do
July 1	do do	10 50		do 23	do do
				do 24	do Colborne.
do 9	do Topeka	18 15		1897.	
				Aug. 15	do Dalhousie.
do 16	do Canester	25 00		1896.	
				July 23	do do
do 25	Brigantine G. B. Owen	9 35		1897.	
				Aug. 17	do do
do 31	do Moravia	75 00		1896.	
do 31	do do	17 24		Aug. 1	do Colborne.
do 31	Steamer Servia	83 75		Sept. 16	do Dalhousie.
Aug. 6	do Bothnia	298 08		do 16	do do
do 15	do F. H. Prince	4 67		do 9	do Colborne.
do 20	do P. J. Ralph	8 77		do 1	do Dalhousie.
do 22	do W. L. Frost	31 63		do 16	do do
do 24	do Omaha	9 29		Oct. 23	do do
do 25	Yacht Comanche	20 00		Sept. 19	do do
do 26	Steamer Bannockburn	26 41		Aug. 25	do Colborne.
do 26	do Colonial	42 32		Nov. 21	do Dalhousie.
				do 17	do Colborne.
Sept. 4	Schooner B. L. Pennington	7 55		1897.	
				May 18	do Dalhousie.
do 17	Steamer P. J. Ralph	11 92		1896.	
Oct. 5	do W. B. Morley	14 32		Nov. 27	do do
do 27	Tug Escort	24 23		Oct. 13	do Colborne.
do 29	Steamer Newaygo	13 85		Dec. 1	do do
Nov. 5	Brigantine No. 111	387 85		Nov. 7	do Dalhousie.
do 12	Steamer Montegagle	14 12		do 5	do Colborne.
				do 30	do do

STATEMENT of Damages to Welland Canal property, during the Fiscal Year ended 30th June, 1897, and amount paid on account of damages in the same year—*Concluded.*

Date of Damage.	Name of Vessel.	AMOUNT OF DAMAGES.		Date Paid.	WHERE PAID. Collector's Office.
		Paid.	Unpaid.		
1896.		\$ cts.	\$ cts.	1897.	
Nov. 25.....	Steamer Omaha	50 00	.....	April 28.....	Port Colborne.
1897.					
April 24....	do W. L. Frost	5 25	.....	May 15.....	do Dalhousie.
do 26.....	do J. B. Ketchum		13 96		
do 27.....	Brigantine J. J. Case.	21 97	.....	June 9.....	do do
May 1.....	Steamer Cuba	10 82	.....	May 28.....	do do
do 10.....	do J. R. Langdon.....	7 54	.....	do 30.....	do do
do 11.....	Brigantine Augustus		16 18		
do 13.....	Tug Inez		14 03		
	Total.....	11,434 48	44 19		

STATEMENT of Fines collected from Vessels contravening Canal Regulations and from Locktenders for neglect of duty during the Fiscal Year ended 30th June, 1897.

Date of Fine.	Name of Vessel.	AMOUNT OF FINE.		Date Paid.	WHERE PAID. Collector's Office.
		Paid.	Unpaid.		
1895.		\$ cts.	\$ cts.	1896.	
Aug. 24.....	Steamer D. R. Vanallen....	10 00	.....	July 11.....	Port Colborne.
1896.					
May 26.....	Steamer D. R. Vanallen.	10 00	.....	July 1.....	Port Dalhousie.
July 29 ..	do Erin.....	10 00	.....	Oct. 15.....	do do
Aug. 15.	do Brg. Niagara.....	10 00	.....	Aug. 22.....	do do
Dec. 1	Schooner Dolly Mordon.....		10 00		
1897.				1897.	
Apr. 23.....	Steamer St. Lawrence.....	10 00	.....	May 6.....	Port Colborne.
May 13.....	do Cuba.....	5 00	.....	do 15.....	do Dalhousie.
1896.	<i>Locktenders.</i>			1896.	
July 22	Thomas Bradley.....	4 00	.....	July 25.....	Port Dalhousie.
		59 00	10 00		

Department of Railways and Canals

STATEMENT showing the Highest and Lowest depth of water on the Upper Mitre Sill of the Old Lock, Port Colborne, Welland Canal, for the Fiscal Year ended 30th June, 1897.

MONTHS.	UPPER SILL.		MONTHS.	UPPER SILL.	
	Highest.	Lowest.		Highest.	Lowest.
1896.	Ft. in.	Ft. in.	1897.	Ft. in.	Ft. in.
July.....	11 9	10 7	January.....	11 9	9 10
August.....	11 10	11 1	February.....	11 10	9 10
September.....	12 7	10 5	March.....	14 6	9 8
October.....	11 6	10 3	April.....	13 2	10 7
November.....	12 1	10 4	May.....	12 9	11 8
December.....	11 10	9 10	June.....	12 3	11 8

STATEMENT showing the Highest and Lowest depth of water on the Upper Sill of the New Lock, Port Colborne, Welland Canal, for the Fiscal Year ended 30th June, 1897.

MONTHS.	UPPER SILL.		MONTHS.	UPPER SILL.	
	Highest.	Lowest.		Highest.	Lowest.
1896.	Ft. in.	Ft. in.	1897.	Ft. in.	Ft. in.
July.....	14 8	13 6	January.....	14 8	12 9
August.....	14 9	14 0	February.....	14 9	12 9
September.....	15 6	13 4	March.....	17 5	12 7
October.....	14 5	13 2	April.....	16 1	13 6
November.....	15 0	13 3	May.....	15 8	14 7
December.....	14 9	12 9	June.....	15 2	14 7

STATEMENT showing the Highest and Lowest depth of water on the Lower Mitre Sill of Lock No. 1, Old Welland Canal, Port Dalhousie, for the Fiscal Year ended 30th June, 1897.

MONTHS.	LOWER SILL.		MONTHS.	LOWER SILL.	
	Highest.	Lowest.		Highest.	Lowest.
1896.	Ft. in.	Ft. in.	1897.	Ft. in.	Ft. in.
July.....	12 4	11 10	January.....	10 11	10 5
August.....	12 0	11 6	February.....	11 2	10 8
September.....	11 7	11 1	March.....	11 8	10 9
October.....	11 5	10 9	April.....	12 4	11 6
November.....	11 0	10 4	May.....	12 9	12 4
December.....	11 1	10 9	June.....	12 10	12 6

STATEMENT showing the Highest and Lowest depth of water on the Lower Mitre Sill of Lock No. 1, New Welland Canal, Port Dalhousie, for the Fiscal Year ended 30th June, 1897.

MONTHS.	LOWER SILL.		MONTHS.	LOWER SILL.	
	Highest.	Lowest.		Highest.	Lowest.
1896.	Ft. ft.	Ft. in.	1897.	Ft. in.	Ft. in.
July	15 3	14 9	January	13 10	13 4
August	14 11	14 5	February	14 1	13 7
September	14 6	14 0	March	14 7	13 8
October	14 4	13 8	April	15 3	14 5
November	13 11	13 3	May	15 8	15 3
December	14 0	13 8	June	15 9	15 4

ST. PETER'S CANAL.

ST. PETER'S CANAL OFFICE, 20th July, 1897.

SIR,—I have the honour to submit the following report upon the St. Peter's Canal, for the fiscal year ended 30th June, 1897.

This canal was closed for navigation on the 2nd day of January, 1897, and opened again on the 20th day of April, 1897. The total number of vessels that passed through during the year was 1,612. The swing bridge across the canal and the lock gates are in good working order, but the sheaves or pulleys in lockwall should be renewed.

The side cribwork of eastern tow-path wants renewing; some slight repairs are also needed on western tow-path. New mooring posts are wanted at both entrances of the canal.

Traffic month by month compares favourably with that of former years.

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

JOHN D. MATHESON,
Lockmaster and Collector.

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

Department of Railways and Canals.

REPORT
OF THE
SECRETARY OF THE RAILWAY COMMITTEE
OF THE
PRIVY COUNCIL

Department of Railways and Canals

RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The Minister of Railways and Canals being Chairman of the Railway Committee of the Privy Council, on which certain extensive duties are imposed by the Railway Act, 1888, and its amendments, it seems proper that a brief record should here be made of the matters submitted to the committee during the period from the 1st of January, 1897, to the 15th of November, 1897, and the decisions arrived at. They are as follows :—

Application of the Montreal Belt Line Railway for permission to cross the Lachine Canal at Côte St. Paul and Montreal.—Granted.

Application of the Hamilton Radial Electric Railway Company for permission to cross the Grand Trunk Railway at Burlington.—Granted.

Application of the Hull Electric Company for permission to cross with its electric cars the Canadian Pacific Railway at Hull, P.Q.—Granted.

Application of the Municipality of Metapedia for permission to cross with a public road the Intercolonial Railway at Metapedia.—Granted.

Petition of the Municipality of the County of Pictou for permission to open a public road across the tracks and land of the Intercolonial Railway at McPhee's siding, east of Bear River.—Granted.

Application of the London Street Railway Company for permission to cross the Grand Trunk, Canadian Pacific and the London and Port Stanley Railways, in the city of London.—Granted.

Application of the Canadian Pacific Railway Company for approval of plan and profile of a crossing, by its railway, of a road between Caughnawaga and Laprairie, and for the diversion of the road.—Approved.

Application of the Canadian Pacific Railway Company for approval of plans of trestle bridges over Kelesquasheshing Lake and River.—Approved.

Complaint of the municipality of Three Rivers against the Canadian Pacific Railway *re* drainage.—Under consideration.

Application of the city of Sherbrooke for a re-hearing as to who is to bear the cost of protection at the crossings of certain streets, in the city of Sherbrooke, by railways.—Under consideration.

Application of the Grand Trunk Railway Company *re* interlocking switch of the United Counties Railway with the Grand Trunk Railway at St. Hyacinthe.—Under consideration.

Application of the Grand Trunk Railway Company *re* interlocking and derailling appliances at the Grand Trunk Railway by the Canada Southern Railway at the Ontario Peat and Fuel Company's works.—Under consideration.

Protection to be provided at the crossings of the Intercolonial Railway by the St. John Street Railway.—Under consideration.

Application of the Toronto, Hamilton and Buffalo Railway Company for permission to cross highway at station 100 + 12 at Chippawa River.—Under consideration.

Application of the Lake Erie and Detroit River Railway Company for permission to build a branch line at Ridgetown.—Granted.

Application of the Lake Erie and Detroit River Railway Company for permission to build a branch line at Blenheim.—Granted.

Application of the London and Port Stanley Railway Company for permission to build a branch line at Port Stanley.—Granted.

Application of the Hamilton Radial Electric Company for permission to cross the Burlington Canal.—Granted.

Application of the Corporation of the Parish of St. Blaise for permission to build a public road across the Montreal and Champlain Railway (G. T. Ry.)—Granted.

Application of the Ontario, Belmout and Northern Railway Company for permission to run along Cameron Street, in the Village of Marmora, and for approval of junction with the Central Ontario Railway.—Granted.

Application of the City of Winnipeg for permission to build a bridge across Salter Street over the tracks of the Canadian Pacific Railway.—Under consideration.

Application of the Grand Trunk Railway Company for permission to build a branch line at Merritton.—Under consideration.

Application of the City of Toronto to re-open case *re* crossing of the Grand Trunk Railway and Canadian Pacific Railway on Lansdowne Avenue.—Under consideration.

Application of the Kaslo and Slocan Railway Company for a re-hearing of the differences between that company and the Nakusp and Slocan Railway at Sandon, B.C.—Under consideration.

Protest of Mr. Powell *re* closing of Hughson Street in the City of Hamilton.—Not granted.

Application of the Sherbrooke Street Railway Company to vary order *re* protection at the crossing of its railway with the Canadian Pacific Railway in the City of Sherbrooke.—Withdrawn.

Application of the County of Wentworth to vary order of the 4th of December, 1896, *re* crossing of certain streets and toll roads in the City of Hamilton by the Toronto, Hamilton and Buffalo Railway Company.—A new order was issued in this matter.

Application of the Hull Electric Company to cross the Canadian Pacific Railway by an overhead bridge.—Granted.

Application of the Grand Trunk Railway *re* interlocking and derailing appliances at the crossing of the Grand Trunk Railway by the Canadian Pacific Railway at Queen's Wharf, Toronto.—Granted.

Application of Messrs. McDermott and Robinson for permission to open two streets across the tracks of the Canada Atlantic Railway.—Dismissed.

Complaint of Mr. E. Morgan *re* discrimination in rates on apples by the Grand Trunk Railway.—Under consideration.

Petition of the Bell Telephone Company for permission to increase their rates.—Under consideration.

Application of the Montreal Park and Island Railway Company for permission to acquire the use of a piece of land at Lachine belonging to the Grand Trunk Railway Company in lieu of the lot approved of by an order of the Railway Committee.—Granted.

Department of Railways and Canals

Application of the Central Counties Railway Company for permission to leave out the packing or filling required by section 262 of The Railway Act, from December to April each year, both months inclusive.—Granted.

Application of the Canada Atlantic Railway Company for permission to leave out the packing or filling required by section 262 of The Railway Act, from December to April each year, both months inclusive.—Granted.

Application of the Ottawa, Arnprior and Parry Sound Railway Company for permission to leave out the packing or filling required by section 262 of The Railway Act, from December to April each year, both months inclusive.—Granted.

Petition of the Northumberland Stone Company asking that the Moncton and Buctouche Railway Company be compelled to put a swing in their railway bridge across the Buctouche River.—Granted.

Application of Mr. Hugh McLean asking that the Central Counties Railway Company be compelled to put a swing in their railway bridge across the Salmon River, near Chipman.—Under consideration.

Petition of the Hamilton Radial Electric Railway Company for permission to expropriate certain lands at Burlington belonging to the Grand Trunk Railway Company.—Under consideration.

Application of the City of Toronto for an order directing that protection be provided at the crossing of Bay Street, Toronto.—Granted.

Application of the Toronto, Hamilton and Buffalo Railway Company for approval of plans and profiles of all highway crossings from Waterford to Cainsville.—Approved.

Application of the City of Toronto for an order to change the grade of the York Street Bridge.—Granted.

Application of the Quebec District Railway Company for approval of crossing of the Canadian Pacific Railway on Dalhousie Street, in the City of Quebec.—Approved.

Application of the Toronto, Hamilton and Buffalo Railway Company for permission to expropriate part of a road allowance in the Township of Barton to be used in connection with their sorting yard.—Granted.

Application of the Chateaugay and Northern Railway Company for permission to cross the Montreal Street Railway on Ontario Street in the City of Montreal.—Granted.

Application of the City of Toronto for an order directing that two certain water mains or pipes may be laid and maintained under the tracks of the Grand Trunk and Canadian Pacific Railways on Esplanade Street, Toronto.—Granted.

Application of Mr. John Owens for permission to construct a flume under the Calgary and Edmonton Railway, on Sec. 12, Tp. 21, Range 1, west of 5th Meridian.—Under consideration.

Application of Mr. R. A. Wallace for permission to construct a flume under the Calgary and Edmonton Railway, on Sec. 7, Tp. 19, Range 28, west of 4th Meridian.—Under consideration.

Application of the Calgary Irrigation Company, for permission to construct ditches across the Canadian Pacific and Calgary and Edmonton Railways.—Under consideration.

Application of the City of Quebec, for an order approving of a street being made across the railway track of the North Shore Railway Company at rail level, in the City of Quebec.—Granted.

Application of the Moncton Electric Street Railway Company for an extension of time for putting in derailing appliances at the crossings of the Intercolonial Railway by its railway in the City of Moncton.—Granted.

Application of the Grand Trunk Railway Company *re* Orders of 29th November, 1894, with respect to crossings of steam railways by the Toronto and Montreal Street Railway Companies, and as to maintenance of signal lights, &c.—Under consideration.

Application of the Kingston, Napanee and Western Railway Company (now Bay of Quinté Railway Company) for permission to cross the Canadian Pacific Railway at Tweed.—Under consideration.

Application of the Township of Shefford for permission to open a road across the tracks of the Stanstead, Shefford and Chambly Railway (which is a division of the Central Vermont Railway), at Gallagher's Cut.—Under consideration.

Petition of Mr. Charles Sturrock for an order compelling the Grand Trunk Railway Company to refund him \$1,079.20, overcharged rates on coal, and also the costs of his application.—Under consideration.

Application of the Canadian Pacific Railway Company for permission to construct a branch line upon, and to carry it along, road allowance on west side of Secs. 22, 27 and 34, of Township 11, Range 2, east of 1st Principal Meridian.—Under consideration.

Application of the London Street Railway Company, for permission to cross the Grand Trunk Railway on Rectory Street, in the city of London.—Under consideration.

Application of the Montreal and Ottawa Railway Company for permission to cross the Rockland branch of the Canada Atlantic Railway.—Under consideration.

Application of the United Counties Railway Company for permission to cross the Central Vermont Railway at Iberville.

Application of the Ottawa and New York Railway Company for approval of crossing of Canadian Pacific Railway at South Finch.—Under consideration.

Application of the Ottawa and New York Railway Company for permission to enter their terminal property in Ottawa, over the tracks of the Canada Atlantic and Ottawa, Arnprior and Parry Sound Railways, or to lay their own tracks upon government property at present leased to the Ottawa, Arnprior and Parry Sound Railway.

Application of the Ottawa and New York Railway Company for permission to enter Ottawa over the tracks of the Canada Atlantic and Ottawa, Arnprior and Parry Sound Railways, and to use the central station.—Under consideration.

Application of the Winnipeg Street Railway Company for permission to cross the Canadian Pacific Railway at Main Street and Higgins Avenue in the City of Winnipeg.—Under consideration.

Canadian Pacific Railway Company applies for permission to fill in part of trestle on branch line from Peterborough to Dickson's Mills.—Under consideration.

Application of the Grand Trunk Railway Company for permission to lay a siding from its railway to McLaughlin's Mill on the corner of Bay and Esplanade Streets, Toronto.—Under consideration.

Application of the Ontario and Quebec Railway Company (C. P. R.) for permission to change the location of their line between Mono Road and Melville Junction in Township of Caledon.—Under consideration.

Department of Railways and Canals.

Application of the Central Ontario Railway Company for permission to remove the packing or filling required by section 262 of The Railway Act from December to April each year, both months inclusive.—Under consideration.

Application of the Town of Galt for permission to make a street crossing over the Canadian Pacific Railway at Myrtle Avenue.—Under consideration.

Application of the Nakusp and Slocan Railway Company for permission to build a branch line from Three Forks to Bear Lake and Whitewater in British Columbia.—Under consideration.

COLLINGWOOD SCHREIBER,
Secretary Railway Committee P.C.

Prepared by
J. W. PUGSLEY,
Clerk of the Ry. Committee, P.C.

PART II

STATEMENTS OF THE ACCOUNTANT

Department of Railways and Canals.

No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals,
Dominion of Canada, during the Fiscal Year ending 30th June, 1897.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	
			Staff.	Repairs.
CANALS.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Beauharnois.....		9,813 15	21,012 64	14,862 98
Carillon.....		4,939 20	13,780 29	11,607 95
Grenville.....	1,908 44			
Chambly.....		12,665 88	18,754 17	13,128 55
Cornwall.....	438,487 51		15,540 43	16,438 32
Lachine.....	282,052 48	14,664 21	57,533 20	25,820 73
Lake St. Louis.....	73,300 41			
Murray.....			5,526 87	3,966 41
Rideau.....	10,720 50	19,079 11	31,461 55	29,535 94
Sault Ste Marie.....	209,561 82		15,381 59	7,671 79
Soulanges.....	363,126 06			
Ste. Anne's.....			2,357 51	1,688 12
St. Lawrence.....	12,347 31			
St. Ours.....			2,135 60	707 06
St. Pierre.....			2,728 38	1 20
Trent.....	486,575 70	13,880 37	4,965 39	3,497 90
Welland.....	2,282 35	22,283 06	88,095 20	41,247 81
Williamsburg, Galops.....	262,793 78	3,880 76	8,697 54	8,210 91
do Rapide Plat.....	205,480 55			
Total.....	2,348,636 91	101,205 74	287,970 36	178,385 47
GENERAL ON CANALS.				
Dredge Vessels, Lachine.....				2,000 00
do Rideau.....				6,998 46
Miscellaneous.....		2,479 33	1,137 15	1,337 86
Salaries and contingencies of canal officers.....			36,444 26	
Sunday labour.....			14,859 39	
Surveys and inspections.....		458 14		
Total.....		2,937 47	52,440 80	10,336 32
RAILWAYS.				
Annapolis and Digby.....	41,457 29			
Baie des Chaleurs.....			18,679 97	
Canadian Pacific.....	14,054 50			
Cape Breton.....	405 00			
Intercolonial.....	145,142 00		2,925,965 67	
Oxford and New Glasgow.....	3,565 52			
Prince Edward Island.....			240,489 90	
Windsor Branch.....			10,821 04	
Total.....	204,624 31		3,195,959 58	
GENERAL ON RAILWAYS.				
International Railway Congress, Brussels.....		97 33		
Railway statistics.....		1,310 28		
Railway subsidies.....		230,355 30		
Reporting evidence before Railway Com- mittee.....		136 44		
Surveys and inspections.....		3,574 94		
Total.....		235,474 29		

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

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	
			Staff.	Repairs.
MISCELLANEOUS.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Costs of litigation		6,016 01		
Expenses of investigations			597 39	
Salaries of engineers, draughtsmen, &c		17,991 50		
Salaries of extra clerks, &c.		1,135 39		
Total		25,142 90	597 39	
RECAPITULATION.				
Total on Canals	2,348,636 91	101,205 74	287,970 36	178,385 47
Total on Canals, general		2,937 47	52,440 80	10,336 32
Total on Canals	2,348,636 91	104,143 21	340,411 16	188,721 79
Total on Railways	204,624 31		3,195,959 58	
Total on Railways, general		235,474 29		
Total on Railways	204,624 31	235,474 29	3,195,959 58	
Total Railways and Canals, including Miscel- laneous	2,553,261 22	364,760 40	3,536,968 13	188,721 79

Total amount expended, \$6,643,711.54.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

LEONARD SHANNON,
Accountant.

Department of Railways and Canals

No. 2.

STATEMENTS showing the amounts expended on Construction, Renewals, Ordinary Repairs and Working Staff of the Canals of the Dominion of Canada, up to the 30th June, 1897.

ST. PETER'S CANAL.

	Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	156,523 32			
do since do	1869	21,519 72			
do do do	1870	70,719 80			
do do do	1871		46,193 57		
do do do	1872			225 36	555 78
do do do	1873			280 00	6,122 07
do do do	1874			343 32	6,539 58
do do do	1875			725 93	1,558 57
do do do	1876	20 97		560 00	889 35
do do do	1877	11,125 00		641 55	
do do do	1878	63,330 18		600 00	17 45
do do do	1879	26,511 51		600 00	
do do do	1880	107,337 75		631 50	
do do do	1881	80,120 54		400 00	
do do do	1882	69,434 76		959 58	
do do do	1883	484 00		1,920 54	200 63
do do do	1884			2,089 19	232 42
do do do	1885	2,471 40		2,601 47	367 85
do do do	1886	16,820 15		1,929 11	183 11
do do do	1887	2,316 85		2,360 67	297 81
do do do	1888	1,087 75	750 00	2,777 13	343 23
do do do	1889			3,217 77	1,588 40
do do do	1890		500 00	3,085 29	353 38
do do do	1891			3,110 15	255 34
do do do	1892	972 65	510 53	3,255 30	312 02
do do do	1893	14,387 00	30,936 82	3,007 70	1,461 24
do do do	1894	811 59	9,987 78	2,938 15	1,856 30
do do do	1895	437 05	3,852 21	2,935 94	1,986 70
do do do	1896	868 44	26,222 46	2,499 81	353 55
do do do	1897	1,455 21	16,743 64	2,182 04	260 90
do do do	1897			2,728 38	1 20
Total		*648,755 64	135,697 01	48,605 88	25,736 88

*Expenditure as above \$ 648,755 64

Less expenditure prior to Confederation 156,523 82

Agreeing with Public Accounts, 1897, page xvi . . . \$492,232 32

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

BAIE VERTE CANAL—SURVEY,

			Year ending 30th June.	Capital.	Income.
				\$ cts.	\$ cts.
Government expenditure prior to Confederation					
do	since	do	1868		
do	do	do	1869		
do	do	do	1870		
do	do	do	1871		17,929 34
do	do	do	1872		6,399 41
do	do	do	1873		14,943 83
do	do	do	1874		4,018 90
do	do	do	1875		443 00
do	do	do	1876		110 75
do	do	do	1877		22 30
do	do	do	1878		
do	do	do	1879		
do	do	do	1880		
do	do	do	1881		520 00
do	do	do	1882		
do	do	do	1883		
do	do	do	1884		
do	do	do	1885		
do	do	do	1886		
do	do	do	1887		
do	do	do	1888		
do	do	do	1889		
do	do	do	1890		
do	do	do	1891		
do	do	do	1892		
do	do	do	1893		
do	do	do	1894		
do	do	do	1895		
do	do	do	1896		
do	do	do	1897		
Total.					44,387 53

LEONARD SHANNON,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

LACHINE CANAL.

	Year ending 30th June.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Expenditure by Imperial Government.....		40,000 00				
Government expenditure prior to Confederation.....		2,547,532 85				
Government expenditure since Confederation.....	1868			1,852 70	13,742 05	10,431 51
do do	1869	2,000 00			14,209 02	12,085 84
Cost of original construction and enlargement of 1843 to 1848.			2,589,532 85			
Expenditure by Dominion Government.....	1870					
do do	1871			12,231 40	15,834 49	13,302 39
do do	1872	36,708 15			17,478 52	15,093 25
do do	1873	7,824 28			16,076 93	12,334 69
do do	1874	158,618 35		35,158 21	23,601 03	34,300 60
do do	1875	197,420 52			25,811 07	22,828 66
do do	1876	327,769 39			28,592 01	30,057 34
do do	1877	1,439,375 73			33,797 73	29,103 65
do do	1878	1,484,619 63			33,148 86	19,824 33
do do	1879	958,053 30			39,062 97	13,646 41
do do	1880	369,566 74			42,338 84	12,400 78
do do	1881	292,165 51			38,950 90	10,223 62
do do	1882	252,821 33		2,978 66	39,027 99	19,888 33
do do	1883	396,496 96		1,859 68	41,158 90	17,116 46
do do	1884	188,266 18			45,554 91	18,199 59
do do	1885	111,215 23			48,624 51	19,683 24
do do	1886	210,509 42			49,004 85	20,199 78
do do	1887	28,772 52		12,981 59	50,969 10	19,199 18
do do	1888	19,414 34		7,996 38	53,113 97	22,567 81
do do	1889	76,032 96		972 71	52,229 61	19,999 64
do do	1890	7,448 03		8,238 46	54,110 67	22,957 71
do do	1891	217 53		16,155 75	53,114 34	22,999 38
do do	1892	87,852 35		27,480 80	50,721 69	36,292 98
do do	1893	445,983 21		50,937 40	57,729 37	67,499 62
do do	1894	64,345 14		15,856 74	53,185 00	51,616 79
do do	1895	189,944 36		32,405 20	60,174 03	40,939 70
do do	1896	184,998 25		8,193 15	56,337 44	25,891 45
do do	1897	282,052 48		14,664 21	58,342 96	24,950 20
Cost of last enlargement			7,818,491 89		57,533 20	25,820 73
Total			*10,408,024 74	249,963 04	1,218,576 96	711,455 66

*Total expenditure on capital account as above..... \$10,408,024 74

Less charged to St. Lawrence River and Canals, see page 9. \$2,950,104 15

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

2,990,104 15

Agreeing with Public Accounts balance sheet, 1897, page xvi .. \$7,417,920 59

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

BEAUHARNOIS CANAL.

	Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	1,611,424 11			
do since do	1868		63,193 75	9,349 99	6,216 98
do do do	1869		55 00	9,626 99	6,498 57
do do do	1870		27 50	10,117 57	6,384 81
do do do	1871			12,316 53	5,722 36
do do do	1872		27 50	11,792 46	15,733 38
do do do	1873		5,122 50	12,210 73	9,882 06
do do do	1874		26 00	15,392 51	10,990 56
do do do	1875		36 00	14,399 32	12,253 01
do do do	1876			14,465 86	17,170 83
do do do	1877			14,377 63	15,207 36
do do do	1878			14,383 37	9,861 05
do do do	1879			15,015 86	10,370 71
do do do	1880	266 15		15,362 61	8,997 34
do do do	1881			17,659 93	10,770 67
do do do	1882			18,804 53	20,813 86
do do do	1883		6,727 44	18,287 77	15,826 71
do do do	1884		3,277 98	19,107 38	16,232 61
do do do	1885		7,999 79	18,960 40	14,637 70
do do do	1886		8,491 80	19,228 90	14,356 00
do do do	1887		3,633 57	18,867 45	14,999 88
do do do	1888		14,411 97	19,325 05	14,285 98
do do do	1889		10,993 52	20,019 11	14,982 54
do do do	1890			19,847 42	14,999 20
do do do	1891		17,085 68	18,886 86	12,537 39
do do do	1892		1,696 23	20,050 01	14,999 80
do do do	1893			20,348 34	14,107 11
do do do	1894		6,547 72	20,574 53	13,903 46
do do do	1895		27,982 93	20,428 59	12,299 49
do do do	1896			20,725 47	15,050 85
do do do	1897		9,813 15	21,012 64	14,862 98
Total		*1,611,690 26	187,150 03	500,945 81	384,955 25

*See page 9 for total cost of St. Lawrence River and Canals.

LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

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

	Year end- ing 30th June.	Chargeable to Capital.	Chargeable to Income.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868	18,442 85	98,378 46
do since do	1869		
do do do	1870		
do do do	1871		
do do do	1872		
do do do	1873	33,241 69	
do do do	1874	26,541 30	
do do do	1875	20,611 36	
do do do	1876	50,215 47	
do do do	1877	47,377 31	
do do do	1878	5,570 46	
do do do	1879	9,265 77	
do do do	1880	9,214 56	
do do do	1881	6,927 96	
do do do	1882	28,933 45	
do do do	1883	44,874 31	
do do do	1884	89,846 03	
do do do	1885	115,110 17	
do do do	1886	116,051 73	
do do do	1887	74,437 31	
do do do	1888	56,482 85	
do do do	1889	18,493 92	
do do do	1890	23,979 91	
do do do	1891	35,137 25	
do do do	1892	59,779 31	
do do do	1893	52,643 39	
do do do	1894	13,721 66	
do do do	1895	182,775 75	
do do do	1896	7,457 05	
do do do	1897	12,347 31	
Total.....		1,159,480 13	98,378 46

ST. LAWRENCE RIVER AND CANALS.

St. Lawrence River and Canals, as above.....	\$ 1,159,480 13
Beauharnois Canal, see page 8.....	1,611,690 26
Cornwall Canal " " 11.....	6,392,150 04
Williamsburg Canals " " 12.....	4,696,694 04
Lake St. Louis " " 10.....	127,962 86
Soulanges Canal " " 25.....	2,639,034 61
Lachine Canal, from prior to Confederation to June 30, 1875, see page 7..	2,950,104 15
Agreeing with Public Accounts Balance Sheet, 1897, page xvi.....	\$ 19,577,116 09

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

LAKE ST. LOUIS.

				Year end- ing 30th June.	Chargeable to Capital.	Chargeable to Income.
					\$ cts.	\$ cts.
Government expenditure prior to Confederation.....				1868		
do	since	do		1869		
do	do	do		1870		
do	do	do		1871		
do	do	do		1872		
do	do	do		1873		
do	do	do		1874		
do	do	do		1875		
do	do	do		1876		
do	do	do		1877		
do	do	do		1878		
do	do	do		1879		
do	do	do		1880		
do	do	do		1881		
do	do	do		1882		
do	do	do		1883		
do	do	do		1884		
do	do	do		1885		
do	do	do		1886		
do	do	do		1887		
do	do	do		1888		
do	do	do		1889		
do	do	do		1890		
do	do	do		1891		
do	do	do		1892		
do	do	do		1893		
do	do	do		1894		
do	do	do		1895	4,753 14	
do	do	do		1896	49,909 31	
do	do	do		1897	73,300 41	
Total.....				*	127,962 86	

*Included in total cost of St. Lawrence River and Canals, see page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CORNWALL CANAL.

	Year ending 30th June.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		\$	cts.	\$	\$	\$
Government expenditure prior to Confederation		1,933,152	69			
Government expenditure since Confederation	1868			2,786	11,244	3,774
do do ..	1869	10,692	04		10,347	3,859
do do ..	1870			17,780	10,368	7,145
do do ..	1871			7	11,848	8,891
do do ..	1872			10,000	10,594	8,163
do do ..	1873			1,011	13,042	12,467
do do ..	1874				13,405	7,610
do do ..	1875	1,780	00		13,351	7,097
Cost of original construction			1,945,624	73		
Expenditure by Dominion Government	1876				13,320	6,423
do do ..	1877	49,211	37		13,375	6,440
do do ..	1878	145,015	45		13,825	4,935
do do ..	1879	143,092	05		13,817	4,983
do do ..	1880	109,454	95		14,440	9,735
do do ..	1881	53,948	14		15,173	5,524
do do ..	1882	44,587	61		15,052	6,634
do do ..	1883	21,728	93		18,283	8,361
do do ..	1884	23,018	13		18,475	9,007
do do ..	1885	62,034	90	16,298	15,988	12,368
do do ..	1886	57,820	83	6,960	15,994	11,832
do do ..	1887	46,966	43		17,520	12,100
do do ..	1888	67,945	74		16,938	13,942
do do ..	1889	163,993	85		17,890	58,205
do do ..	1890	365,038	01	2,000	17,063	12,758
do do ..	1891	599,001	85	1,459	16,077	9,830
do do ..	1892	398,555	25	2,345	15,596	9,864
do do ..	1893	352,536	13		15,173	9,668
do do ..	1894	404,990	22		15,344	7,733
do do ..	1895	450,689	65	21,407	15,414	13,053
do do ..	1896	448,408	31	2,175	15,472	25,259
do do ..	1897	438,487	51		15,540	16,438
Cost of enlargement			4,446,525	31		
Total			*6,392,150	04	84,323	439,983
					18	334,111

* Included in total cost of St. Lawrence River and Canals, see page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

Government expenditure since Confederation.....	1896	4,980 00	150,744 16	286,306 96	442,121 12	8,607 04	9,588 51	9,038 00
do	1897		262,793 78	206,480 55	468,274 33	3,890 76	8,697 54	8,210 71
Total ..	...	7,833 76	1,664,158 87	1,701,559 24	*4,691,694 04	33,371 66	228,623 75	212,573 91

Original construction..... \$1,320,655 54
Cost of enlargement..... 3,370,038 50

Total \$4,696,694 04

Included in total cost of St. Lawrence River and Canals, page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

WELLAND CANAL.

	Year ending 30th June.	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			
do since do ..	1868	12,097 84		37,679 05	38,852 96
do do do ..	1869	43,486 36		39,060 61	50,773 03
do do do ..	1870		22,173 72	40,340 45	65,009 19
do do do ..	1871		48,569 10	42,383 33	53,381 02
do do do ..	1872	53,680 32	6,022 44	37,085 37	50,276 90
do do do ..	1873	82,282 20	47,876 27	45,382 99	66,550 73
do do do ..	1874	746,420 61		50,966 48	103,666 99
do do do ..	1875	1,047,119 91		52,595 00	88,599 99
do do do ..	1876	1,569,478 19	700 00	57,623 31	81,376 12
do do do ..	1877	2,199,962 61		59,963 47	49,783 93
do do do ..	1878	2,138,392 99		60,138 59	66,393 53
do do do ..	1879	1,552,697 41		59,942 23	56,755 57
do do do ..	1880	1,252,924 75		63,198 10	76,535 25
do do do ..	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
do do do ..	1882	603,402 17	13,664 80	74,641 51	84,374 97
do do do ..	1883	549,433 29	5,979 03	109,207 21	72,707 62
do do do ..	1884	432,336 21		113,276 87	90,926 97
do do do ..	1885	463,505 38	6,150 21	112,670 00	91,534 66
do do do ..	1886	215,380 75	1,359 00	111,660 22	69,507 48
do do do ..	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
do do do ..	1888	429,720 94	10,740 86	110,806 01	86,518 97
do do do ..	1889	225,910 21	43,803 80	113,587 05	77,547 77
do do do ..	1890	117,633 22	51,648 28	109,202 02	72,686 19
do do do ..	1891	36,371 03	19,767 73	107,662 63	82,548 30
do do do ..	1892	29,541 21	9,008 80	104,673 73	73,771 87
do do do ..	1893	8,259 94	25,103 13	104,926 73	65,016 84
do do do ..	1894	1,571 78	13,430 20	102,018 80	53,053 71
do do do ..	1895	3,809 35	24,245 02	90,438 07	48,270 94
do do do ..	1896	1,677 67	18,768 99	87,988 11	62,542 64
do do do ..	1897	2,282 35	22,283 06	88,095 20	41,247 81
Total.....		*23,771,635 76	401,716 30	2,352,982 87	2,066,842 28

Total expenditure as above..... \$ 23,771,635 76
Less expenditure by Imperial Government..... 222,220 00

Agreeing with Public Accounts Balance Sheet, 1897, page xvi. \$ 23,549,415 76

Original cost of construction including first enlargement..... \$ 7,693,824 03
Enlargement, including new Welland Canal..... 16,077,811 73

Total expenditure as above..... \$ 23,771,635 76

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897

Department of Railways and Canals.

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

STE. ANNE'S LOCK AND CANAL.

	Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	134,456 51			
do since do	1869			778 16	432 47
do do do	1870			1,062 96	1,873 51
do do do	1871			1,136 54	1,280 36
do do do	1872			1,285 84	1,539 02
do do do	1873		1,939 46	1,106 80	1,393 63
do do do	1874	12,753 27	540 11	2,199 64	1,264 40
do do do	1875	32,627 71		2,614 90	7,208 63
do do do	1876	24,935 85		1,859 20	4,506 68
do do do	1877	30,003 08		1,952 14	4,033 72
do do do	1878	14,618 85		1,982 65	1,756 93
do do do	1879	22,113 02		2,057 32	541 95
do do do	1880	3,054 68		2,202 03	3,259 70
do do do	1881	69,042 76		2,152 57	1,704 71
do do do	1882	193,158 36		2,533 02	3,257 92
do do do	1883	172,959 95		2,611 30	2,343 99
do do do	1884	142,006 25		2,569 86	3,448 83
do do do	1885	93,679 57		2,775 32	2,725 49
do do do	1886	129,681 67		2,618 60	4,042 04
do do do	1887	45,276 08	6,054 10	2,611 90	5,803 01
do do do	1888	18,910 55	1,372 59	2,537 41	1,499 96
do do do	1889	24,786 33		2,505 61	1,380 75
do do do	1890	6,151 14		2,569 22	1,750 79
do do do	1891		8,173 69	2,571 04	1,525 51
do do do	1892		25,471 61	2,505 69	1,503 56
do do do	1893		6,521 88	2,571 28	1,666 21
do do do	1894		3,497 56	2,581 08	2,800 03
do do do	1895		3,694 33	2,640 00	2,799 63
do do do	1896			2,508 14	3,025 91
do do do	1897			2,495 51	4,993 89
Total		*1,170,215 63	57,265 33	65,973 27	77,031 35

* Included in total cost of Ottawa River Works, see page 18.

Original construction	\$ 134,456 51
Enlargement, including new lock	1,035,759 12
	<u>\$ 1,170,215 63</u>

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CARILLON AND GRENVILLE CANALS.

	Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government		*			
Government expenditure prior to Confederation		63,053 64			
do since do ..	1868		19,817 22	6,301 88	8,911 28
do do do ..	1869			6,549 38	10,157 42
do do do ..	1870		4,167 96	6,617 81	9,852 09
do do do ..	1871		23,119 37	8,676 90	8,218 24
do do do ..	1872	165,257 28		8,324 51	17,235 31
do do do ..	1873	133,199 10	3,051 38	10,068 28	8,781 50
do do do ..	1874	245,258 38		10,710 88	10,605 82
do do do ..	1875	339,864 76		10,378 57	18,520 44
do do do ..	1876	326,203 16		10,764 38	11,475 96
do do do ..	1877	245,738 04		11,050 27	10,304 06
do do do ..	1878	22,676 20		11,401 30	5,082 72
do do do ..	1879	243,141 24		11,501 22	7,629 98
do do do ..	1880	281,514 27		11,959 14	7,625 54
do do do ..	1881	336,707 53		13,059 18	8,076 91
do do do ..	1882	433,084 39		14,387 49	7,582 68
do do do ..	1883	433,575 10		17,479 58	8,310 02
do do do ..	1884	399,267 16		17,393 91	7,918 42
do do do ..	1885	157,187 72		19,702 30	10,429 26
do do do ..	1886	104,973 24	75 00	20,597 82	9,303 31
do do do ..	1887	20,747 11		20,011 36	10,554 41
do do do ..	1888	38,996 29		21,531 12	10,036 62
do do do ..	1889	298 17		22,098 88	10,135 66
do do do ..	1890	17 58	4,526 61	15,896 16	7,582 38
do do do ..	1891		4,395 25	21,230 22	10,796 68
do do do ..	1892	34,585 64	15,036 48	17,458 69	8,620 15
do do do ..	1893	207 00	42,298 74	16,762 71	10,669 28
do do do ..	1894	385 55	20,034 94	14,144 98	11,620 09
do do do ..	1895		5,963 76	15,453 21	12,303 25
do do do ..	1896	3,850 31		13,995 69	12,161 10
do do do ..	1897	1,908 44	4,939 20	13,780 29	11,607 95
Total	†	4,031,697 30	147,425 91	419,288 11	302,108 53

*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 18, cost of enlargement \$3,968,643.66.

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CULBUTE LOCK AND DAM.

			Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.			1868				
do	do	do	1869				
do	do	do	1870				
do	do	do	1871				
do	do	do	1872				
do	do	do	1873				
do	do	do	1874		835 53		
do	do	do	1875	63,659 29	38,388 99		
do	do	do	1876	76,842 44			
do	do	do	1877	56,081 87			
do	do	do	1878	5,933 53			
do	do	do	1879	20,694 19			
do	do	do	1880	16,688 20		202 50	259 31
do	do	do	1881	4,721 62		962 85	
do	do	do	1882	29,567 15		790 00	162 33
do	do	do	1883	14,249 60		695 00	288 99
do	do	do	1884	8,151 16		733 50	
do	do	do	1885	19,071 76		730 00	572 75
do	do	do	1886	26,385 27		730 00	2,396 14
do	do	do	1887	7,760 88		730 00	967 33
do	do	do	1888	7,573 99		739 50	730 60
do	do	do	1889	17,112 01		1,050 00	116 53
do	do	do	1890	2,818 35		747 83	
do	do	do	1891	2,183 15	9,122 05	745 25	499 91
do	do	do	1892		1,546 25	736 00	
do	do	do	1893		1,420 65	749 00	13 55
do	do	do	1894		2,540 14	730 00	494 43
do	do	do	1895		1,475 26	436 05	434 28
do	do	do	1896				
do	do	do	1897				
Total				*379,494 46	55,328 87	11,507 48	6,936 15

*Included in total cost of Ottawa River Works, see page 18.

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

RIDEAU CANAL.

	Year ending 30th June.	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			
do since do .. 1868		166 50	7,298 12	18,397 28	16,475 21
do do do .. 1869				19,250 71	13,140 77
do do do .. 1870			13 16	20,022 37	19,469 33
do do do .. 1871			11,732 98	22,814 58	18,120 52
do do do .. 1872			4,967 50	22,139 48	14,005 32
do do do .. 1873			18,070 97	22,841 51	26,074 49
do do do .. 1874			5,793 16	26,815 44	22,957 40
do do do .. 1875		9,310 85		26,553 37	19,699 81
do do do .. 1876		2,163 96		26,430 77	14,428 25
do do do .. 1877		214 11		25,959 56	14,198 18
do do do .. 1878				26,651 51	11,034 22
do do do .. 1879		7,703 88		26,042 52	7,134 55
do do do .. 1880				26,463 88	11,434 05
do do do .. 1881			133 50	26,024 71	8,627 00
do do do .. 1882				26,915 29	13,860 28
do do do .. 1883			70 65	27,322 81	23,524 84
do do do .. 1884			4,597 50	26,938 95	19,245 02
do do do .. 1885			2,098 76	26,971 32	18,189 55
do do do .. 1886			550 00	27,045 95	35,648 04
do do do .. 1887			20,823 96	29,440 46	18,565 34
do do do .. 1888			18,889 48	33,458 83	25,478 87
do do do .. 1889			6,665 22	33,801 77	18,106 36
do do do .. 1890			21,124 10	34,270 57	18,025 21
do do do .. 1891			20,967 25	34,641 98	21,537 56
do do do .. 1892			31,363 23	35,500 82	21,507 16
do do do .. 1893			24,274 71	35,022 49	18,789 50
do do do .. 1894			14,485 11	34,943 35	16,939 47
do do do .. 1895			31,559 48	33,827 08	19,897 32
do do do .. 1896			21,452 29	34,052 77	30,196 38
do do do .. 1897		10,720 50	19,079 11	31,461 55	29,535 94
Total		*4,095,043 87	286,010 24	842,023 68	565,845 94

* Ottawa River Works.

Ste. Anne's Lock, page 15	\$1,170,215 63
Carillon and Grenville Canals, page 16	4,031,697 30
Culbute Canal, page 17	379,494 46
Rideau Canal as above	\$4,095,043 87
Less expenditure by Imperial Government	3,911,701 47
	183,342 40
Total Ottawa Works (Capital)	\$5,764,749 79
Add expenditure on slides and booms prior to Confederation	\$ 719,247 13
Since Confederation	7,243 60
Add expenditure on Chats Canals prior to Confederation	482,950 81
Add expenditure in 1881, charged to Miscellaneous, see page 229, part ii Public Accounts	1,136 84
Add amount transferred, see page xxxvi Public Accounts, Balance sheet 1881	233,555 85
	1,444,134 23
Less expenditure prior to Confederation, transferred to Income Accounts	\$7,203,884 02
Less expenditure, 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous	320,618 28
	165,257 28
	485,875 56
Agreeing with Balance Sheet, Public Accounts, 1897, page xvi	\$6,723,008 46

Department of Railways and Canals.

STATEMENTS showing the amounts expended on Construction, Renewals &c.—*Con.*

ST. OURS LOCK.

				Year end- ing 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
					\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation				1868	121,537 65		1,532 75	753 74
do	since	do	..	1869			1,755 15	1,399 18
do	do	do	..	1870			1,458 09	1,006 22
do	do	do	..	1871			1,414 48	1,210 98
do	do	do	..	1872			1,565 80	1,263 19
do	do	do	..	1873			2,076 50	1,575 10
do	do	do	..	1874			2,219 13	2,363 42
do	do	do	..	1875			1,362 22	1,245 69
do	do	do	..	1876			1,403 92	1,601 71
do	do	do	..	1877			1,533 40	750 80
do	do	do	..	1878			1,556 65	283 77
do	do	do	..	1879			1,581 55	456 07
do	do	do	..	1880			1,614 01	705 54
do	do	do	..	1881			1,741 97	1,299 77
do	do	do	..	1882			2,002 71	1,902 41
do	do	do	..	1883		17,230 32	2,361 65	2,188 08
do	do	do	..	1884		5,279 17	2,315 37	1,494 99
do	do	do	..	1885		4,700 64	2,271 57	3,652 63
do	do	do	..	1886			2,311 70	4,143 47
do	do	do	..	1887			2,175 37	5,864 78
do	do	do	..	1888			2,216 04	2,801 17
do	do	do	..	1889		17,964 45	2,421 14	2,002 63
do	do	do	..	1890		24,571 96	2,138 40	1,935 44
do	do	do	..	1891		21,696 74	2,011 08	4,460 16
do	do	do	..	1892		3,585 34	2,168 44	1,944 33
do	do	do	..	1893			2,136 66	1,994 34
do	do	do	..	1894			2,216 68	924 55
do	do	do	..	1895			2,161 63	915 50
do	do	do	..	1896			2,094 91	1,678 49
do	do	do	..	1897			2,135 60	707 06
Total.....					*121,537 65	95,028 62	57,954 57	54,525 21

*Included in total cost of Chambly Canal and River Richelieu, see page 20.

LEONARD SHANNON.

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

CHAMBLY CANAL.

	Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		634,711 76			
do since do	1868			8,312 90	9,355 70
do do do	1869			8,437 22	13,120 97
do do do	1870			8,934 41	20,180 73
do do do	1871		2,839 85	10,214 71	22,426 33
do do do	1872		1,906 40	9,628 50	22,327 99
do do do	1873		759 00	10,390 44	11,789 27
do do do	1874		2,810 00	11,675 67	16,427 19
do do do	1875	2,415 00		12,201 99	16,306 91
do do do	1876			10,593 14	13,273 56
do do do	1877	80 00		10,281 78	10,111 32
do do do	1878			10,413 99	6,022 96
do do do	1879			11,301 53	8,809 77
do do do	1880			11,516 22	12,377 74
do do do	1881			13,950 47	20,705 17
do do do	1882		31,796 41	16,686 78	16,843 60
do do do	1883		21,332 36	15,904 38	15,182 24
do do do	1884		41,640 77	18,448 85	12,003 34
do do do	1885		21,049 23	18,378 55	13,046 95
do do do	1886		14,547 27	19,501 28	11,999 77
do do do	1887		17,911 17	19,053 62	20,071 37
do do do	1888		65,536 64	20,073 60	11,823 74
do do do	1889		51,437 87	19,679 22	19,392 18
do do do	1890		23,221 48	19,655 38	14,399 93
do do do	1891		43,344 41	19,204 76	11,899 93
do do do	1892		38,353 99	19,665 22	12,976 48
do do do	1893		21,127 65	19,310 29	12,451 03
do do do	1894		8,567 78	19,040 93	11,920 74
do do do	1895		6,147 63	19,325 49	11,779 12
do do do	1896		3,694 63	19,349 65	11,801 12
do do do	1897		12,665 88	18,754 17	13,128 55
Total		*637,206 76	430,690 42	449,885 14	423,455 70

*Chamby Canal and River Richelieu.

Chamby Canal as above	\$ 637,206 76
St. Ours Lock, see page 19	121,537 65
	\$ 758,744 41
Less amount deducted at Confederation, see Public Accounts, 1868, part i, page 9.	
Government expenditure prior to Confederation.	
Chamby Canal as above	\$ 634,711 76
St. Ours Lock, page 19	121,537 65
	\$ 756,249 41
Returned as an asset in Public Accounts, 1868.	433,807 83
	\$ 322,441 58
Agreeing with Public Accounts, 1897, page xvi	\$ 436,302 83

LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

MURRAY CANAL.

			Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation							
do	since	do	1868		400 00		
do	do	do	1869				
do	do	do	1870				
do	do	do	1871				
do	do	do	1872				
do	do	do	1873				
do	do	do	1874				
do	do	do	1875				
do	do	do	1876				
do	do	do	1877				
do	do	do	1878				
do	do	do	1879				
do	do	do	1880				
do	do	do	1881				
do	do	do	1882	7,135 63			
do	do	do	1883	84,071 68			
do	do	do	1884	118,187 43			
do	do	do	1885	148,902 66			
do	do	do	1886	179,704 52			
do	do	do	1887	142,563 66			
do	do	do	1888	146,754 37			
do	do	do	1889	215,326 46			
do	do	do	1890	106,760 35		494 31	
do	do	do	1891	61,260 49		5,137 03	173 53
do	do	do	1892	5,964 22		5,803 48	3,505 15
do	do	do	1893	20,838 79		5,499 62	5,341 34
do	do	do	1894			5,667 52	5,295 57
do	do	do	1895			5,354 97	5,063 49
do	do	do	1896			5,409 10	5,410 33
do	do	do	1897			5,526 87	3,966 41
Total				*1,247,470 26	400 00	38,892 90	28,755 82

*Agreeing with Public Accounts Balance Sheet, 1897, page xvi.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

TRENT CANAL.

				Year end- ing 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
					\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation				1868	309,371 31			
do	since	do	1868					
do	do	do	1869					
do	do	do	1870					
do	do	do	1871					
do	do	do	1872					
do	do	do	1873					
do	do	do	1874					
do	do	do	1875					
do	do	do	1876					
do	do	do	1877					
do	do	do	1878					
do	do	do	1879					
do	do	do	1880		561 50		1,188 92	3,568 89
do	do	do	1881				2,489 93	2,233 50
do	do	do	1882			5,836 51	2,011 92	8,115 50
do	do	do	1883		40,767 16	9,303 66	2,235 50	3,047 42
do	do	do	1884		120,393 91	6,198 57	2,208 64	5,264 35
do	do	do	1885		121,382 84		3,303 87	4,653 50
do	do	do	1886		75,103 30		1,639 75	5,917 88
do	do	do	1887		179,541 63		1,938 08	6,008 88
do	do	do	1888		114,879 35		1,770 29	5,151 42
do	do	do	1889		47,592 13	29,677 92	3,242 05	5,935 94
do	do	do	1890		58,644 50	11,522 65	3,450 99	730 55
do	do	do	1891		9,826 49	3,164 81	3,803 66	4,888 98
do	do	do	1892		4,457 28	6,506 97	3,695 85	4,721 85
do	do	do	1893		5,962 47	10,838 90	3,739 86	2,087 17
do	do	do	1894		3,412 32	20,403 93	3,785 47	4,988 59
do	do	do	1895		53,907 70	21,143 41	4,184 18	3,374 49
do	do	do	1896		392,976 08	6,185 75	4,349 34	3,329 97
do	do	do	1897		486,575 70	13,880 37	4,965 39	3,497 90
Total					2,025,355 67	144,663 45	54,003 69	77,516 78

Total expenditure on Capital account as above..... 2,025,355 67

Less,—Expenditure prior to Confederation..... 309,371 31

“ Year 1880..... 561 50

Agreeing with Public Accounts Balance Sheet, 1897, page xvi..... \$ 1,715,422 86

LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

TAY CANAL.

	Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.	1868				
do do do	1869				
do do do	1870				
do do do	1871				
do do do	1872				
do do do	1873				
do do do	1874				
do do do	1875				
do do do	1876				
do do do	1877				
do do do	1878				
do do do	1879				
do do do	1880				
do do do	1881				
do do do	1882		748 65		
do do do	1883	4,831 80			
do do do	1884	50,878 12			
do do do	1885	92,473 97			
do do do	1886	65,561 51			
do do do	1887	49,617 92			
do do do	1888	54,166 57			
do do do	1889	89,486 18			
do do do	1890	22,226 23		*	*
do do do	1891	17,114 78		*	*
do do do	1892	29,771 65		*	*
do do do	1893			*	*
do do do	1894			*	*
do do do	1895			*	*
do do do	1896			*	*
do do do	1897			*	*
Total.....		†476,128 73	748 65	*	*

*Included in Rideau Canal.

†Agreeing with Public Accounts, 1897, page xvi.

Cost of Canal as above.....	476,128 73
Paid in 1896-97 but charged as voted under Rideau Canal Capital—Final Estimate, Wm. Davis & Sons.....	10,720 50
Total cost of Tay Canal.....	<u>\$ 486,849 23</u>

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

SAULT STE. MARIE CANAL.

				Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
					\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.				1868				
do	do	do	do	1869				
do	do	do	do	1870				
do	do	do	do	1871				
do	do	do	do	1872		949 35		
do	do	do	do	1873				
do	do	do	do	1874				
do	do	do	do	1875				
do	do	do	do	1876				
do	do	do	do	1877				
do	do	do	do	1878				
do	do	do	do	1879				
do	do	do	do	1880				
do	do	do	do	1881				
do	do	do	do	1882				
do	do	do	do	1883				
do	do	do	do	1884				
do	do	do	do	1885				
do	do	do	do	1886				
do	do	do	do	1887				
do	do	do	do	1888	8,145 06			
do	do	do	do	1889	34,018 95			
do	do	do	do	1890	176,568 55			
do	do	do	do	1891	325,336 33			
do	do	do	do	1892	341,474 31			
do	do	do	do	1893	589,801 25			
do	do	do	do	1894	1,316,529 29			
do	do	do	do	1895	466,151 50		3,432 73	
do	do	do	do	1896	189,986 59		16,074 70	2,650 17
do	do	do	do	1897	209,561 82		15,381 59	7,671 79
Total.....					*3,657,573 65	949 35	34,889 02	10,321 96

* Agreeing with Public Accounts, 1897, page xvi.

LEONARD SHANNON,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals

STATEMENTS showing the amounts expended on Construction, Renewals, &c.—*Con.*

SOULANGES CANAL.

			Year ending 30th June.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederat'n.			1868				
do	since	do	1869				
do	do	do	1870				
do	do	do	1871				
do	do	do	1872				
do	do	do	1873				
do	do	do	1874				
do	do	do	1875				
do	do	do	1876				
do	do	do	1877				
do	do	do	1878				
do	do	do	1879				
do	do	do	1880				
do	do	do	1881				
do	do	do	1882				
do	do	do	1883				
do	do	do	1884				
do	do	do	1885				
do	do	do	1886				
do	do	do	1887				
do	do	do	1888				
do	do	do	1889				
do	do	do	1890				
do	do	do	1891				
do	do	do	1892	54,235 76			
do	do	do	1893	210,336 24			
do	do	do	1894	723,380 95			
do	do	do	1895	752,016 53			
do	do	do	1896	535,939 07			
do	do	do	1897	363,126 06			
Total..				*2,639,034 61			

* Included in total cost of St. Lawrence River and Canals, see part ii, page 9.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

STATEMENT showing amount expended on Construction and Enlargement of Canals,
to 30th June, 1897.

Canal.	Construction.	Enlargement.	Total.
St. Peters	248,762 84	399,992 80	648,755 64
Lachine	2,589,532 85	7,818,491 89	10,408,024 74
Beauharnois	1,611,690 26		1,611,690 26
St. Lawrence River and Canals	18,442 85	1,141,037 28	1,159,480 13
Lake St. Louis		127,962 86	127,962 86
Cornwall	1,945,624 73	4,446,525 31	6,392,150 04
Williamsburg { Farran's Point		7,833 76	
Galops		1,664,158 87	
Rapide Plat		1,701,559 24	
Williamsburg	1,320,655 54	2,486 63	4,696,694 04
Welland	7,693,824 03	16,077,811 73	23,771,635 76
Ste. Anne's	134,456 51	1,035,759 12	1,170,215 63
Carillon and Grenville	73,053 64	3,968,643 66	4,031,697 30
Culbute	379,494 46		379,494 46
Rideau	4,095,043 87		4,095,043 87
St. Ours	121,537 65		121,537 65
Chambly	637,206 76		637,206 76
Murray	1,247,470 26		1,247,470 26
Trent	309,932 81	1,715,422 86	2,025,355 67
Tay	476,128 73		476,128 73
Sault Ste. Marie	3,657,573 65		3,649,952 90
Soulanges	2,639,034 61		2,639,034 61
Total	\$29,189,466 05	40,107,686 01	69,289,531 31

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

RECAPITULATION—EXPENDITURE on Canals, also showing Revenue received.

Department of Railways and Canals.

	Year ending 30th June.	Capital.		Income.		Staff.		Repairs.		Revenue received.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation, including Imperial Government.		20,593,866	13	98,378	46						
Government expenditure since Confederation.	1868	33,784	06	95,347	79	113,084	50	101,646	44	403,879	19
do do do	1869	126,808	20	55	00	116,069	76	118,579	31	400,263	32
do do do	1870			90,855	96	120,403	02	150,176	70	414,687	02
do do do	1871			116,429	54	136,040	81	140,467	52	488,538	76
do do do	1872			33,289	27	124,137	09	152,086	25	466,847	52
do do do	1873	255,645	75	127,369	55	148,581	18	186,573	13	486,433	26
do do do	1874	1,189,591	91	51,037	05	167,194	40	213,613	86	510,755	90
do do do	1875	1,714,830	37	479	00	168,401	21	203,226	85	414,979	59
do do do	1876	2,388,733	46	810	75	178,411	80	190,578	45	390,337	04
do do do	1877	4,131,374	30	22	30	179,661	40	138,448	51	390,857	37
do do do	1878	3,843,338	62			187,521	31	122,251	60	373,814	17
do do do	1879	3,064,098	61			191,892	44	115,349	99	337,675	13
do do do	1880	2,123,366	34			195,039	33	147,167	52	341,598	14
do do do	1881	2,075,891	65	7,246	69	197,573	62	154,653	63	361,538	17
do do do	1882	1,598,174	09	55,025	03	224,572	61	187,399	02	325,231	54
do do do	1883	1,763,001	97	62,503	14	269,415	01	178,617	86	361,604	01
do do do	1884	1,577,295	42	60,993	99	290,657	29	192,219	38	372,561	69
do do do	1885	1,504,621	47	58,297	59	280,226	20	201,708	47	321,289	47
do do do	1886	1,933,324	80	31,964	02	282,523	63	196,251	97	328,977	43
do do do	1887	1,783,698	16	65,983	06	285,172	62	198,888	84	321,784	88
do do do	1888	1,033,118	34	120,561	59	292,458	76	201,928	93	317,902	04
do do do	1889	972,918	43	162,015	49	301,040	23	240,261	36	333,188	90
do do do	1890	1,026,364	24	146,853	54	290,516	63	176,089	00	354,816	92
do do do	1891	1,318,092	15	163,843	87	294,562	12	204,768	45	349,431	90
do do do	1892	1,437,149	30	194,129	61	293,115	58	231,089	54	324,475	24
do do do	1893	2,069,573	30	196,185	84	291,588	97	204,759	39	357,089	87
do do do	1894	3,027,164	19	109,216	33	294,446	34	179,630	13	387,788	97
do do do	1895	2,452,273	65	216,057	58	281,477	04	164,033	71	339,800	49
do do do	1896	2,528,778	97	85,820	49	292,121	05	209,321	60	339,538	72
do do do	1897	2,341,016	16	101,205	74	287,970	36	178,385	47	384,780	53
Total.		69,297,152	06	2,453,498	27	6,764,673	31	5,282,172	88	11,302,577	27

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

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

LEONARD SHANNON,
Accountant.

COLLECTORS of Canal Tolls in Account with Revenue.

61 Victoria.

Sessional Papers (No. 10.)

A. 1898

CANAL REVENUE.				Total Canal Revenue Accrued.	Hydraulic Rents, &c.	Total.	COLLECTION DIVISIONS.	DEPOSITS TO THE CREDIT OF THE RECEIVER GENERAL.		Total.	Cost of Staff, Repairs and Office of Collection, Chargeable to Revenue.
Tolls.	Wharfage and Storage.	Fines.	Other Receipts.					On account, Canal Revenue.	On account, Hydraulic Rents.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.
132,739 96		40 00	39 92	132,819 90	879 50	133,699 40	<i>Welland Canal</i>	132,819 90	879 50	133,699 40	133,783 06
51,038 13	49 00		20 18	51,107 31	709 15	51,816 46	Port Colborne	51,107 31	709 15	51,816 46	3,740 53
306 62				306 62	318 34	624 96	Port Dalhousie	306 62	318 34	624 96	2,302 61
48 99				48 99		48 99	Dunnville	48 99		48 99	778 00
725 46				725 46	4,209 43	4,934 89	Port Maitland	725 46	4,209 43	4,934 89	579 12
81 05				81 05	5 00	86 05	St. Catharines	81 05	5 00	86 05	211 00
							Chippawa				130 00
184,940 23	89 00		60 10	185,069 33	6,121 42	191,210 75	Totals	185,069 33	6,121 42	191,210 75	141,524 32
1,028 34		20 00		1,048 34	2,334 50	3,382 84	<i>St. Lawrence Canals.</i>	1,048 44	2,331 50	3,382 84	173,347 65
31,092 58	60 00			31,152 58	4,351 75	35,504 33	Beauharnois	31,152 58	4,351 75	35,504 33	1,367 74
721 82	25 00			746 82	3,602 95	4,349 77	Cornwall	746 82	3,602 95	4,349 77	2,065 12
2,510 02	18 54		975 29	3,503 85		3,503 85	Cardinal	3,503 85		3,503 85	1,191 00
25,169 31	2,503 80		14,474 50	42,147 61	24,048 57	66,196 18	Lachine	42,147 61	24,048 57	66,196 18	2,230 25
9,500 72				9,500 72		9,500 72	Montréal	9,500 72		9,500 72	7,543 44
							Kingston				1,197 21
70,022 79	2,522 34	105 00	15,449 79	88,099 92	34,337 77	122,437 69	Totals	88,099 92	34,337 77	122,437 69	188,942 41
12,368 13		5 00		12,393 13	10 00	12,403 13	<i>Chambly Canal.</i>	12,393 13	10 00	12,403 13	34,725 38
11,385 86				11,385 86	50 00	11,435 86	Chambly	11,385 86	50 00	11,435 86	1,587 80
590 83				590 83		590 83	St. John's	590 83		590 83	1,691 00
							St. Ours				614 40
24,364 82		5 00		24,369 82	60 00	24,429 82	Totals	24,369 82	60 00	24,429 82	38,618 58
							<i>Ottawa Canals</i>				20,923 92
24,913 34				24,913 34		24,913 34	Ottawa	24,913 34		24,913 34	1,063 73
6,520 72			8 00	6,528 72	13 00	6,541 72	Grenville	6,528 72	13 00	6,541 72	856 15
933 14				933 14	3 00	936 14	Carillon	933 14	3 00	936 14	891 61
1,033 76				1,033 76		1,033 76	St. Anne's Lock	1,033 76		1,033 76	32,735 41
33,400 96			8 00	33,408 96	16 00	33,424 96	Totals	33,408 96	16 00	33,424 96	

Department of Railways and Canals.

2,699 31	42 76	94 50	2,836 57	3,783 25	6,619 82	62,949 44
1,144 53			1,144 53	130 00	1,274 53	2,418 05
524 16		33 92	558 08	80 20	638 28	3,369 85
4,368 00	42 76	128 42	4,539 18	3,993 45	8,532 63	483 32
						66,220 66
4,580 69		12 00	4,542 69		4,542 69	2,729 58
4,530 69		12 00	4,542 69		4,542 69	236 76
						2,966 34
595 79			595 79	4 00	599 79	9,788 52
595 79			595 79	4 00	599 79	337 05
						10,125 57
53 53			53 53		53 53	8,463 29
334 75		118 00	452 75		452 75	1 35
41 86		2 90	44 76		98 76	36 90
20 45		0 25	20 70	54 00	20 70	3 25
285 37			285 37	3 00	288 37	10 00
44 52			44 52		44 52	34 28
780 48		121 15	901 63	57 00	958 63	8,549 07
	10 00		10 00	10 00	20 00	24,718 38
						8,998 46
						1,920 05
						940 25
						3,470 84
323,003 76	2,565 10	209 00	341,557 32	44,599 64	386,156 96	523,730 34
					1,376 43	
					384,780 53	

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

HYDRAULIC AND OTHER RENTS.

Balances due 1st July, 1896.	Accrued during the Year ended 30th June, 1897.	Totals.	NAME OF WORK.	Abatement.	Deposited to the Credit of the Receiver General.	Balance due 30th June.	Totals.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.
28,132 79	6,295 89	34,428 68	Welland Canal		6,121 42	28,307 26	34,428 68
3,865 62	608 33	3,973 95	Williamsburg Canal		3,602 95	371 00	3,973 95
1,687 50	3,991 75	5,689 25	Cornwall do		4,351 75	1,337 50	5,689 25
8,093 50	1,667 33	9,760 83	Beauharnois do	710 00	2,334 50	6,706 33	9,760 83
22,595 24	19,485 11	43,080 35	Lechaine do	1,249 74	24,048 57	17,782 04	43,080 35
276 84	145 00	421 84	Chambly do		60 00	361 84	421 84
2,717 89	3,335 65	6,053 54	Rideau do	2 00	3,993 45	2,058 09	6,051 54
73 00	56 00	129 00	Trent Valley do		57 06	72 00	129 00
	10 00	10 00	Sault Ste. Marie Canal		10 00		10 00
	116 00	116 00	Carillon & Grenville Canal		16 00	100 00	116 00
	4 00	8 00	Sundry Canals		4 00	4 00	8 00
354 18		354 18	Intercolonial Railway Land Sales	354 18			354 18
68,310 56	33,705 06	104,015 62	Totals	2,315 92	44,599 64	57,100 06	104,015 62

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

LEONARD SHANNON,
Accountant.

Department of Railways and Canals

STATEMENT showing Refunds Canals Tolls paid during the Year 1896-97.

Date.	To Whom Paid.	Refunds of Tolls on	Canals.	Amount.	Total.
1896.				\$ cts.	\$ cts.
Oct. 2	Canadian Forwarding and Export Company.....	Coal, Government Works	St. Lawrence	62 21	
do 2	Canadian Forwarding and Export Company.....	do do do	do ..	94 38	
do 2	Kingston and Montreal Forwarding Company.....	Unused "Let Pass"....	do ..	18 78	
do 30	Canadian Forwarding and Export Company.....	Coal, Government Works	do ..	139 01	
Nov. 19	Kingston and Montreal Forwarding Company.....	do do do	do ..	104 70	
do 19	Montreal Transportation Co....	Cement do do	do ..	17 67	
do 28	George Hall Coal Company....	Coal do do	do ..	62 00	
do 28	Canadian Forwarding and Export Company.....	do do do	do ..	89 37	
do 28	Montreal Transportation Co....	Cement do do	do ..	17 73	
1897.					
Jan. 4	H. Muir & Son.....	Barge "Riley".....	do ..	20 27	
do 25	Canadian Forwarding and Export Company.....	Unused "Let Pass" and Tolls twice paid.....	do ..	53 02	
Feb. 18	Kingman, Brown & Company..	Wharfage dues over paid.	do ..	38 75	
Mar. 16	Central Vermont Railway.....	Corn and Wheat.....	do ..	34 50	
May 17	Capt. Hefferman.....	Coal, Government Works	do ..	227 02	
June 30	do	do do do	do ..	146 33	
1896.					1,125 79
Oct. 9	Battle and Newman.....	Material do do	Welland....	55 31	
do 14	G. E. Morden.....	Lumber do do	do	152 01	207 32
	Total.....				1,333 11

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, 1st November, 1897.

STATEMENT showing Refunds of Rentals paid during the Year 1896-97.

Date.		Amount.	Total.
1897.		\$ cts.	\$ cts.
Jan. 22	Dey Bros.....	36 66	
Mar. 22	Estate Late Jno. Brannigan.....	6 66	
	Total.....		43 32

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, 1st November, 1897.

INTERCOLONIAL RAILWAY.

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

	Year.	Construction.	Working Expenses including Windsor Branch Railway.	Revenue received, including Windsor Branch Railway.
		\$ cts.	\$ cts.	\$ cts.
Expenditure prior to Confederation.....		10,766,725 54		
do since do	1868	483,353 65	359,961 08	420,752 58
do do do	1869	282,615 18	387,548 47	455,022 76
do do do	1870	1,729,381 49	445,208 75	471,245 09
do do do	1871	2,916,782 13	442,993 31	565,713 52
do do do	1872	5,131,141 51	595,076 22	622,900 56
do do do	1873	5,201,450 37	1,011,892 60	703,458 26
do do do	1874	3,614,898 81	1,847,175 24	893,430 17
do do do	1875	3,426,099 55	1,532,589 62	861,593 43
do do do	1876	1,108,321 59	1,277,197 79	848,861 46
do do do	1877	1,318,352 19	1,661,673 55	1,154,445 35
do do do	1878	408,816 74	1,811,273 56	1,378,946 78
do do do	1879	226,639 19	2,010,183 22	1,294,099 69
do do do	1880	2,048,014 60	1,607,956 70	1,520,310 45
do do do	1881	608,732 80	1,780,353 53	1,777,856 76
do do do	1882	585,568 79	2,080,592 37	2,100,315 85
do do do	1883	1,616,632 96	2,383,477 20	2,395,034 99
do do do	1884	1,405,377 52	2,366,719 95	2,376,666 19
do do do	1885	1,195,363 08	2,460,229 87	2,392,605 00
do do do	1886	544,958 17	2,508,473 10	2,406,858 88
do do do	1887	823,070 86	2,854,158 91	2,621,337 41
do do do	1888	742,203 09	3,300,481 94	2,937,337 40
do do do	1889	655,228 13	3,174,785 19	2,923,736 46
do do do	1890	365,246 48	3,500,455 80	2,958,243 38
do do do	1891	79,929 34	3,691,273 65	3,007,630 51
do do do	1892	168,101 77	3,458,891 39	2,978,950 82
do do do	1893	228,984 79	3,062,207 45	3,099,815 20
do do do	1894	166,362 43	2,999,317 07	3,020,485 74
do do do	1895	327,034 51	2,964,940 98	2,979,795 59
do do do	1896	259,105 23	3,029,304 08	2,994,201 93
do do do	1897	145,142 00	2,936,789 71	2,906,631 25
Total		*48,579,634 49	63,543,182 30	57,068,283 46

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

Total cost of construction as above..... \$48,579,634 49

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>\$ 83,363 18</u>	
		208,509 72	
			296,872 90
Cape Breton Railway.....			\$48,282,761 59
Oxford and New Glasgow Railway.....			3,860,289 54
Eastern Extension Railway.....			1,949,063 21
			<u>1,324,042 81</u>
Total Capital cost of Intercolonial Railway system			\$55,416,157 15
Governor General's car "Victoria".....			1,290 31
Agreeing with Public Accounts, 1897, page xvi.....			<u>\$55,417,447 46</u>

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

EASTERN EXTENSION RAILWAY.

				Year.	Capital.	Working Expenses.	Revenue received.
					\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.							
do	since	do	1868				
do	do	do	1869				
do	do	do	1870				
do	do	do	1871				
do	do	do	1872				
do	do	do	1873				
do	do	do	1874				
do	do	do	1875				
do	do	do	1876				
do	do	do	1877				
do	do	do	1878				
do	do	do	1879				
do	do	do	1880				
do	do	do	1881				
do	do	do	1882				
do	do	do	1883				
do	do	do	1884		1,284,311 97	10,033 77	30,767 66
do	do	do	1885		2,055 92	78,273 65	73,050 01
do	do	do	1886		183 79	94,756 06	66,893 11
do	do	do	1887			94,254 04	64,107 10
do	do	do	1888			90,954 73	70,552 20
do	do	do	1889		34,235 73	90,719 04	72,436 65
do	do	do	1890			79,102 77	84,658 95
do	do	do	1891		3,255 40	*	†
do	do	do	1892			*	†
do	do	do	1893			*	†
do	do	do	1894			*	†
do	do	do	1895			*	†
do	do	do	1896			*	†
do	do	do	1897			*	†
Total.					†1,324,042 81	538,094 06	462,465 68

* Included in Intercolonial Railway working expenses † Included in Intercolonial Railway revenue.
‡ Included in total cost of Intercolonial Railway system, page 32.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

CARLETON BRANCH RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868			
do since do	1869			
do do do	1870			
do do do	1871			
do do do	1872			
do do do	1873			
do do do	1874			
do do do	1875			
do do do	1876			
do do do	1877			
do do do	1878			
do do do	1879			
do do do	1880			
do do do	1881			
do do do	1882			
do do do	1883			
do do do	1884			
do do do	1885			
do do do	1886	85,610 69		
do do do	1887	2,299 62		
do do do	1888	500 17		
do do do	1889			
do do do	1890			
do do do	1891			
do do do	1892			
do do do	1893			
do do do	1896			
do do do	1897			
Total		*88,410 48		

* 56 Victoria, cap. 6, transferred the Carleton Branch Railway to the city of St. John, N.B., for the sum of \$40,000, which sum was paid in March, 1893, to the Receiver General.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals

CAPE BRETON RAILWAY.

	Year.	Capital.	Working Expenses
		\$ cts.	\$ cts.
Government expenditure prior to Confederation ...	1868		
do since do	1869		
do do do	1870		
do do do	1871		
do do do	1872		
do do do	1873		
do do do	1874		
do do do	1875		
do do do	1876		
do do do	1877		
do do do	1878		
do do do	1879		
do do do	1880		
do do do	1881		
do do do	1882		
do do do	1883		
do do do	1884		
do do do	1885		
do do do	1886		
do do do	1887	76,501 89	
do do do	1888	689,450 50	
do do do	1889	1,083,276 60	
do do do	1890	1,170,523 62	
do do do	1891	521,441 62	
do do do	1892	99,936 96	
do do do	1893	59,982 74	
do do do	1894	158,770 61	
do do do	1895	*	
do do do	1896	*	
do do do	1897	405 00	
Total.....		\$3,860,289 54	†

* Included in Intercolonial Railway capital.

† Included in Intercolonial Railway working expenses.

§ Included in total cost of Intercolonial Railway system, see page 32.

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, 1st November, 1897

OXFORD AND NEW GLASGOW RAILWAY.

				Year.	Capital.	Working Expenses.
					\$ cts.	\$ cts.
Government expenditure prior to		Confederation.		1868		
do	since	do		1869		
do	do	do		1870		
do	do	do		1871		
do	do	do		1872		
do	do	do		1873		
do	do	do		1874		
do	do	do		1875		
do	do	do		1876		
do	do	do		1877		
do	do	do		1878		
do	do	do		1879		
do	do	do		1880		
do	do	do		1881		
do	do	do		1882		
do	do	do		1883		
do	do	do		1884		
do	do	do		1885		
do	do	do		1886		
do	do	do		1887		
do	do	do		1888	280,932 35	
do	do	do		1889	840,553 57	
do	do	do		1890	434,074 60	
do	do	do		1891	220,886 39	
do	do	do		1892	48,745 23	
do	do	do		1893	7,922 80	
do	do	do		1894	112,382 75	
do	do	do		1895	*	
do	do	do		1896	*	
do	do	do		1897	3,565 52	
Total.					1,949,063 21	†

*Included in Intercolonial Railway capital. †Included in Intercolonial Railway working expenses.
 §Included in total cost of Intercolonial Railway system, see page 32.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, 1st November, 1897.

Department of Railways and Canals

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868	.....	.....	.....
do since do	1869	.....	.....	.....
do do do	1870	.....	.....	.....
do do do	1871	.....	.....	.....
do do do	1872	.....	.....	.....
do do do	1873	.....	.....	.....
do do do	1874	.....	.....	.....
do do do	1875	.....	.....	.....
do do do	1876	.....	.....	.....
do do do	1877	.....	.....	.....
do do do	1878	.....	.....	.....
do do do	1879	.....	.....	.....
do do do	1880	.....	.....	.....
do do do	1881	.....	.....	.....
do do do	1882	.....	.....	.....
do do do	1883	.....	.....	.....
do do do	1884	.....	.....	.....
do do do	1885	49,587 45	.....	.....
do do do	1886	135,214 38	.....	.....
do do do	1887	24,157 32	.....	.....
do do do	1888	397 35	.....	.....
do do do	1889	.....	.....	.....
do do do	1890	.....	.....	.....
do do do	1891	124,568 23	.....	.....
do do do	1892	.....	.....	.....
do do do	1893	.....	.....	.....
do do do	1894	17 99	.....	.....
do do do	1895	.....	.....	.....
do do do	1896	.....	.....	.....
do do do	1897	.....	.....	.....
Total .....	.....	*333,942 72	.....	.....*

*Agreeing with Public Accounts, 1897, page xvi.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

PRINCE EDWARD ISLAND RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1874	3,114,735 11	750 00	
do since do	1875	46,086 63	49,344 62	24,493 99
do do do	1876	42,546 10	219,930 43	118,060 96
do do do	1877	200,000 00	228,595 25	130,664 92
do do do	1878	6,551 86	221,599 49	135,899 60
do do do	1879	40,129 05	223,313 12	125,855 91
do do do	1880	16,539 82	164,640 55	113,851 11
do do do	1881	203,122 88	131,131 43	
do do do	1882	402 03	228,259 97	137,267 54
do do do	1883	57,186 02	252,808 41	146,170 42
do do do	1884	130,663 38	236,428 13	144,504 12
do do do	1885	76,956 56	211,207 01	158,588 06
do do do	1886	4,668 33	216,744 34	155,584 36
do do do	1887	5,800 00	204,237 45	155,303 37
do do do	1888	229,639 95	158,363 62	
do do do	1889	247,559 44	171,369 56	
do do do	1890	266,485 85	160,971 78	
do do do	1891	257,990 08	174,258 05	
do do do	1892	8,300 49	157,442 69	
do do do	1893	226,422 17	162,690 42	
do do do	1894	226,891 06	158,533 83	
do do do	1895	232,905 19	149,654 78	
do do do	1896	225,138 56	146,476 54	
do do do	1897	240,489 90	153,443 13	
Total.....	...	3,750,565 38	5,104,210 23	3,270,580 19

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

CANADIAN PACIFIC RAILWAY.

	Year.	Construction, including Subsidy of \$25,000,000.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868			
do since do.....	1869			
do do do.....	1870			
do do do.....	1871	30,148 32		
do do do.....	1872	489,428 16		
do do do.....	1873	561,818 44		
do do do.....	1874	310,224 88		
do do do.....	1875	1,546,241 67		
do do do.....	1876	3,346,567 06		
do do do.....	1877	1,691,149 97		
do do do.....	1878	2,228,373 13		
do do do.....	1879	2,240,285 47		
do do do.....	1880	4,044,522 72	78,892 01	104,975 69
do do do.....	1881	4,968,503 93	236,944 98	291,498 06
do do do.....	1882	(1) 4,589,075 79	1,786 20	
do do do.....	1883	(2) 10,033,800 04	266 09	
do do do.....	1884	(3) 11,192,722 02	327 02	
do do do.....	1885	(4) 9,900,281 53		
do do do.....	1886	(5) 3,672,584 81		
do do do.....	1887	(6) 915,057 49		
do do do.....	1888	52,098 65		
do do do.....	1889	86,716 07		
do do do.....	1890	40,980 54		
do do do.....	1891	37,367 00		
do do do.....	1892	66,211 39		
do do do.....	1893	413,836 49		
do do do.....	1894	146,539 87		
do do do.....	1895	49,209 77		
do do do.....	1896	65,669 49		
do do do.....	1897	14,054 50		
Total.....		*62,733,469 20	318,216 30	396,473 75

*Agrees with Public Accounts balance sheet, 1896-97, page xvi.

(1) Including.....	\$ 2,210,000 00	on account subsidy.
(2) do	5,323,076 60	do
(3) do	7,254,208 27	do
(4) do	6,862,201 00	do
(5) do	2,890,427 00	do
(6) do	460,087 13	do

*\$25,000,000 00

*See also Statement No. 3, page 44, for this expenditure.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
do since do	1869		
do do do	1870		
do do do	1871		
do do do	1872		
do do do	1873		
do do do	1874		
do do do	1875		
do do do	1876		
do do do	1877		
do do do	1878		
do do do	1879		
do do do	1880		
do do do	1881		
do do do	1882		
do do do	1883		
do do do	1884		
do do do	1885		
do do do	1886		
do do do	1887		
do do do	1888		
do do do	1889	9,847 27	
do do do	1890	381,942 75	
do do do	1891	196,869 36	
do do do	1892	26,129 39	
do do do	1893	2,190 62	
do do do	1894	1,675 36	
do do do	1895	570 55	
do do do	1896		
do do do	1897	41,457 29	
Total.....		* 660,683 09	

*Of this amount Parliament voted under 52 Vic., cap. 8, the sum of \$500,000 as a subsidy to the Western Counties Railway which is also shown in the statement of subsidies page 44.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

STATEMENT showing amount expended on Capital Account on Railways.

Railways.		
	\$ cts.	\$ cts
Intercolonial	48,282,761 59	
Cape Breton	3,860,289 54	
Oxford and New Glasgow	1,949,063 21	
Eastern Extension	1,324,042 81	
Governor General's car "Victoria"	1,290 31	
		55,417,447 46
Carleton Branch		48,410 48
Montreal and European Short Line		333,942 72
Prince Edward Island		3,750,565 38
Canadian Pacific		62,733,469 20
Annapolis and Digby		660,683 09
Total		122,944,518 33
<i>Memo. re Recapitulation--Railways.</i>		
Total cost as per statement above		122,944,518 33
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, see statement page 32.		296,872 90
Agreeing with total cost of construction, as per statement, page 42.		123,241,391 23

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

RECAPITULATION—RAILWAYS.

	Year.	Construction.	Working Expenses.	Revenue Received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	13,881,460 65		
do since do	1868	483,353 65	359,961 08	420,752 58
do do do	1869	282,615 18	387,548 47	455,022 76
do do do	1870	1,729,381 49	445,208 75	471,245 09
do do do	1871	2,946,930 45	442,993 31	565,713 52
do do do	1872	5,620,569 67	595,076 22	622,900 56
do do do	1873	5,763,268 81	1,011,892 60	703,458 26
do do do	1874	3,925,123 69	1,847,925 24	893,430 17
do do do	1875	5,018,427 85	1,581,934 24	886,087 42
do do do	1876	4,497,434 75	1,497,128 22	966,922 42
do do do	1877	3,209,502 16	1,890,268 80	1,285,110 27
do do do	1878	2,643,741 73	2,032,873 05	1,514,846 38
do do do	1879	2,507,053 71	2,233,496 34	1,419,955 60
do do do	1880	6,109,077 14	1,851,489 26	1,739,137 25
do do do	1881	5,577,236 73	2,220,421 39	2,200,486 25
do do do	1882	5,175,046 61	2,310,638 54	2,237,583 39
do do do	1883	11,707,619 02	2,636,551 70	2,541,205 41
do do do	1884	14,013,074 89	2,613,508 87	2,551,937 97
do do do	1885	11,224,244 54	2,749,710 53	2,624,243 07
do do do	1886	4,443,220 17	2,819,973 50	2,628,336 35
do do do	1887	1,846,887 18	3,152,650 40	2,840,747 88
do do do	1888	1,765,582 11	3,021,076 62	3,166,253 22
do do do	1889	2,709,857 37	3,513,063 67	3,167,542 67
do do do	1890	2,392,767 99	3,846,044 42	3,203,874 11
do do do	1891	1,184,317 34	3,949,263 73	3,181,888 56
do do do	1892	417,425 73	3,748,597 77	3,136,393 51
do do do	1893	712,917 44	3,288,629 62	3,262,505 62
do do do	1894	585,749 01	3,226,208 13	3,179,019 57
do do do	1895	376,814 83	3,197,846 17	3,129,450 37
do do do	1896	324,774 72	3,254,442 64	3,140,678 47
do do do	1897	204,624 31	3,195,959 58	3,060,074 38
Total		123,280,100 92	69,522,382 86	61,196,803 08

Total amount paid on construction	\$123,280,100 92
Less amount received from the city of St. John, N.B., as purchase of the Carleton Branch Railway	40,000 00
Total cost of construction	\$123,240,100 92
Add expenditure Governor General's car "Victoria"	1,290 31
	<u>\$123,241,391 23</u>

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

Department of Railways and Canals.

RECAPITULATION—RAILWAYS AND CANALS.

EXPENDITURE.

Railways—Capital Account, see statement page 41.....	\$ 122,944,518 33
Canals—do do do 27.....	69,297,152 06
Total cost of Government Railways and Canals Capital Account.\$	192,241,670 39
Railway Subsidies, chargeable to Consolidated Fund as per Statement No. 3, page 44.....	\$ 41,890,887 33
LESS subsidies already included in Railways Capital Account (statement page 41) to Canadian Pacific Railway.....	\$ 25,000,000 00
Western Counties Railway.....	500,000 00
	<u>25,500,000 00</u>
	16,390,887 33
*Total expenditure on Railways and Canals, Capital Account, and Railway Subsidies.....	<u>\$ 208,632,557 72</u>

REVENUE.

Canals, revenue received from July 1st, 1867, to June 30th, 1897. (For details see page 27).....	\$ 11,302,577 27
Railways, revenue received from July 1st, 1867, to June 30th, 1897. (For details see page 42).....	61,196,803 08
Total revenue received from July 1st, 1897.....	<u>\$ 72,499,380 35</u>
Memo of cost of operating and maintaining Railways and Canals to June 30th, 1897 :—	
Canals chargeable to Income.....	\$ 2,453,498 27
Less prior to Confederation.....	98,378 46
	<u>\$ 2,355,119 81</u>
From Confederation (July 1st, 1867) to June 30th, 1897 :—	
Staff.....	6,764,673 31
Repairs.....	5,282,172 88
Total Canals, see statement page 27.	\$ 14,401,966 00
Railways, Working expenses, see page 42.....	69,522,382 86
Total.....	<u>\$ 83,924,348 86</u>

*This amount does not include the annual subsidy of \$186,600 payable half yearly for twenty years, dating from the 1st of July, 1889, to the Atlantic and North-west Railway Company; nor the annual payment of \$119,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 granted by 47 Vic. ch. 8 (1884), for the line between Ottawa and Quebec, which sum has now been transferred to the public debt as a liability. (See Public Accounts 1896-97, p. X.) These items are dealt with by the Finance Department.

LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 1st November, 1897.

No. 3.

STATEMENT showing Subsidies voted for Railways as to which contracts have been entered into and payments made up to the 30th June, 1897.

SUBSIDIES VOTED.		RAILWAYS.	PAYMENTS.														Total June 30th, 1897.
Authority.	Amount.		1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	
	\$ cts.		\$	\$	\$	\$	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
46 Vic., cap. 25	156,800 00	International Railway, Quebec	144,000					8,960 00		3,840 00							156,800 00
53 do 2																	
45 do 14	384,000 00																
46 do 25	80,000 00																
48-49 do 59	96,000 00																
49 do 10	186,295 00																
50-1 do 24	28,800 00	Quebec and Lake St. John Railway, Quebec	32,000	37,027	186,745	202,219	232,013 00	19,911 00	38,440 00	70,350 00	26,222 73	76,471 77	81,600 00		3,744 00		1,006,743 50
51 do 3	96,000 00																
52 do 3	64,000 00																
53 do 2	30,000 00																
54-5 do 8	5,250 00																
57-8 do 4	44,800 00																
46 do 25	89,600 00																
49 do 10	70,000 00																
50-1 do 24	12,800 00	Kingston, Napanee and Western Railway, formerly Napanee, Tamworth and Quebec Railway, Ontario	32,000	57,600					95,744 00	7,600 00		1,856 00	13,932 80				208,732 80
52 do 3	32,000 00																
55-6 do 5	64,000 00																
47 do 8	272,000 00																
51 do 3	41,000 00	Pontiac Pacific Junction Railway, Quebec		49,090	41,000	60,580	24,158 00							18,750 00			193,578 00
53 do 2	24,000 00																
46 do 25	115,200 00																
47 do 8	76,800 00	Caraquet Railway, N.B.		32,000	76,800	61,200	40,050 00	13,950 00									224,000 00
50-1 do 24	32,000 00																
47 do 8	32,000 00																
49 do 10	57,600 00																
52 do 3	22,400 00																
53 do 2	48,000 00	Great Northern Railway, Quebec		25,088					20,000 00					32,000 00	32,000 00		142,688 00
56 do 2	48,000 00																
57-8 do 4	96,000 00																
47 do 8	48,000 00	Kingston and Pembroke Railway, Ontario		48,000						9,500 00	24,100 00						48,000 00
45 do 14	660,000 00																
46 do 25	660,000 00	Northern and Pacific Junction Railway, Ontario		154,440	1,051,590	78,370			35,000 00								1,320,000 00
53 do 2	128,000 00																
47 do 8	19,200 00																
48-9 do 59	32,000 00																
49 do 10	24,439 84	Canada Eastern Railway, formerly Northern and Western Railway, N.B., including also Chatham Branch Railway			128,000	18,200	159,400 00	6,300 00	100 00	600 00				30,400 00			366,839 84
48-9 do 59	140,800 00																
51 do 3	35,200 00																
57-8 do 4	60,342 00																
47 do 8	288,000 00	Quebec Central Railway, Quebec			60,342										288,000 00		348,342 00
53 do 2	72,000 00																
48-9 do 59	40,000 00	Montreal and Sorel Railway, Quebec			64,972	4,950			6,719 50								93,757 57
51 do 3	30,000 00																
48-9 do 59	64,000 00	Montreal and Champlain Junction Railway, Quebec			30,000		16,400 00	36,700 00	5,400 00			15,100 00					103,600 00
50-1 do 24	9,600 00																
46 do 25	38,400 00																
51 do 3	44,252 82	Elgin, Petitoodiac and Havelock, Railway, N.B.			38,400					17,116 07							82,652 82
47 do 8	22,400 00	St. Louis and Richibucto Railway, N.B.			22,400						44,252 82						22,400 00
48-9 do 59	96,000 00																
49 do 10	38,400 00	Canada Atlantic Railway, Ont.			48,480	44,384		9,491 20	149,812 00								282,855 20
50-1 do 24	180,000 00																
47 do 8	750,000 00	Esquimaux and Nanaimo Railway, B.C.			422,520	327,480											750,000 00
47 do 8	96,000 00	Erie and Huron Railway, Ontario				96,000				30,188 00							96,000 00
46 do 25	320,000 00																
47 do 8	300,000 00	Baie des Chaleurs Railway, Quebec			250,000	50,300 00	75,200 00	148,675 00					95,825 00				620,000 00
52 do 3	118,400 00																
48-9 do 59	217,000 00	New Brunswick and Prince Edward Railway, N.B.			97,440	16,000 00											113,440 00
50-1 do 24	11,200 00	St. Lawrence, Lower Laurentian and Saguenay Railway, Quebec, now Laurentian Railway				64,430	28,383 00			32,003 00	92,784 00						217,600 00
49 do 10	32,000 00	L'Assomption Railway, Quebec				11,200											11,200 00
50-1 do 24	96,000 00																
56 do 2	64,000 00	Great Eastern Railway, Quebec				19,200				16,300 00	4,845 00						40,345 00
53 do 2	37,500 00																
47 do 8	160,000 00	Irondale, Bancroft and Ottawa Railway, Ontario				15,000						17,000 00	32,000 00	32,000 00		48,000 00	144,000 00
49 do 10	96,000 00																
50-1 do 24	6,400 00	Buctouche and Moncton Railway, N.B.			40,480	20,573 57		4,366 00	1,600 43</								

Department of Railways and Canals.

PART III

RAILWAY SUBSIDIES

Department of Railways and Canals

No. 1.

RAILWAY SUBSIDIES.

TABLE of per mile Cash Subsidies paid in aid of Railway Construction, showing amount of subsidy granted for same Railways.

Number.	NAME OF RAILWAY.	ON FOLLOWING NAMED RAILWAYS.				
		No. of miles built.	No. of miles paid and provided for.	Subsidy paid and Available at June 30, 1897.	Subsidy paid to 30th June, 1897.	Subsidy paid to 1st Nov., 1897.
				\$ cts.	\$ cts.	\$ cts.
1	Albert Southern.	16	16	50,460 00	50,460 00	50,460 00
2	Baie des Chaleurs.	70	70	620,000 00	620,000 00	620,000 00
3	Beauharnois Junction.	19 50	19 50	62,400 00	62,400 00	62,400 00
4	Belleville and North Hastings.	6 84	6 84	21,888 00	21,888 00	21,888 00
5	Brantford, Waterloo and Lake Erie.	18	18	57,600 00	57,600 00	57,600 00
6	Brockville, Westport and Sault Ste. Marie.	44 50	44 50	105,200 00	105,200 00	105,200 00
7	Buctouche and Moncton.	31 75	31 75	101,600 00	101,600 00	101,600 00
8	Canada Atlantic.	54 05	54 05	282,355 20	282,355 20	282,355 20
9	Canada Central.	120	120	1,525,250 00	1,525,250 00	1,525,250 00
10	Canada Eastern.	107	107	342,400 00	342,400 00	342,400 00
11	Canadian Pacific.	1,905	1,905	25,000,000 00	25,000,000 00	25,000,000 00
12	do (extension)*.	185	185	1,580,000 00	1,580,000 00	1,580,000 00
13	Caraquet.	67	67	224,000 00	224,000 00	224,000 00
14	Central (of New Brunswick).	44 50	59 50	185,100 00	75,639 00	137,100 00
15	Cornwallis Valley.	14	14	44,800 00	44,800 00	44,800 00
16	Columbia and Kootenay.	27 75	27 75	88,800 00	88,800 00	88,800 00
17	Cumberland.	14	14	39,850 00	39,850 00	39,850 00
18	Dominion Lime Co.	4 80	4 80	15,360 00	15,360 00	15,360 00
19	Dominion Coal Co.	27 44	27 44	87,808 00	87,808 00	87,808 00
20	Drummond Counties.	89 98	135 60	433,920 00	287,936 00	287,936 00
21	Elgin, Petittcodiac and Havelock.	12	12	38,400 00	38,400 00	38,400 00
22	Erie and Huron.	30	30	96,000 00	96,000 00	96,000 00
23	Esquimalt and Nanaimo.	71	71	750,000 00	750,000 00	750,000 00
24	Fredericton and St. Mary's Bridge Co.	1 33	1 33	30,000 00	30,000 00	30,000 00
25	Grand Trunk, Georgian Bay and Lake Erie.	12 42	12 42	39,744 00	39,744 00	39,744 00
26	Great Eastern.	12 50	12 50	40,345 00	40,345 00	40,345 00
27	Great Northern.	44 05	143 59	517,588 00	142,688 00	142,688 00
28	Guelph Junction.	15 25	15 25	46,000 00	46,000 00	46,000 00
29	Harvey Branch.	3	3	5,553 57	5,553 57	5,553 57
30	Hereford.	48 50	48 50	155,200 00	155,200 00	155,200 00
31	Irondale, Bancroft and Ottawa.	45	50	160,000 00	144,000 00	144,000 00
32	International.	49	49	156,800 00	156,800 00	156,800 00
33	Joggins.	12	12	37,500 00	37,500 00	37,500 00
34	Kingston and Pembroke.	15	15	48,000 00	48,000 00	48,000 00
35	Kingston, Napanee and Western.	61 35	61 35	208,732 80	208,732 80	208,732 80
36	L'Assomption.	3 50	3 50	11,200 00	11,200 00	11,200 00
37	Lake Erie and Detroit River.	84 04	84 04	338,731 00	338,731 00	338,731 00
38	Lake Temiscamingue Colonization.	45 84	45 84	310,335 95	310,335 95	310,335 95
39	Leamington and Lake St. Clair.	16	16	51,200 00	51,200 00	51,200 00
40	Lotbinière and Mégantic.	30	30	96,000 00	96,000 00	96,000 00
41	Montreal and Sorel.	44 67	44 67	93,757 57	93,757 57	93,757 57
42	Montreal and Lake Champlain.	83	83	103,600 00	103,600 00	103,600 00
43	Montreal and Western.	70	70	361,270 00	361,270 00	361,270 00
44	Montreal and Lake Maskinongé.	12 90	12 90	41,280 00	41,280 00	41,280 00
45	Montreal and Ottawa.	33	60	192,000 00	105,600 00	105,600 00
46	Montfort Colonization.	21	33	171,600 00	67,200 00	67,200 00
47	Nakusp and Slocan.	36 80	38	121,600 00	117,760 00	117,760 00
48	New Brunswick and P.E.I.	35 45	35 45	113,440 00	113,440 00	113,440 00
Carried forward.		3,815 71	4021 07	35,204,669 09	34,363,684 09	34,425,145 09

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.
—Concluded.

Number.	Name of Railway.	ON FOLLOWING NAMED RAILWAYS.				
		No. of miles built.	No. of miles paid and provided for.	Subsidy paid and Available at June 30, 1897.	Subsidy paid to 30th June, 1897.	Subsidy paid to 1st Nov., 1897.
				\$ cts.	\$ cts.	\$ cts.
	Brought forward.....	3,815·71	4,021·07	35,204,669 09	34,363,684 09	34,415,145 09
49	New Glasgow Iron and Coal Co.	12·45	12·45	39,840 00	39,840 00	39,840 00
50	Northern Pacific Junction.	110	110	1,320,000 00	1,320,000 00	1,320,000 00
51	Nova Scotia Central.	73·50	73·50	230,700 00	230,700 00	230,700 00
52	Ontario, Belmont and Northern.	9·60	10	32,000 00	30,720 00	30,720 00
53	Ontario and Quebec.	61·25	61·25	196,000 00	196,000 00	196,000 00
54	Orford Mountain.	26·50	26·50	84,800 00	84,800 00	84,800 00
55	Oshawa Railway and Navn. Co.	7	7	22,400 00	22,400 00	22,400 00
56	Ottawa and Gatineau Valley.	54	54	320,000 00	284,128 00	284,128 00
57	+Ottawa, Arnprior and Parry Sound.	107	163	609,600 00	430,400 00	430,400 00
58	Parry Sound Colonization.	47·75	47·75	152,800 00	152,800 00	152,800 00
59	Pontiac and Pacific Junction.	70	70	307,850 00	193,578 00	193,578 00
60	+Phillipsburg Junction.	6·75	7·41	23,712 00	21,600 00	21,600 00
61	Pontiac and Renfrew.	4·25	4·25	13,600 00	13,600 00	13,600 00
62	Port Arthur, Duluth and Western.	84·75	84·75	271,200 00	271,200 00	271,200 00
63	Quebec Central.	74·86	74·86	348,342 00	348,342 00	348,342 00
64	Quebec and Lake St. John.	245·85	245·85	1,006,743 50	1,006,743 50	1,006,743 50
65	Quebec, Montmorency and Charlevoix.	30	30	96,000 00	96,000 00	96,000 00
66	Shuswap and Okanagan.	51	51	163,200 00	163,200 00	163,200 00
67	South Norfolk.	17	17	54,400 00	54,400 00	54,400 00
68	St. Catharines and Niagara Central.	12	12	38,400 00	38,400 00	38,400 00
69	St. Clair Frontier Tunnel.	2·23	2·23	375,000 00	375,000 00	375,000 00
70	St. Lawrence and Lower Laurentian.	38·85	38·85	217,600 00	217,600 00	217,600 00
71	St. Louis, Richibucto and Buctouche.	7	7	22,400 00	22,400 00	22,400 00
72	+St. Lawrence and Adirondack.	20·32	33·81	108,201 60	65,001 60	65,001 60
73	Témiscouata.	112·95	112·95	645,950 00	645,950 00	645,950 00
74	Thousand Island.	4·33	4·33	24,400 00	24,400 00	24,400 00
75	+Tilsonburg, Lake Erie and Pacific.	16	19·50	62,400 00	51,200 00	51,200 00
76	Tobique Valley.	27·88	27·88	134,016 00	134,016 00	134,016 00
77	Toronto, Grey and Bruce.	4·60	4·60	14,656 00	14,656 00	14,656 00
78	+United Counties.	59	65	208,000 00	187,328 00	187,328 00
79	Waterloo Junction.	10·25	10·25	32,800 00	32,800 00	32,800 00
80	Western Counties.	20	20	500,000 00	500,000 00	500,000 00
81	Western Ontario Pacific.	18·75	18·75	60,000 00	60,000 00	60,000 00
82	Cap de la Magdeleine.	2·32	3	9,600 00	7,424 00	7,424 00
83	+Gulf Shore.		17·50	56,000 00	28,635 05	38,400 00
84	+St. Stephen and Milltown.	3·50	4·64	14,848 00	9,635 89	9,635 89
	Total.....	5,281·19	5,573·92	43,201,328 19	41,738,582 13	41,809,808 08

*Includes the mileage of the North Shore Railway, 160 miles.

† By 60-61 Vic., cap. 4, a subsidy was authorized on certain mileage of this railway, specified in the Act of Parliament, of \$3,200 per mile and a further subsidy beyond the sum of \$3,200 per mile, of 50 per cent on so much of the average cost of the said specified mileage subsidized as in excess of \$15,000 per mile, such subsidy not exceeding in the whole sum of \$6,400 per mile.

The amount of certain of the subsidies authorized by Parliament, given in this Statement, includes the determined portion of the subsidies under 60-61 Vic., cap. 4, viz.: The amount produced by the \$3,200 per mile, but the other portion is now an undetermined amount, and therefore cannot be shown here.

The following is the mileage of certain of the Railways shown in this statement and subsidized under 60-61 Vic., cap. 4:—

	MILES.
Ottawa, Arnprior and Parry Sound.	56
Phillipsburg Junction.	0·66
St. Lawrence and Adirondack.	13·50
Tilsonburg, Lake Erie and Pacific.	3·50
United Counties.	1
Great Northern.	44
Gulf Shore.	5·50
St. Stephen's and Milltown.	1·14
Drummond County.	42·50

Department of Railways and Canals.

STATEMENT showing Railways receiving Cash Subsidizes of fixed amounts, payable
Annually or Semi-annually for fixed period of years.

No.	Name of Railway.	Miles Subsidized.	Amount of Instalment.	Amount paid up to June 30, 1897.
1	International (Atlantic and North-west) Railway Co.	252	\$93,300 per $\frac{1}{2}$ year for 20 years	\$ 1,492,800
2	Kingston, Smith's Falls and Ottawa Rail- way Co.	56	\$3,136 do 21	Nil.
	Total.....	308		1,492,800

STATEMENT showing Railways aided by the Grant of Loans.

No.	Name of Railway.	Amount of Loans authorized.	Amount loaned.
		\$	\$ cts.
1	Albert Railway Co.	15,000	14,725 56
2	Fredericton and St. Mary's Bridge Co.	300,000	300,000 00
3	St. John Bridge and Railway Extension Co.	500,000	433,900 00
		815,000	748,625 56

STATEMENT showing Railways subsidized by the Grant of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Subsidy on value of Rails.	Subsidy in used Rails paid.
			\$ cts.	\$ cts.
1	Central Railway Co. of New Brunswick.....	4,052	83,612 54	83,612 54
2	Elgin, Petitecodiac and Havelock Ry. Co.....	2,201	44,252 82	44,252 82
3	Chatham Branch Railway Co.....	958	24,439 84	24,439 84
	Total	7,211	152,305 20	152,305 20

STATEMENT showing Railways aided by the Loan of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Value of used Rails loaned.	Remarks.
			\$ cts.	
1	Kent Northern Railway Co	2,549	58,334 27	By 51 Victoria, chapter 3, these used rails will be granted as a subsidy (the section of road to be first laid with new steel rails weighing not less than 50 lbs. per lin. yard and after an O. C. had been passed authorizing transfer.)
2	Halifax Cotton Co	233	4,335 00	
3	Steel Company of Canada.....	597	11,964 66	
4	Albert Railway Company.....	726	14,665 45	
	Total	4,105	89,299 38	

Department of Railways and Canals.

STATEMENT showing Railways subsidized by Grants of Lands.

No.	Act authorizing Subsidy.	Name of Railway Company.	Mileage Subsidized.	Acres granted per mile.	Total area granted.
1	{ 48-49 Vic., c. 60 } { 50-51 Vic., c. 22 } 52 Vic., c. 4 }	Alberta Railway and Coal Co.—Main line, Dunmore to Lethbridge.....	109·50	6,400	700,800
2	{ 52 Vic., c. 4 } { 52 Vic., c. 3 }	Alberta Railway and Coal Co.—From Lethbridge to the International Boundary....	64·62	6,400	413,568
3	53 Vic., c. 4.....	Calgary and Edmonton Railway.....	340·00	6,400	2,176,000
4	44 Vic., c. 1.....	Canadian Pacific Railway—Main line.....			18,206,986
5	53 Vic., c. 4.....	C. P. R.—Deloraine and Napinka Branch....	18·01	6,400	115,264
6	53 Vic., c. 4.....	C. P. R.—Glenboro' and Souris Branch.....	45·24	6,400	289,536
7	{ 53 Vic., c. 4 } { 54 Vic., c. 10 }	C. P. R.—Kenmay and Estevan Branch.....	156·86	6,400	1,003,904
8	57-58 Vic., c. 6.....	C. P. R.—Pipestone Branch.....	31·30	6,400	200,320
9	49 Vic., c. 11.....	Great North-western Central Railway.....	50·00	6,400	320,000
10	58 Vic., c. 4.....	Lake Manitoba Railway and Canal Company.	125·00	6,400	800,000
11	48-49 Vic., c. 60...	Manitoba and North-western Railway—Main line.....	430·00	6,400	2,918,400
12	49 Vic., c. 11.....	Manitoba and North-western Railway—Branch from Binscarth.....	26·00	6,400	
13	53 Vic., c. 4.....	Manitoba and South-eastern Railway Co....	98·00	6,400	627,200
14	{ 54-55 Vic., c. 10 } { 48-49 Vic., c. 10 }	Manitoba South-western Colonization Co....	218·25	6,400	1,396,800
15	{ 48-49 Vic., c. 60 } { 50-51 Vic., c. 23 }	Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Co.....	253·96	6,400	1,625,344
16	{ 52 Vic., c. 4 } { 54 Vic., c. 9 }	Red Deer Valley Railway and Coal Co.	55·00	6,400	352,000
17	57-58 Vic., c. 6....	Saskatchewan and Western Railway Co.....	15·47	6,400	99,008
18	{ 47 Vic., c. 25, } s. 7.	Winnipeg Great Northern Railway.....	900·00	Div. A., 6,400 do B., 12,800 do C., 6,400	8,480,000
			2,937·21		
					39,725,130

No. 2.

LIST OF RAILWAY SUBSIDY ACTS PASSED IN EACH YEAR.

NOTE.—The marginal number opposite each subsidy has reference to the alphabetical list in the Deputy Minister's report showing the action taken in case where a contract for work has been made with any company.

By the Acts of Parliament below specified, authority has been placed in the hands of the Governor in Council to grant, upon certain conditions, aid towards the construction of various lines of railway throughout the Dominion, as follows, namely :—

By the Acts of 45 Vic., cap. 14, 1882 (*Assented to 17th May, 1882*) :—

1. For a railway from Gravenhurst to Callander, both in the province of Ontario, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole \$660,000
2. For a railway from St. Raymond to Lake St. John, both in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 384,000
3. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, or between them, to Edmundston, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 240,000
4. For a railway from Oxford to New Glasgow, both in the province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 224,000

"The said subsidies to be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to complete the said railways respectively, within a reasonable time, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in an agreement to be made by the company with the Government, and which the Government is empowered to make, and to be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, such proportion to be established by the report of the said Minister; provided always, that the granting of such bonuses or subsidies shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting therewith, as the Governor in Council may determine."

By the special Act 45 Vic., cap. 55, 1882 (*Assented to 17th May, 1882*) :—

5. A subsidy authorized in favour of "The Chignecto Marine Transport Railway Company," provided that they construct and thereafter maintain and operate a ship railway, to be approved by the Government, across the Isthmus of Chignecto, from the Gulf of St. Lawrence to the Bay of Fundy, per year, for twenty-five years \$150,000

By the Act 46 Vic., cap. 25, 1883 (*Assented to 25th May, 1883*) :—

6. To the Baie des Chaleurs Railway Company, for 100 miles of their railway, from Métapediac, on the Intercolonial Railway, to Paspébiac, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 320,000

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7. To the Caraquet Railway Company, for 36 miles of their railway, from a point near Bathurst to Caraquet, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$115,200
8. To the Gatineau Valley Railway Company, for the first 50-mile section of their railway, from Hull station, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..	160,000
9. To the Great American and European Short Line Railway Company, for 80 miles of their railway, from Canso to Louisburg or Sydney, in the province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	256,000
10. To the International Railway Company, for 49 miles of their railway, from Sherbrooke, in the province of Quebec, to the international boundary line, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	156,800
11. To the Northern and Western Railway Company, for 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy village, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..	102,400
12. To the Montreal and Western Railway Company, for the first 50-mile section of their railway, out of St. Jérôme, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	160,000
13. To the Napanee, Tamworth and Quebec Railway Company, for 28 miles of their railway, from Napanee to Tamworth, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	89,600
14. To the Quebec and Lake St. John Railway Company, for 25 miles of their railway, from St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.	
15. For a railway from the International Railway at Petitcodiac to Havelock Corner, in the province of New Brunswick, 12 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
16. For a railway from Gravenhurst to Callander, 110 miles, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole.....	660,000
In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.	

"The nine subsidies first mentioned to be granted to the companies hereinbefore named respectively ; and the two subsidies last mentioned to be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to complete the said railways, respectively ; and all the eleven lines above mentioned, and also the lines of railway in respect of which it is provided by the Act of forty-fifth Victoria, chapter fourteen, that subsidies may be granted, shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years from and after the passing of this Act, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made by each company with the Government, and which the Government is empowered to make ; and all the said subsidies authorized by this Act, respectively, to be paid out of the Consolidated Revenue Fund of Canada by instalments, on the completion of each section of not less than ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, to be established by the report of the said Minister ; Provided always, that the granting of such subsidies shall be subject to such conditions for securing such running powers

or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine."

By the special Act 46 Vic., cap. 26, 1883 (*Assented to 25th May, 1883*):—

- 17.** An advance authorized in favour of the "St. John Bridge and Railway Extension Company," to enable them to build a railway bridge across the River St. John, N.B., with railway connection with the Intercolonial, such advance to be secured by a mortgage on their entire property, not to exceed 80 per cent of the expenditure on the work, nor a total sum of \$ 500,000

By the Act 47 Vic., cap. 8, 1884 (*Assented to 19th April, 1884*):—

- 18.** To the Government of the province of Quebec, in consideration of their having constructed the railway from Quebec to Ottawa, forming a connecting line between the Atlantic and Pacific coasts via the Intercolonial and Canadian Pacific Railways, and being as such a work of national and not merely provincial utility, a subsidy not exceeding \$6,000 per mile for the portion between Quebec and Montreal, 159 miles, nor exceeding in the whole..... 954,000
- 19.** And for the portion between Montreal and Ottawa, 120 miles, \$12,000 per mile, nor exceeding in the whole..... 1,440,000
- 20.** For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding \$170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work.
- 21.** For the construction of a line of railway from Oxford station, on the Intercolonial Railway, to Sydney or Louisburg, a subsidy not exceeding \$30,000 per annum for fifteen years or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work, in addition to the subsidies previously granted, and also a lease or transfer to such company of the Eastern Extension Railway, from New Glasgow to Canso, with its present equipment.
- 22.** To the Quebec Central Railway Company, for a line of railway from Beauce Junction to the international boundary line, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 211,200
- 23.** For the extension of the Canadian Pacific Railway, from its terminus at St. Martin's Junction, near Montreal, or some other point on the Canadian Pacific Railway, to the harbour of Quebec, in such manner as may be approved by the Governor in Council, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole..... 960,000
- 24.** To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway to the village of Bancroft, in the township of Dungannon, county of Hastings, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000
- 25.** To the Pontiac Pacific Junction Railway, for a line of railway from Hull or Aylmer to Pembroke, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 272,000
- 26.** To the Gatineau Railway Company, for a line of railway from Kazuabazua to Le Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000
- 27.** To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth to Bogart and Bridgewater, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 70,400

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28. To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last session of Parliament, towards Le Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$160,000
29. To the Northern and Western Railway Company, for a line of railway from Fredericton to the Miramichi River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883).....	128,000
30. To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
31. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	262,400
32. To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
33. To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
34. For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole.....	200,000
35. For a line of railway from Richibucto to St. Louis, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
36. For a line of railway from Hopewell to Alma, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200
37. For a line of railway from St. Andrew's to Lachute, in the county of Argenteuil, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
38. For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	217,600
39. For a line of railway from Annapolis to Digby, in the province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
40. For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway between Sussex and St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	128,000
41. To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbour, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	76,800
42. For a branch of the Intercolonial Railway, from Metapediae eastward towards Paspebiac, twenty miles, in the province of Quebec, a sum not exceeding in the whole.....	300,000
43. For a branch of the Intercolonial Railway, from Derby Station to Indian-town, fourteen miles, a sum not exceeding in the whole.....	140,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are

granted shall be commenced within two years from the first day of July next and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, except the line mentioned in the fourth section of this Act,* which shall be commenced within one year, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister. The subsidies to the province of Quebec shall be capitalized, and the interest shall be payable at such time and in such manner as the Government of Canada shall agree upon with the Government of the said province. The two subsidies last mentioned in the list are for works to be constructed by the Government of Canada.

"Provided, always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By the special Act 47 Vic., cap. 6, 1884 (*Assented to 19th April, 1884*):

44. Relating to an agreement with the province of British Columbia, authority was given, *inter alia*, for the grant of a subsidy to the "Esquimalt and Nanaimo Railway Company" in aid of the construction of a line of railway and telegraph between the points named; such subsidy to be in lands *en bloc* on Vancouver Island, the boundaries being fixed by the Act, and in money..... \$750,000

By the Act 48-49 Vic., cap. 59, 1885 (*Assented to 20th July, 1885*):

45. To the Ottawa, Waddington and New York Railway and Bridge Company, for a line of railway from Ottawa to Waddington, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 166,400
46. To the New Brunswick and Prince Edward Island Railway Company, for a line of railway from Sackville to the Straits of Northumberland, at or near Cape Tormentine, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 118,400
47. To the Montreal and Sorel Railway Company, for a line of railway from St. Lambert to Sorel, a subsidy not exceeding \$1,600 per mile, nor exceeding in the whole..... 72,000
48. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a line of railway from Brockville to Westport, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 128,000
49. To the Quebec and Lake St. John Railway Company, for a line of railway from its junction on the North Shore Railway to St. Raymond, upon condition of the company extending their road to a point 50 miles north of St. Raymond, a subsidy not exceeding \$3,200 per mile nor exceeding in the whole..... 96,000
50. To the Northern and Western Railway Company, for a line of railway from the northern end of the 40 miles subsidized between Fredericton and the Miramichi River by 47 Victoria, chapter 8, to Boiestown, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 19,200

* The extension of the Canadian Pacific Railway from its terminus at St. Martin's Junction, or some other point on the said railway to the harbour of Quebec.

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51.	To the Montreal and Champlain Junction Railway Company, for a line of railway from Brosseau's to Dundee, a subsidy not exceeding \$500 per mile, nor exceeding in the whole	\$30,000
52.	To the Thunder Bay Colonization Railway Company, for a line of railway from the Murillo station of the Canadian Pacific Railway to the east end of Whitefish Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	92,000
53.	To the Central Ontario Railway Company, for a line of railway from Coe Hill or Rathbun, to Bancroft, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	64,000
54.	To the Belleville and North Hastings Railway Company, for a line of railway from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, a subsidy not exceeding \$1,500 per mile, nor exceeding in the whole	10,500
55.	For a line of railway from Long Sault to the foot of Lake Temiscamingue, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	25,600
56.	For a line of railway from a point on the Canada Southern Railway near Comber, to Lake Erie, at or near the village of Leamington, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	44,800
57.	To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth towards Bogart and Bridgewater, 16 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy of	70,000
58.	To the Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of 62 miles, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, a subsidy of	320,000
59.	For a line of railway from the Grand Piles, on the River St. Maurice, to its junction with Lake St. John Railway, a distance of about 50 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, for a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy of	217,600
60.	To the Canada Atlantic Railway Company, for a line of railway from Valleyfield to a point one and a half miles west of Johnston's, a subsidy not exceeding \$1,600 per mile, and from one and a half miles west of Johnston's to Lacolle; also from the present terminus at Ottawa, to the Chaudiere Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	96,000
61.	For a line of railway from Indiantown via the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	140,800

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions, specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister.

"Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connected with those so subsidized, as the Governor in Council may determine."

By the Act 48-49 Vic., cap. 58, 1885 (*Assented to 20th July, 1885*):—

- 62.** For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, to Edmundston, in the province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act forty-fifth Victoria, chapter fourteen, and constituting with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.
- 63.** For a line of railway from the south bank of the St. Lawrence river, opposite or near Montreal, to the harbours of St. Andrew's, St. John and Halifax via Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such a line of railway for a period of twenty years, or a guarantee bond of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway.
- 64.** The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montreal, or from some other point on their railway to be selected by the said company, to the harbour of Quebec, in such a manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act, to aid in procuring the extension of

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the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada.

The said Act further provided as follows in relation to this matter :—

“ If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligation as the Government shall have assumed in acquiring it.”

By the Act 49 Vic., cap. 10, 1886 (*Assented to 2nd June, 1886*) :—

65.	For a railway from a point at or near Moncton, to Buctouche, in the province of New Brunswick, thirty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 96,000
66.	For a railway from Ingersoll via London to Chatham, in the province of Ontario, eighty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	256,000
67.	To the Northern and Western Railway Company, for ten miles of their railway, intervening between the termini of the portions of their railway for which subsidies are already granted, the one from Fredericton and the other from Indiantown, and an extension of two miles down to deep water at Chatham, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	32,000
68.	To the Caraquet Railway Company, for ten miles of their railway, from the end of the present subsidized portion at Lower Caraquet to Shippegan, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
69.	To the Lake Erie, Essex and Detroit River Railway Company, for thirty-seven miles of their railway, from Windsor to Leamington, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	118,400
70.	To the Thunder Bay Colonization Railway Company, for fifty-six miles of their railway, from the end of the present subsidized section to a point near Crooked Lake, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	179,200
71.	To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, on the line of the Northern Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	128,000
72.	For a railway from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600
73.	For a railway from Hereford to the International Railway, in the township of Eaton, in the province of Quebec, thirty-four miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..	108,800
74.	For a railway from St. Félix to Lake Maskinongé, parish of St. Gabriel in the province of Quebec, ten miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
75.	For a railway from Glenannan to Wingham, in the province of Ontario, five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	16,000

76. For a railway from a point at or near the McCann Station, on the Intercolonial Railway, to the Joggins, on Cumberland Basin, in the province of Nova Scotia, twelve miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 38,400
77. For a railway from L'Assomption to L'Epiphanie, in the province of Quebec, three miles and a half, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	11,200
78. To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly towards Désert, in the province of Quebec, a subsidy of \$5,161 per mile, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, not exceeding in the whole	361,270
79. For a railway from St. Andrew's to the Canadian Pacific Railway at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
80. To the Canada Atlantic Railway Company, for twelve miles of their railway from Clark's Island to Valleyfield, and from Lacolle, in the province of Quebec, to the international boundary, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
81. For a railway from Truro to Newport, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	156,800
82. To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding \$1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of \$3,200 per mile).....	186,295
83. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
84. For the construction of wharfs and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of.....	6,000
85. To the Gananogue, Perth and James Bay Railway Company, seventeen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	54,400
86. For a railway from St. Eustache to St. Placide, county of Two Mountains, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600
87. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley, on the line which will afford facilities of communication with the Iron Mines, Spring Side, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
88. For a railway from Yamaska to the River St. Francis, in the province of Quebec, ten miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
89. For a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, in the province of New Brunswick, twenty-eight miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	89,600
90. For a railway from Fredericton to the village of Prince William, in the province of New Brunswick, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400

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| 91. For a railway from a point on the Intercolonial Railway near Newcastle or via Douglastown to a point on the River Miramichi, opposite the town of Chatham, in the province of New Brunswick, six miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. | \$19,200 |
| 92. For a railway from a point on the Canadian Pacific Railway to Eganville, in the province of Ontario, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. | 70,400 |
| 93. To the Belleville and North Hastings Railway Company, for seven miles of their railway, from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, in the province of Ontario, a subsidy (in addition to the subsidy of \$1,500 per mile granted by 48-49 Victoria, chapter 59), not exceeding \$1,700 per mile, nor exceeding in the whole. | 11,900 |
| 94. To the Napanea, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of. | 70,000 |
| 95. To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of. | 15,000 |

"The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose shall be granted to such companies respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies have been granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall be so constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company to the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements, and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By section 2 of this Act authority was given for the grant of a charter by the Governor in Council for the purpose of constructing a railway from Long Sault to the foot of Lake Temiscamingue.

By the Act 50-51 Vic., cap. 24, 1887 (*Assented to 23rd June, 1887*).

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| 96. To the St. Catharines and Niagara Railway Company, for twelve miles of their railway from the city of St. Catharines to the bridge over the Niagara River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. | \$ 38,400 |
| 97. To the Vaudreuil and Prescott Railway Company, for thirty miles of their railway from Vaudreuil towards Hawkesbury, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. | 96,000 |
| 98. To the Richmond Hill Junction Railway Company, for five miles of their railway from Richmond Hill Junction, on the Northern Railway of Canada, to Richmond Hill village, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. | 16,000 |

99.	To the Drummond County Railway Company, for thirty miles of their railway from Drummondville towards Nicolet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
100.	To the Jogjins Railway Company, for one and a quarter miles of their railway extending from the southern end of the portion subsidized by the Act 49 Victoria, chapter 10, to the wharfs, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	4,000
101.	To the Moncton and Buctouche Railway Company, for two miles of their railway from the west end of the portion subsidized by the Act 49 Victoria, chapter 10, to Moncton, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	6,400
102.	To the Beauharnois Junction Railway Company, for thirty miles of their railway from St. Martin's towards St. Anicet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
103.	To the Harvey Branch Railway Company, for three miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	9,600
104.	To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway from the town of Brantford to the village of Hagersville or the village of Waterford, or some intermediate point on the Canada Southern Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600
105.	To the Guelph Junction Railway Company, for sixteen miles of their railway from its junction with the Canadian Pacific Railway to the town of Guelph, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200
106.	To the Massawippi Railway Company, for ten miles of their railway from a point on the Atlantic and North-western Railway near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
107.	To the Napanee, Tamworth and Quebec Railway Company, for four miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to Tweed, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	12,800
108.	To the Dominion Lime Company, for seven miles of their railway from a point on the Quebec Central Railway, in the township of Dudswell, to the Dudswell Lime Company's quarries, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
109.	To the South Norfolk Railway Company, for seventeen miles of their railway from Port Rowan to the town of Simcoe, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	54,400
110.	To the Jacques Cartier Union Railway Company, extending and completing their railway, a subsidy of.....	20,000
111.	For a line of railway from Mount Forest to Walkerton, twenty-four miles in length, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	76,800
112.	To the Oshawa Railway and Navigation Company, for seven miles of their railway from Port Oshawa towards Raglan, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
113.	To the Saguenay and Lake St. John Railway Company, for thirty miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000

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114. To the Great Eastern Railway Company, for thirty miles of their railway from the River St. Francis to the Arthabaska Railway, at St. Grégoire station, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$96,000
115. To the Ontario and Pacific Railway Company, for six miles of their railway from the northern end of the portion subsidized by the Act 47 Victoria, chapter 8, to the town of Perth, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200
116. To the Caraqueet Railway Company, for seven miles of their railway from Lower Caraqueet to Shippegan, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding in the whole...	32,000
117. To the St. Lawrence and Lower Laurentian and Saguenay Railway Company, for the section of this railway from Grand Piles, on the St. Maurice River, to its junction with the Quebec and Lake St. John Railway, in lieu of the subsidy granted by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, for a line of railway from Grand Piles, on the St. Maurice River, to its junction with the Lake St. John Railway, a distance of about fifty miles, a subsidy of.....	217,600
118. To the St. John Valley and River du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
119. To the Lake Temiscamingue Railway Company, for four short sections of railway, in all about two miles in length, to overcome the rapids of the Ottawa River, known as "La Mi-Charge," "La Cave," "Les "Erables," and "La Montagne," and for the construction of wharfs and landing stages at these rapids, to connect the Canadian Pacific Railway at Mattawa with Lake Temiscamingue by steamboats, railways and other works (in lieu of a portion two miles in length, out of the eight miles of railway subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, under which about six miles of railway have already been built from the foot of Long Sault proper to the foot of Lake Temiscamingue, and in lieu also of the subsidy granted by the Act 49 Victoria, chapter 10), a subsidy of.....	12,400
120. To the Carillon and Grenville Railway Company, for twelve miles of their railway from St. Eustache to Sault au Récollet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
121. To the Minudie Branch Railway Company, for five and a half miles of their railway from its junction with the Joggins Railway, near the River Hébert railway bridge, to the village of Minudie, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	17,600
122. To the Lake Temiscamingue Colonization and Railway Company, for ten and a half miles of their railway from the Long Sault to Lake Kippewa, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	33,600
123. To the Leamington and St. Clair Railway Company, for two miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to the village of Comber, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	6,400
124. To the Cumberland Railway and Coal Company for fourteen miles of their railway from a point on the Spring Hill and Parrsboro' Railway, near Spring Hill, to a point on the railway between Oxford and New Glasgow, near Oxford village, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	44,800

125.	To the Montreal and Champlain Junction Railway Company, a subsidy of.....	\$ 64,000
126.	To the Quebec and Lake St. John Railway Company, for nine miles of their railway, the distance which the previous subsidies granted are short of covering from the city of Quebec to Lake St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	28,800
127.	To the Temiscouata Railway Company, for thirty miles of a branch of their railway from Edmundston towards the St. Francis River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..	96,000
128.	To the Cornwallis Valley Railway Company, for thirteen miles of their railway from Kentville to Kingsport, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	41,600
129.	To the Nova Scotia Central Railway Company, for thirty-four miles of their railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	108,800
130.	To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, a subsidy of.....	89,600
131.	For a railway from Woodstock towards Centreville, twenty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..	64,000
132.	For a railway bridge over the St. Lawrence River, at Coteau Landing on the line of the Canada Atlantic Railway, a subsidy of fifteen per cent on the value of the structure, not to exceed.....	180,000
133.	To the Lake Erie, Essex and Detroit River Railway Company, for twenty-seven miles of their railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding.....	118,400

"For the purpose of granting corporate powers to persons or companies undertaking the construction of railways or parts of railways, mentioned in the next preceding section, for the construction of which no corporate powers exist at the time of the passing of this Act, the Governor in Council may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, as the Governor in Council shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; the other subsidies, including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct their railway, shall be granted to such companies as shall be approved by the Governor in Council, as having established, to his satisfaction, their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized, except as regards the subsidy for the bridge over the

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St Lawrence River, upon which shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"Notwithstanding anything contained in the Act forty-fifth Victoria, chapter fourteen, or in the Act forty-sixth Victoria, chapter twenty-five, the balances of the sums granted for a railway from St. Raymond to Lake St. John and to the Quebec and Lake St. John Railway Company by the said Acts respectively, which have not yet been paid by the Government, may be paid at any time within one year from the passing of this Act, subject to the conditions in the said Act contained."

By the Act 51 Vic., cap. 3, 1888 (*Assented to 22nd May, 1888*):—

134.	To the Ottawa and Parry Sound Railway Company, for 22 miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by 49 Victoria, chapter 10, for a railway from a point on the Canadian Pacific Railway to Eganville, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 70,400 00
135.	To the Nova Scotia Central Railway Company, for 46 miles of their railway, in the province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	147,200 00
136.	To the Montreal and Champlain Junction Railway Company, for 3 miles of their railway from the end of the present subsidized section, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	9,600 00
137.	To the Massawippi Junction Railway Company, for their railway from a point on the Atlantic and North-west Railway, near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of.....	32,000 00
138.	To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of \$31,500, to be paid out monthly as the work progresses, upon the certificate of the Chief Engineer of Government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken, and for three miles of their railway extending from a point three miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$9,600, provided that the entire work subsidized upon this railway shall be completed within four years from the passing of this Act, the subsidy granted by this Act not to exceed in the whole.....	41,100 00
139.	To the Port Arthur, Duluth and Western Railway Company, for 84½ miles of their railway from Port Arthur towards Gun Flint Lake, in lieu of the subsidies granted by 48-49 Victoria, chapter 59, and 49 Victoria, chapter 10, for the construction of a railway from Murillo Station to Crooked Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	271,200 00
140.	To the Quebec and Lake St. John Railway Company, for 30 miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, being a transfer made at the request of the Saguenay and Lake St. John Railway Company of the subsidy granted to them by 50-51 Victoria, chapter 24, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000 00

141.	To the Temiscouata Railway Company, for 20 miles of their branch railway from Edmundston towards the St. Francis River, in the province of Quebec, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of.....	\$100,000 00
142.	To the Quebec Central Railway Company, for the construction and completion of a line of railway from St. Francis Station to a point on the Atlantic and North-west Railway near Moose River, 90 miles, in lieu of the balance of the subsidy, unearned, granted by 47 Victoria, chapter 8, a subsidy not exceeding \$21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of.....	288,000 00
143.	To the Central Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 4,052 tons of used iron rails and fastenings, loaned to the St. Martin's and Upham Railway Company, now forming part of the Central Railway, which rails and fastenings stand in the Public Accounts as an asset for.....	83,612 54
144.	To the Elgin, Petitcodiac and Havelock Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,201 tons of used iron rails and fastenings loaned to the Elgin Branch Railway, now forming part of the Elgin, Petitcodiac and Havelock Railway, which rails and fastenings stand in the Public Accounts as an asset for.....	44,252 82
145.	To the Kent Northern Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,549 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for.....	58,334 27
146.	To the Halifax Cotton Company of Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 233 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for.....	4,335 00
147.	To the Steel Company of Canada, in Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 597 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for.....	11,964 66
148.	To the Albert Railway Company of New Brunswick, a grant as a subsidy (the section of road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 726 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for.....	14,665 45

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- 149.** To the Chatham Branch Railway of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 958 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... \$24,439 84

"All the lines, for the construction of which subsidies are granted, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and also the said subsidies respectively, payable in cash, shall be payable out of the Consolidated Revenue Fund of Canada by instalments, on the completion to the satisfaction of the Minister of Railways and Canals of each section of the railway of not less than 10 miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized."

By the Act 52 Vic., chap. 3, 1889. (*Assented to 2nd May, 1889*):—

- 150.** To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Ottawa, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$172,400 00
- 151.** To the Ottawa and Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of sixty-two miles, a subsidy not exceeding in the whole..... 320,000 00
- 152.** To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway, from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400 00
- 153.** To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the line of the Northern and Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 128,000 00
- 154.** For a railway from St. Andrew's to the Canadian Pacific Railway, at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 22,400 00
- 155.** For a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 156,800 00
- 156.** For a line of the Central Railway from the head of Grand Lake to the Intercolonial Railway, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 128,000 00
- 157.** To the Albert Southern Railway Company, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole 31,771 43
- 158.** To the Baie des Chaleurs Railway Company, the balance remaining unpaid of the subsidy mentioned in the Act 49th Victoria, chapter 17, not exceeding in the whole 244,500 00

159.	To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria Branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole.....	\$145,000 00
160.	To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Act 45th Victoria, chapter 14, and 46th Victoria, chapter 25, not exceeding in the whole..	35,000 00
161.	For a railway from some point on the Joggins Railway, near the Hébert River, to Young's Mills, in the province of Nova Scotia, a distance of five miles, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	16,000 00
162.	To the St. Clair Frontier Tunnel Company, for the construction of a tunnel under the St. Clair River, from a point at or near Sarnia, to a point at or near Port Huron, a subsidy not exceeding in the whole.....	375,000 00
163.	To the Pontiac and Renfrew Railway Company, for six miles of their railway from the north bank of the Ottawa River, opposite Braeside, or from Bristol Iron Mines, to the Pontiac Pacific Junction Railway, near the Quyon River, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	19,200 00
164.	To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the St. Charles River, to or near to Cap Tourmente, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	96,000 00
165.	To the Fredericton and St. Mary's Bridge Company, for a bridge over the St. John River, at Fredericton, in the province of New Brunswick, a subsidy not exceeding in the whole.....	30,000 00
166.	To the Napanee, Tamworth and Quebec Railway Company, for seven miles of their railway, from a point at or near Yarker to a point at or near Harrowsmith, and to a company for three miles of railway from a point at or near Harrowsmith to a point at or near Sydenham, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	32,000 00
167.	For a railway from a point near Sicamous, on the Canadian Pacific Railway, to a point on Lake Okanagan for fifty-one miles of such railway, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	163,200 00
168.	To the Cornwallis Valley Railway Company, for one mile of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Kingsport, in the province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	3,200 00
169.	To the Lake Témiscamingue Colonization and Railway Company, for fifteen miles of their railway, from Mattawa station on the Canadian Pacific Railway, towards the Long Sault, or from the Long Sault towards the said Mattawa station, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
170.	To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of Saint-Michel des Saints, on the River Mattawin, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00

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171.	To the Kingston, Smith's Falls and Ottawa Railway Company, for twenty miles of their railway, from the city of Kingston towards Smith's Falls, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 64,000 00
172.	To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway, from Woodstock to Hamilton, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	158,400 00
173.	For a railway from St. Césaire to St. Paul d'Abbotsford, in the province of Quebec, five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	16,000 00
174.	To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000 00
175.	To the Drummond County Railway Company, for four and one-half miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Ball's Wharf, on the St. Lawrence River, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	14,400 00
176.	To the St. Catharines and Niagara Central Railway Company, for twenty miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Catharines, towards the city of Hamilton, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000 00
177.	To the Quebec and Lake St. John Railway Company, for twenty miles of their railway, from the end of the section of thirty miles from Lake St. John towards Chicoutimi, subsidized by the Act 51 Victoria, chapter 3, towards Chicoutimi, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000 00
178.	To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
179.	To the Hereford Railway Company, for fifteen miles of their railway, from Cookshire to a junction with the Quebec Central Railway at Dudswell, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
180.	To the Massawippi Junction Railway Company, for fifteen miles of their railway, from Ayer's Flat to Coaticook, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
181.	To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro', towards Palmer's Rapids, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000 00
182.	To the Thousand Islands Railway Company, for four miles of their railway, from a point near the St. Lawrence River, in Gananoque village, to Gananoque Junction of the Grand Trunk Railway, and for thirteen miles of their railway, from Gananoque Junction of the Grand Trunk Railway to a junction with the Brockville, Westport and Sault Ste. Marie Railway, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	54,400 00

- 183.** For a railway from Cape Tourmente towards Murray Bay, twenty miles, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$64,000 00
- 184.** To the Amherstburg, Lake Shore and Blenheim Railway Company, for twenty miles of their railway, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 64,000 00

"So much of the subsidy of three thousand two hundred dollars per mile, which under the provisions of the Act forty-ninth Victoria, chapter seventeen, and of this Act, may be paid to the Baie des Chaleurs Railway Company in respect of the thirty miles of their railway, from the seventieth to the hundredth mile, eastward from Metapediac, shall be applicable to the section of the said railway, comprised between the fortieth and the seventieth mile thereof, eastward from Metapediac, instead of to the said first mentioned section of thirty miles, making six thousand four hundred dollars per mile applicable to the secondly mentioned section of thirty miles; but the foregoing provision shall be subject to the condition that the said company undertake to complete the thirty miles of their railway from the seventieth to the hundredth mile eastward from Metapediac within a reasonable time, not to exceed four years, to be fixed by Order in Council, and without any further subsidy from the Government of Canada, and that they deposit with the Minister of Railways and Canals, as security to the Crown that they will well and truly carry out their undertaking, their bonds to the amount of two hundred thousand dollars.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized, except as respects the tunnel under the St. Clair River, in which case there shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"And for the removal of doubts it is hereby declared and enacted that the provision in the Act passed in the fifty-first year of Her Majesty's reign, and chaptered three, relating to the Pontiac Pacific Junction Railway Company, extended and extends the several subsidies in aid of the said company for four years from the passing of the said Act, that is to say, from the twenty-second day of May, one thousand eight hundred and eighty-eight."

By the Special Act, 52 Vic., cap. 5, 1889 (*Assented to 2nd May, 1889*):—

- 185.** In order to enable the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company to complete their railway from Regina to some point on the South Saskatchewan River at or near Saskatoon, and thence northward to Prince Albert, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails,

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for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum in manner following, that is to say :—the sum of fifty thousand dollars to be paid annually on the construction of the railway to a point at or near Saskatoon, such payment to be computed from the date of the completion of the railway to such point ; and the remaining thirty thousand dollars annually on the extension of the railway to Prince Albert, such payment to be computed from the date of such last mentioned completion : Provided that if the second portion of the said railway is not built and operated to Prince Albert within two years after the completion of the railway to the South Saskatchewan as aforesaid, the payment of fifty thousand dollars shall cease until the whole railway is finished to Prince Albert.

By the Act 53 Vic., cap. 2, 1890 (*Assented to 16th May, 1890*) :—

186.	To the Montreal and Ottawa Railway Company, for thirty miles of their railway, from the western end of the thirty-six miles subsidized by the Act 50-51 Victoria, chapter 24, towards Ottawa, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	\$ 96,000
187.	To the Waterloo Junction Railway Company, for eleven miles of their railway, from Waterloo to Elmira, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	35,200
188.	To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Acts 45 Victoria, chapter 14, and 46 Victoria, chapter 25, not exceeding in the whole...	600
189.	For a railway from Woodstock via London to Chatham, in the province of Ontario, thirty miles in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Ingersoll via London to Chatham, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	256,000
190.	To the St. Catharines and Niagara Railway Company, for fourteen miles of their railway, from the end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Hamilton, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	44,800
191.	To a railway from Ottawa to Morrisburg, fifty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	166,400
192.	To the Erie and Huron Railway Company, for twenty-two miles of their railway from Petrolea via Oil Springs to Dresden, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	70,400
193.	To the Brockville, Westport and Sault Ste. Marie Railway Company, for a railway from Brockville to Westport, the balance remaining unpaid of the subsidy granted by the Act 48-49 Victoria, chapter 59, not exceeding in the whole.....	83,000
194.	To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
195.	To the Port Arthur, Duluth and Western Railway Company, for five miles of their railway, being a branch of the main line of railway to the Kakabeka Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	16,000
196.	To the Lake Erie and Detroit River Railway Company, for fifty miles of their railway, on a line to be fixed by the Governor in Council, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	160,000

197.	To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway, from Bobcaygeon to the Midland Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 51,200
198.	To the Kingston, Smith's Falls and Ottawa Railway Company, for thirty-six miles of their Railway, from the north-east end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Smith's Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	115,200
199.	To the Ottawa and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
200.	To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway, from Belleville to Tweed and thence to Bridgewater, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
201.	To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
202.	To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	11,200
203.	To the Woodstock and Centreville Railway Company, for six miles of their railway, from the western end of the twenty miles subsidized by the Act 50-51 Vic., chap. 24, to the International boundary between the province of New Brunswick and the state of Maine, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200
204.	For a railway from a point at or near Fredericton, via Oromocto and Gagetown, to a point on the New Brunswick Railway west of Westfield station, for thirty miles thereof, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
205.	To the Central Railway Company of New Brunswick, for four and a half miles of their railway, the distance which the previous subsidy granted is short of covering, from the head of Grand Lake to the Intercolonial Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	14,400
206.	To the Montreal and Western Railway Company, for seventy miles of their railway, from St. Jérôme, north-westerly towards Désert, in the province of Quebec, in lieu of the subsidy granted by the Act 49 Vic., chap. 10, a subsidy not exceeding \$5,161 per mile, nor exceeding in the whole.....	361,270

"Provided, that the subsidy hereby granted to the Montreal and Western Company may be paid by instalments on the completion of each section of the railway as follows, that is to say :—

SECTIONS.	Approximate length in miles.
St. Jérôme to Shawbridge.....	8
Shawbridge to St. Sauveur.....	4
St. Sauveur to Ste. Adèle.....	6
Ste. Adèle to Lac à la Fourche.....	6
Lac à la Fourche to Ste. Agathe.....	6½
Ste. Agathe to St. Faustin.....	14
St. Faustin to St. Jovite.....	7½
St. Jovite to Summit Lake.....	8
Summit Lake to La Chute aux Iroquois.....	7
La Chute aux Iroquois towards Désert.....	3

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"Such instalments to be proportionate to the value of the portions so completed in comparison with that of the whole work undertaken, to be established as aforesaid."

207. For seventy-five miles of the railway from Shelburne, in the county of Shelburne, and from Liverpool, in the county of Queen's towards Annapolis, in the province of Nova Scotia, to be so contracted for as to secure the construction to both Shelburne and Liverpool, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 240,000
208. To the Inverness and Richmond Railway Company, for fifty miles of their railway from Port Hawkesbury to Broadcove, a subsidy not exceeding \$1,000 per mile, nor exceeding in the whole.....	50,000
209. To the International Railway Company, for a railway from Sherbrooke to the international boundary, the balance remaining unpaid of the subsidy granted by the Act 46 Vic., chapter 25, not exceeding in the whole.....	3,840
210. For completing the Montreal and Sorel Railway from St. Lambert to Sorel.....	40,000
211. To the Pontiac Pacific Junction Railway Company, for seven and a half miles of their railway, from Hull to Aylmer, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	24,000
212. To the Montreal and Lake Maskinongé Railway Company, for three and a half miles of their railway, the distance which the subsidy granted by the Act 49 Vic., chapter 10, is short of covering from St. Félix to Lake Maskinongé, in the parish of St. Gabriel, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	10,200
213. To the Great Eastern Railway Company, for a bridge over the Nicolet River, and also a bridge on the St. Francis River, a subsidy of 15 per cent on the value of the structure, not to exceed.....	37,500
214. To the Drummond County Railway Company, for twenty-four miles of their railway, from Drummondville to Ste. Rosalie, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	76,800
215. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
216. To the Lake Temiscamingue Colonization Railway Company, for twenty miles of their railway, from the northern end of the fifteen miles subsidized by the Act 52 Vic., chapter 3, to the Long Sault, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
217. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from the northern end of the 15 miles subsidized by the Act 52 Victoria, chapter 3, towards the parish of St. Michel des Saints, on the River Mattawa, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
218. To the St. Lawrence and Adirondack Railway Company, for eighteen miles of their railway, from Valleyfield to Huntingdon, on the Montreal and Champlain Junction Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	57,600
219. To the Quebec Central Railway Company, for ninety miles of their railway, from St. Francis Station, on the Quebec Central Railway, to a point on the Atlantic and North-western Railway,	

near Moose River, or from a point on the Quebec Central Railway between the Chaudière River and Tring Station, to a point on the International Railway at or near Lake Megantic, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding \$21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period, as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of.....		\$288,000
220.	To the Quebec and Lake St. John Railway Company, for a railway bridge over the St. Charles River, to give access to the city of Quebec, a subsidy not to exceed in the whole \$30,000; also for twelve miles of their railway from Lorette via Charlesbourg to Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$38,400.....	68,400
221.	For a railway from Summerside to Richmond Bay, in the province of Prince Edward Island, three miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	9,600
222.	To the Columbia and Kootenay Railway Company, for thirty-five miles of their railway, from the outlet of Kootenay Lake to a point on the Columbia River as near as practicable to the junction of the Kootenay and Columbia Rivers, a subsidy not exceeding \$3,200 per mile, nor to exceed in the whole.....	112,000
223.	For a railway from a point on the Intercolonial Railway through the Stewiacke Valley on a line which will afford facilities of communication with the Iron Mines, Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
224.	For a railway from Fredericton to the village of Prince William in the province of New Brunswick, twenty-two miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
225.	To the St. John Valley and Rivière du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
226.	To the Témiscouata Railway Company, for sixteen miles of their railway, from the west end of the twenty miles of their branch railway from Edmundston, subsidized by the Act 51 Victoria, chapter 3, towards the St. Francis River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200
227.	For a railway from the north end of the fourteen miles for which a subsidy was granted by the Act 50 and 51 Victoria, chapter 24, to the Tobique Valley Railway Company, from Perth Centre towards Plaister Rock Island, eleven miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	35,200
228.	To the Orford Mountain Railway Company, for thirty-one miles of their railway, between Eastman and Kingsbury, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	99,200
229.	For a railway from Lachine Bank, on a line of the Grand Trunk Railway, to a point at or near Rivière des Prairies, a distance of fifteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; the other subsidies,

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including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct its railway, shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council,—except the Erie and Huron Railway, which shall be completed within two years from the first day of July next. And they shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specifying an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make. The location, also, of every such line of railway shall be subject to the approval of the Governor in Council. And all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as regards the Erie and Huron Railway Company, upon which payment shall be made only upon the completion of the work—except, also as regards the subsidies to the Inverness and Richmond Railway, which shall be paid on the completion of each ten mile section, in accordance, as nearly as practicable, with the agreement between the company and the municipality of Inverness, and with section four of the Act of the Legislature of Nova Scotia, 1890, intituled: An Act to enable the county of Inverness to borrow money—except, also, as regards the subsidies to the Great Eastern Railway Company for bridges over the Nicolet and St. Francis Rivers, and to the Quebec and Lake St. John Railway for the bridge over the St. Charles River, upon which shall be paid fifteen per cent of the value of work done, on monthly progress estimates certified by the Chief Engineer and upon the approval of the Minister of Railways and Canals—and except also the subsidy granted to the Quebec Central Railway Company, the first annual payment upon which shall be made at the end of twelve months from the date of the Chief Engineer's certificate of the completion of the work, and each subsequent payment at the end of each twelve months thereafter, for the term of twenty years.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing running powers or traffic arrangements or other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those subsidized, as the Governor in Council determines."

By the special Act 53 Vic., ch. 5, 1890 (*Assented to 16th May, 1890*):—

230. In order to enable the Calgary and Edmonton Railway Company to construct so much of their railway as reaches from a point on the line of the Canadian Pacific Railway Company within the town of Calgary to a point on the North Saskatchewan River near Edmonton, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum, in manner following, that is to say: the sum of eighty thousand dollars to be paid annually on the construction of the railway from Calgary to a point on the North Saskatchewan River near Edmonton,—such payment to be computed from the date of the completion of the railway between such points: Provided that the Governor General in Council may order such sums to be paid in semi-annual instalments, and may permit the company to assign the same by way of security for any bonds or securities which may be issued by the company in respect of the company's undertaking.

By 54-55 Victoria, ch. 8, 1891 (*Assented to 30th Sept., 1891*):—

231. To the Great Northern Railway Company, for a railway from a point at or near New Glasgow or St. Lin to or near to Montcalm, in the province of Quebec, eighteen miles, the balance

	remaining unpaid of the subsidy, not exceeding \$3,200 per mile, granted by the Act forty-ninth Victoria, chapter ten, nor exceeding in the whole.....	\$ 28,100 00
232.	To the Quebec and Lake St. John Railway Company, for the railway bridge over the St. Charles River to give access to the city of Quebec, the difference between the amount already paid to the company and the sum of \$30,000 mentioned as not to be exceeded by the Act fifty-third Victoria, chapter two, a subsidy not exceeding.....	5,250 00
233.	To the Oshawa Railway Company, for seven miles of their railway from Port Oshawa towards Raglan, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400 00
234.	To the St. Lawrence, Lower Laurentian and Saguenay Railway Company, for the section of their railway from Grand Piles, on the St. Maurice River to its junction with the Quebec and Lake St. John Railway, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole.....	92,784 00
235.	To the Great Eastern Railway Company, for thirty-miles of their railway, from the River St. Francis to the Arthabaska Railway at St. Grégoire station, the balance remaining unpaid of the subsidy, not exceeding \$3,200 per mile, granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole.....	79,700 00
236.	To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway from Woodstock to Hamilton, in the province of Ontario, in lieu of the subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	158,400 00
237.	To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole.....	46,040 00
238.	To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding \$6,400 per mile, nor exceeding in the whole....	89,600 00
239.	To the Kingston, Smith's Falls and Ottawa Railway Company for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed \$179,200, granted by the Acts fifty-second Victoria, chapter three, and fifty-third Victoria, chapter two, a subsidy not exceeding \$12,534 per annum, to be paid in semi-annual instalments of \$6,267 each, for twenty years, which represents a grant in cash of.....	179,200 00

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"Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles; Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding \$1,170,000, in consideration whereof there shall be paid to the company, for twenty years, a semi-annual annuity calculated on a basis of three and one-half per cent on the amount so deposited; Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

240. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro' towards Palmer's Rapids, in the province of Ontario, in lieu of a subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$64,000 00

"Provided that the subsidy hereby granted to the Brockville, Westport and Sult Ste. Marie Railway Company may be paid by instalments, on the completion of each section of the railway as follows, that is to say:—

Sections.	Length in miles.
From, at or near Newboro' to Westport.....	4
From Westport towards Palmers Rapids.....	16

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also of every such line of railway, shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, the first semi-annual payment upon which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of twenty-eight miles of the railway, and each subsequent payment at the end of each six months thereafter, for the term of twenty years,—except also as to the Quebec and Lake St. John Railway Company, the subsidy to which shall be paid upon the completion of the work,—except also as to the Brockville, Westport and Sault Ste. Marie Railway Company, the subsidy to which shall be paid as follows: on the completion of that portion of the said road from, at or near Newboro' to Westport, a distance of four miles, the sum of twelve thousand eight hundred dollars, and on the completion of the remaining sixteen miles from Westport towards Palmer's Rapids, the sum of fifty-one thousand two hundred dollars.

"Within one month after the commencement of each session of Parliament, whilst any of the said moneys are being paid out, there shall be laid before Parliament a statement showing all payments of such moneys during the then next preceding year, the names of the respective persons to whom such payments have been made, and the amounts paid them respectively, together with the engineer's report upon which pay-

ments have been recommended, and copies of all contracts between the Government and the company under which the said subsidies are authorized to be paid.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running power or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

By the Act 55-56 Victoria, chap. 5, 1892 (*Assented to 9th July, 1892*):—

241.	To the Lake Erie and Detroit River Railway Company, for fifty-eight miles of their railway from a point at or near Cedar Creek to the town of Ridgetown, in lieu of the subsidies granted to the Lake Erie and Detroit River Railway Company by the Act 53 Victoria, chapter 2, and to the Amherstburg, Lake Shore and Blenheim Railway Company by the Act 52 Victoria, ch. 3.	\$224,000 00
242.	To the Ottawa, Arnprior and Parry Sound Railway Company, for fifty-five miles of their railway from Barry's Bay towards the Northern Pacific Junction Railway, a subsidy not exceeding \$6,400 per mile on the first twenty-seven and a half miles out from Barry's Bay, and not exceeding \$3,200 per mile on the second twenty-seven and a half miles, nor exceeding in the whole.	264,000 00
243.	To the Canadian Pacific Railway Company or to the Columbia and Kootenay Railway and Navigation Company, for a railway from a point on the Canadian Pacific Railway at or near Revelstoke to the head of Arrow Lake, for twenty-five miles of such railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	80,000 00
244.	To the Tobique Valley Railway Company, for a railway from the north end of the eleven miles for which a subsidy was granted by the Act 53 Victoria, chapter 2, to Plaister Rock Island, for 3 miles of such railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	9,600 00
245.	To the Monfort Colonization Railway Company, for twenty-one miles of their railway from Lachute, St. Jérôme or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Monfort and westward, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	67,200 00
246.	To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway from the Belmont iron mines to the Canadian Pacific Railway and the Central Ontario Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	32,000 00
247.	To the Montreal and Champlain Junction Railway Company, the balance remaining unpaid of the subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, a subsidy of.	15,100 00
248.	To the Buctouche and Moncton Railway Company, for thirty-two miles of their railway from Moncton to Buctouche, the balance remaining unpaid of the subsidy, not exceeding \$3,200 per mile, granted by the Acts 49 Victoria, chapter 10, and 50-51 Victoria, chapter 24, not exceeding in the whole.	35,480 00
249.	To the Cobourg, Northumberland and Pacific Railway Company, for nineteen miles of their railway from Cobourg to the Ontario and Quebec Railway (in addition to the subsidy granted by the Act 53 Victoria, chapter 2), a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	60,800 00

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250.	For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien in the said county, for twelve miles of such railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 38,400 00
251.	To the Inverness and Richmond Railway Company (or any other company undertaking the work), for twenty-five miles of their railway from a point on the Cape Breton Railway, at or near Orangedale, to Broadcove, a subsidy not exceeding \$3,200 per mile, in lieu of the subsidy of \$50,000 granted to the said railway company by 53 Victoria, chapter 2, and on the same conditions, not exceeding in the whole....	80,000 00
252.	To the Nicola Valley Railway Company, for twenty-five miles of their railway from a point on the Canadian Pacific Railway at or near Spence's Bridge towards Nicola Lake	80,000 00
253.	To the Lotbinière and Megantic Railway Company, for fifteen miles of their railway from a point at or near St. Jean Deschailons towards Glen Lloyd, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	48,000 00
254.	To the Stewiacke and Lansdowne Railway Company, for a railway from a point on the Intercolonial Railway, through the Stewiacke Valley, on a line which will afford facilities of communication with the iron mines at Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000 00
255.	To the Philipsburg Junction Railway and Quarry Company, for six and seven-hundredths miles of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	21,600 00
256.	To the Kingston, Napanee and Western Railway Company, for three miles of their railway from a point at or near Harrowsmith to a point at or near Sydenham, in lieu of the subsidy granted for this section of road by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	9,600 00
257.	For a railway from Cape Tourmente towards Murray Bay, in the province of Quebec, twenty miles, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	64,000 00
258.	To the Stewiacke and Lansdowne Railway Company, for a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, for forty-nine miles of such railway, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	156,800 00
259.	To the Restigouche and Victoria Railway Company, for fifteen miles of their railway from Campbellton towards Grand Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
260.	For a railway from St. Johns to Ste. Rosalie, thirty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	102,400 00
261.	For a railway from St. Placide to St. Andrew's, eight miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..	25,600 00
262.	For a railway to complete the connection between Sydney and Louisburg, in the county of Cape Breton, for twenty-eight miles of such railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	89,600 00

- 263.** To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway from Belleville to Tweed and thence to Bridgewater, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$ 96,000 00
- 264.** To the Kingston, Smith's Falls and Ottawa Railway Company, for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed \$179,200, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of such subsidies so granted, to be paid in semi-annual instalments for such period not exceeding twenty-one years, as the company may elect, which represents a grant in cash of..... 179,200 00

" Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles : Provided also, that the company may deposit with the Minister of Finance and Receiver General, a sum not exceeding \$1,170,000, in consideration whereof there shall be paid to the company for such period not exceeding twenty years as the company may elect, a semi-annual annuity calculated on a basis of three and a half per cent on the amount so deposited. Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

- 265.** To the St. Catharines and Niagara Central Railway Company, for thirty-four miles of their railway from the city of St. Catharines to the city of Hamilton, in lieu of the subsidies, not to exceed \$108,000, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of the said subsidies, to be paid in semi-annual instalments for such period, not exceeding twenty years, as the company may elect, representing a grant in cash of \$108,000 : Provided that, upon the completion of ten miles of said railway, a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole thirty-four miles. Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding \$400,000, in consideration whereof there shall be paid by the Government to the company, for such period not exceeding twenty years, as the company may elect, a semi-annual annuity, calculated on a basis of three and a half per cent on the amount so deposited, or a guarantee of a like sum, as interest on the bonds of the company : Provided further, that the company, with the approval of the Governor in Council, may assign the said subsidy and annuity to trustees by way of security for principal, or interest of any bonds or securities which may be issued by the company in respect of their undertaking, and the subsidy last above mentioned to the St. Catharines and Niagara Central Railway Company shall be paid in instalments, the first semi-annual payment upon which shall be made at the end of the six months from the date of the Chief Engineer's certificate of the completion of the first ten miles of railway, and each subsequent payment at the end of six months thereafter, for the term of twenty years or less. It is a condition of this subsidy that the sum not exceeding \$400,000 above mentioned shall be deposited with the Finance Minister before January 1st, 1893.

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266.	To the Woodstock and Centreville Railway Company, for a railway from Woodstock towards Centreville, twenty miles, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$64,000 00
267.	To the Brockville, Westport and Sault Ste. Marie Railway Company, for the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding \$3,200 per mile, and also for the balance remaining unpaid of the subsidy granted by the Act 53 Victoria, chapter 2, nor exceeding in the whole.....	96,800 00
268.	To the New Glasgow Iron, Coal and Railway Company, for a railway from Eureka Junction on the Intercolonial Railway to a point at or near Sunnybrae, including a branch line to the charcoal iron furnace at Bridgeville, for twelve and a half miles of such railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	40,000 00
269.	To the Thousand Island Railway Company, for an extension of their railway to connect with the Brockville, Westport and Sault Ste. Marie Railway, the Kingston, Napanee and Western Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, and an extension across the mouth of the Gananoque River, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.....	44,000 00
Payable, \$14,000 on the completion of the last named or southern extension, and the balance of said subsidy, being \$30,000, on the completion of the first named or northern extension of their railway.		
270.	To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$96,000 00
271.	To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway from the end of the line subsidized by the Act 53 Victoria, chapter 2, at the junction with the Midland Railway, to Pontypool, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200 00
272.	For seventy-five miles of the railway from Sand Point, Shelburne Harbour, in Nova Scotia, to Annapolis Royal, in the county of Annapolis and to a junction at or near New Germany on the Nova Scotia Central Railway, with a view to future construction to Liverpool, in lieu of the subsidy of a like amount granted by the Act 53 Victoria, chapter 2, for the same length of railway from Shelburne and from Liverpool, towards Annapolis, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	240,000 00
273.	To the Kingston, Napanee and Western Railway Company, for twenty miles of their railway, being extensions or branches in the counties of Peterborough, Hastings, Addington, Frontenac or Leeds, towards iron deposits, a subsidy not exceeding \$3,200 per mile, payable in instalments regulated by the length of each of the said extensions, additions or branches, the subsidy not exceeding in the whole.....	64,000 00
274.	To the St. John Valley and Rivière du Loup Railway Company, for ten miles of their railway from the north end of the line subsidized by the Act 53 Victoria, chapter 2, towards the town of Woodstock, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00

275.	To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 96,000 00
276.	To the Ottawa, Arnprior and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000 00
277.	To the Ottawa, Arnprior and Parry Sound Railway Company, for twenty-two miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400 00
278.	To the Lake Témiscamingue Colonization Railway Company, for thirty-five miles of their railway from Mattawa to the Long Sault, in lieu of the subsidies granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	112,000 00
279.	To the Témiscouata Railway Company, for twelve miles of their railway from the north end of the section of the St. François Branch subsidized by the Act 51 Victoria, chapter 3, being the first twelve miles on the section subsidized by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$1,800 per mile, in addition to the subsidy already granted, and not exceeding in the whole.....	21,600 00
280.	To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway from Port Burwell to Tilsonburg, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200 00
281.	To the Woodstock and Centreville Railway Company, for six miles of their railway from the west end of their twenty miles subsidized by the Act 50-51 Victoria, chapter 24, to the international boundary between the province of New Brunswick and the state of Maine, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200 00
282.	To the Lake Témiscamingue Colonization Railway Company, for 15 miles of their railway from the Long Sault to the crossing of the Kippewa River, a subsidy not exceeding \$3,200 per mile—and a subsidy of fifteen per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not exceeding \$15,000,—nor exceeding in the whole.....	63,000 00
283.	To the Goderich and Wingham Railway Company, for thirty-one miles of their railway from Goderich to Wingham, via Port Albert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	99,200 00
284.	To the Joliette and St. Jean de Matha Railway Company, for eight miles of their railway from St. Félix de Valois to St. Jean de Matha, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	25,600 00
285.	To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
286.	To the Nipissing and James Bay Railway Company, for twenty-five miles of their railway from, at or near North Bay station on	

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	the Canadian Pacific Railway towards James Bay, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 80,000 00
287.	For a railway from a point on the Intercolonial Railway between Ste. Flavie and Little Métis station to Matane, for fifty miles of such railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	160,000 00
288.	To the Ontario and Pacific Railway Company, for fifty-three and eighty-seven hundredths miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	172,400 00
289.	For a railway from a point on the line of the Canadian Pacific Railway on the Isle Jésus, in the county of Laval, towards St. Eustache, for twelve miles of such railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, to the Carillon and Grenville Railway Company, for twelve miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400 00
290.	For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for eighteen miles of such railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600 00
291.	To the Port Arthur, Duluth and Western Railway Company, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding, with the amount already paid, \$3,200 per mile, nor exceeding in the whole.....	114,125 00
292.	To the Drummond County Railway Company for four and six-tenths miles of their railway from Bull's Wharf, on the St. Lawrence River, near Nicolet, to Ste. Rosalie Junction, an excess of distance by the constructed line over the subsidies heretofore voted for a railway between the said points, \$3,200 per mile, not exceeding in the whole.....	14,720 00
293.	To the St. Lawrence and Adirondack Railway Company, for five and forty-two hundredths miles of their railway, from Huntingdon towards the international boundary, which, with the distance between Valleyfield and Huntingdon, twelve and fifty-eight hundredths miles, makes up the distance of eighteen miles named in the 53 Vic., chap. 2, granting a subsidy to this company, and for five and forty-hundredths miles from the east end of the eighteen miles referred to to the international boundary, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	25,024 00

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated

Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, and the subsidy granted to the St. Catharines and Niagara Central Railway Company, the first semi-annual payments upon both of which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of their railways respectively, and each subsequent payment at the end of each six months thereafter, for the term of twenty years or less.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines."

294. Notwithstanding the expiration of the time limited by the Act 47 Victoria, chapter 8, and by the contract entered into with the Pontiac Pacific Junction Railway Company, the Governor in council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act.

295. Notwithstanding the expiration of the time limited by the Act 52 Victoria, chapter 3, and by the contract entered into with the Quebec and Lake St. John Railway Company, the Governor in Council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act; and notwithstanding anything contained in the Act 50-51 Victoria, chapter 24, the Governor in Council may also pay to the said company the balance remaining unpaid of the subsidy granted to the company by the said Act, amounting to \$12,800, on the four miles of their road from the north end of the main line subsidized towards Roberval.

By the Act 56 Vic., chap. 2, 1893 (*Assented to 1st April, 1893*):—

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|---|--------------|
| 296. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... | \$ 64,000 00 |
| 297. To the United Counties Railway Company, for thirty-two miles of their railway, from a point at or near the town of Iberville to St. Hyacinthe, and thence towards Sorel, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, for a railway from St. Johns to Ste. Rosalie, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... | 102,400 00 |
| 298. To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway, divided into two sections: first, from the Belmont Iron Mines to Marmora village; second, from Marmora village to the junction with the Ontario Central Railway, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... | 32,000 00 |
| 299. To the Central Ontario Railway Company, for twenty miles of their railway, from Coe Hill or Gilmore, or some point between | |

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	Coe Hill and Gilmore, to Bancroft, via L'Amable, or as near thereto as practicable, in lieu of the subsidy granted by the Act 48-49 Victoria, chapter 59, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 64,000 00
300.	To the Quebec and Lake St. John Railway Company, for thirty miles of their railway, from Lake St. John towards Chicoutimi, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding in the whole.....	81,040 00
301.	To the Irondale, Bancroft and Ottawa Railway Company, for fifty miles of their railway, from the Victoria branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47 Victoria, chapter 8, and again granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.....	145,000 00
302.	To the Beauharnois Junction Railway Company, for thirty miles of their railway, from Ste. Martine towards St. Anicet, the balance remaining unpaid of the subsidy granted by the Act 50-51 Victoria, chapter 24, not exceeding in the whole.....	3,500 00
303.	To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	11,200 00
304.	To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the River St. Charles, to or near to Cape Tourmente, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..	30,400 00
305.	To the Ottawa and Gatineau Valley Railway Company, for sixty-two miles of their railway, from Hull station towards Le Désert, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.....	89,248 00
306.	To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara, or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
307.	To the Nova Scotia Central Railway Company (or to such person or persons or company as in the opinion of the Minister or acting Minister of Justice are entitled to the same) for eighty miles of their railway, from Lunenburg, on the east coast of Nova Scotia, westward to a point in the district of New Germany, together with a spur about three-fourths mile long to Bridgewater railway wharf, and from a point thirty-three and a half miles from Lunenburg and running to Middleton on the Windsor and Annapolis Railway, of unpaid subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, an amount not exceeding in the whole.....	4,500 00
308.	To the Great Northern Railway Company, for eighteen miles of their railway, from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 54-55 Victoria, chapter 8, not exceeding in the whole.....	25,600 00
309.	To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific	

	Railway between Joliette and St. Félix de Valois, in lieu of the subsidy granted by the Act 53 Victoria, chap. 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 48,000 00
310.	To the Montfort Colonization Railway Company, for twenty-one miles of their three-foot gauge railway from Lachute, St. Jérôme, or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Montfort and westward, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	67,200 00
311.	To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of St. Michel des Saints, on the river Mattawa, in the province of Quebec, and for fifteen miles of their railway from the north end of the fifteen miles above referred to, towards the parish of St. Michel des Saints on the river Mattawa, in the province of Quebec, in lieu of the subsidies granted by the Acts 52 Victoria, chap. 3, and 53 Victoria, chap. 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000 00
312.	To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the Northern Pacific Junction Railway, in the province of Ontario, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.....	97,600 00
313.	To the Jacques Cartier Union Railway Company, for extending and completing their railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy of.....	20,000 00
314.	To the Oshawa Railway Company, for seven miles of their railway and branches as follows: from Port Oshawa to a point at or near Edmondson's Falls mill site, near Mill Street, in the town of Oshawa (this portion being known as the "Lake" section of the said railway); thence to a point at or near the town hall in the town of Oshawa, and thence to the Oshawa station of the Grand Trunk Railway Company of Canada (this portion being known as the "Town" or "Northern" section of the said railway)—in lieu of the subsidy granted by the Act 54-55 Victoria, chapter 8, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400 00

"All the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"All the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed

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in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as follows :—

“(a.) The subsidy to the Ontario, Belmont and Ottawa Railway Company, which shall be paid as follows : on the completion of the first section, an instalment proportionate to the value of the said section in comparison with that of the ten miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy on the completion of the second section ;

“(b.) The subsidy to the Oshawa Railway Company, which shall be paid as follows : on the completion of the “Town” or “Northern” section, an instalment proportionate to the value of the said section in comparison with that of the seven miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy, on the completion of the “Lake” section of the said railway.”

By the Act 57-58 Vic., cap. 4, 1894. (*Assented to, 23rd July, 1894*):—

315.	To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	\$ 48,000
316.	To the Brockville, Westport and Sault Ste. Marie Railway, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding \$3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was re-granted by chapter 5 of 1892 ; the whole not exceeding	86,800
317.	To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway, from Port Burwell to Tilsonburg, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	51,200
318.	To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway, from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding \$3,200 per mile, nor exceeding in the whole	4,790
319.	To the St. Catharines and Niagara Central Railway Company, for 34 miles of their railway from the city of St. Catharines to the city of Hamilton, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	108,800
320.	To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887 ; and for 30 miles of their railway from the western end of the 30 miles first mentioned towards Ottawa, the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, not exceeding \$3,200 per mile ; the whole not exceeding	118,400
321.	Notwithstanding the expiration of the time limited by chapter 2 of 1890, and by the contract entered into with the Quebec Central Railway Company, and notwithstanding anything otherwise in the said chapter 2 contained, the Governor in Council may pay the subsidy granted by the said chapter to the said company at the present worth of the twenty annual payments mentioned in the said chapter (interest computed at four per cent), for and upon the completion of its railway extending from a point between the Chaudière River and Tring Station to a point on the International Railway at or near Lake Megantic, and upon the inspection and acceptance of the same by the Chief Engineer of Railways and Canals, the sum in all of	288,000

322.	To the Philipsburg Junction Railway and Quarry Company, for 1 1/2 ^{1 1/4} mile of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi and a branch to Missisquoi Bay, the balance remaining unpaid of the subsidy granted by chapter 5 of 1892, not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 2,912
323.	To the Joliette and St. Jean de Matha Railway Company, for 8 miles of their railway from St. Félix de Valois to St. Jean de Matha, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	23,600
324.	To the Lake Temiscamingue Colonization Railway Company, for their railway from Mattawa to the foot of the Kippewa Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$160,000,—also 15 per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not to exceed \$15,000 in all, in lieu of the subsidies granted by chapter 5 of 1892,—also the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, for their railway from Long Sault to Lake Kippewa, a subsidy not exceeding \$3,200 per mile of railway and 15 per cent on the value of the bridges,—also, a sum of \$1,750 additional per mile on their said railway from Mattawa to the foot of the Kippewa Lake; the whole not exceeding.....	274,940
325.	For a railway from St. Placide to St. Andrews, 8 miles, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	25,600
326.	For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for 18 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600
327.	For a railway from a point on the line of the Canadian Pacific Railway on Isle Jésus, in the county of Laval, towards St. Eustache, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, to the Carillon and Grenville Railway Company, for 12 miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
328.	For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien, in the said county, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	38,400
329.	To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of \$31,500, to be paid out monthly as the work progresses, upon the certificate of the chief engineer of government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken; and for 3 miles of their railway extending from a point 3 miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$9,600, in lieu of the subsidy granted by chapter 3 of 1888; provided that the entire work subsidized upon this railway shall be completed within 4 years from the passing of this Act; the subsidy granted by this Act not to exceed in the whole.....	41,100

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330.	To the Pontiac Pacific Junction Railway Company, for the construction or acquisition of $7\frac{1}{2}$ miles of railway, from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	\$ 24,000
331.	To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, less the subsidy granted for the line from Hull to Aylmer, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	73,172
332.	To the Harvey Branch Railway Company, for 3 miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding \$3,200 per mile, nor exceeding in the whole.....	4,046
333.	For a railway from a point on the Intercolonial Railway near Newcastle via Douglastown, to a point on the River Miramichi opposite the town of Chatham, in the province of New Brunswick, 6 miles, in lieu of the subsidy granted by chapter 10 of 1886, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200
334.	For a railway from some point on the Joggins Railway, near the Hebert River, to Young's Mills, in the province of Nova Scotia, a distance of 5 miles, in lieu of the subsidy granted by chapter 3 of 1889, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	16,000
335.	To the Woodstock and Centreville Railway Company, for a railway from Woodstock to the international boundary between the province of New Brunswick and the state of Maine, 26 miles, in lieu of the subsidies granted by chapter 24 of 1887 and chapter 2 of 1890 a subsidy not exceeding \$3,200 per mile nor exceeding in the whole.....	83,200
336.	For 90 miles of the railway from Newport or Windsor to Truro, or to a point between Truro and Stewiacke, and from a point on the said railway to a point at or near Eastville, and from Eastville through the valley of the Musquodoboit River towards a point on the proposed Dartmouth branch of the Intercolonial, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile; and also for a railway bridge over the Shubenacadie River on the line of the said railway, a subsidy of 15 per cent on the value of the structure; the whole not exceeding.....	300,000
337.	To the Nipissing and James Bay Railway Company, for 25 miles of their railway from, at or near North Bay Station on the Canadian Pacific Railway towards James Bay, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile; also for 43 miles of their railway from North Bay towards Lake Tamagaming, a subsidy not exceeding \$3,200 per mile; the whole not exceeding.....	217,000
338.	To the Lotbinière and Mégantic Railway Company, for 15 miles of their railway, in addition to the 15 miles already subsidized and built, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
339.	To the Drummond County Railway Company, for 30 miles of their railway from St. Leonard northerly towards a junction with the Intercolonial Railway at Chaudière Junction, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000

340. For a railway from Lime Ridge, in the county of Wolfe, in the province of Quebec, northerly through the county of Wolfe and into the county of Megantic, a distance not exceeding 50 miles from Lime Ridge, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 160,000
341. To the Strathroy and Western Counties Railway Company, for 25 miles of their railway from St. Thomas through the counties of Elgin and Middlesex, towards Forest Station or Park Hill, on the Grand Trunk Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
342. To the Parry Sound Colonization Railway Company, for 20 miles of their railway east from Parry Sound, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
343. To the Manitoulin and North Shore Railway Company, for 10 miles of their railway from Little Current to Nelson, on the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
344. To the United Counties Railway Company for 32 miles of their railway from Iberville to Sorel, in addition to the 32 miles already subsidized, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	102,400
345. To the Joliette and St. Jean de Matha Railway Company, for 12 miles of their railway from St. Jean de Matha to Ste. Emelie de L'Energie, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
346. To the Great Northern Railway Company, for 22 miles of their railway, from the eastern end of the 15 miles subsidized by chapter 2 of 1893 to a point between Joliette and St. Félix de Valois, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
347. To the Quebec and Lake St. John Railway Company, for 2 miles of the Chicoutimi branch of their railway, from the east end of the 50 miles already subsidized and built eastward to deep water at Chicoutimi, a subsidy not exceeding \$3,200 per mile; also for 12 miles from the 52nd mile on the Chicoutimi branch to Ha Ha Bay, a subsidy not exceeding \$3,200 per mile; the whole not exceeding.....	44,800
348. To the Pontiac and Ottawa Railway Company, for 23 miles of their railway from the point of divergence from the Pontiac Railway to Ferguson's Point, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	73,600
349. To the Ottawa and Gatineau Valley Railway Company, for 20 miles of their railway from the eastern end of the 62 miles already subsidized towards Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
350. To the Canada Eastern Railway Company for 6 miles of their railway from the town of Chatham to Black Brook, a subsidy not exceeding \$3,200 per mile; also for 4 miles of their railway for a branch to the village of Nelson, a subsidy not exceeding \$3,200 per mile; the whole not exceeding.....	32,000
351. For a railway from Cross Creek Station, on the Canada Eastern Railway to Stanley village, in the county of York, in the province of New Brunswick, 6 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200
352. To the Restigouche and Victoria Railway Company, for 20 miles of their railway from the western end of the 15 miles subsidized by chapter 5 of 1892, towards Grand Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000

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353.	To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman station to the Newcastle coal fields, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 48,000
354.	To the Tobique Valley Railway Company, for 15 miles of their railway from the present terminus at Plaister Rock easterly, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
355.	Towards the restoration or renewal of the railway bridge on the South-eastern Railway over the Yamaska River at Yamaska, a subsidy equal to one-third of the actual cost of the renewal of the bridge, but the grant not to exceed in the whole.....	50,000
356.	To the Boston and Nova Scotia Coal and Railway Company, for 10½ miles of their railway from the north end of the section already subsidized to Broad Cove, a subsidy not exceeding \$3,200 per mile; also for 25 miles of their railway from a point on the Cape Breton Railway at or near Orangedale towards Broad Cove, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile; the whole not exceeding	113,600
357.	For a railway from Port Hawkesbury towards Cheticamp, 25 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
358.	To the Manitoba North-western Railway Company, for 100 miles of the extension of their main line from its present western terminus towards Prince Albert,—the company relinquishing 3,200 acres of the land grant per mile, and the whole road to be operated as a continuous line of railway under one management, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	320,000
359.	For a line of railway from the junction of the Elk and Kootenay Rivers to Coal Creek, a distance of 34 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	108,800
360.	For a railway from Abbotsford Station on the Mission Branch of the Canadian Pacific Railway to the town of Chilliwack, 21 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	67,200
361.	To the Nicola Valley Railway Company, for 28 miles of their railway from the western end of the section of their road subsidized by chapter 5, of 1892, towards Nicola Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	89,600
362.	To the Nakusp and Slocan Railway Company, for 38 miles of their railway from the town of Nakusp to a point at or near the Forks of Carpenter Creek, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	121,600
363.	To the Pontiac and Kingston Railway Company, for 22 miles of a railway from Portage du Fort to Upper Thorne Centre, via Shawville, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
364.	To the New Glasgow Iron, Coal and Railway Company, for 5 miles of their railway, from Sunnysbrae to Kerrogare, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	16,000 00
365.	To the South Shore Railway Company, for 35 miles of their railway from Yarmouth towards Shelburne and Lockport, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	112,000 00
366.	To the Cape Breton Railway Extension Company, for 30 miles of railway from Port Hawkesbury to St. Peter's, on their line of • railway from Port Hawkesbury to Louisbourg, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000 00

367. For a railway from a point on the Intercolonial Railway between Norton and Sussex Stations towards Havelock, 20 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	\$ 64,000 00
368. For a railway from St. John to Barneville, for a distance of 10 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000 00
369. For a line of railway from Cap de la Magdeleine to connect with the Piles Branch of the Canadian Pacific Railway, 3 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	9,600 00
370. To the Canada Eastern Railway Company, for an extension of one mile from the western end of their railway, to connect with the Canadian Pacific Railway, a subsidy not exceeding.....	3,200 00
371. To the Great Northern Railway Company, for 30 miles of their railway from its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the River St. Maurice, westward, in lieu of the subsidy granted to the Maskinongé and Nipissing Railway Company by chapter 2 of 1893, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000 00
372. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for 16 miles of their railway from Bobcaygeon to the Midland Railway, and for another 16 miles from the end of the first mentioned 16 miles to Pontypool, in lieu of the subsidies granted by chapter 2 of 1890, and chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	102,400 00
373. To the Montfort Colonization Railway Company, for 12 miles of their railway from the end of the 21 miles already subsidized westward to a point on the Rouge River, in the county of Argenteuil, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400 00
374. For a railway from a point on the Caraquet Railway, at or near Pokemouche siding, towards Tracadie village, 12 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	38,400 00

The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railway and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the

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subsidy granted to the Great Northern Railway Company by chapter two of 1893, for fifteen miles from Montcalm to the Canadian Pacific Railway, which shall be paid as follows: on the completion of the eighteen miles from New Glasgow to Montcalm and of two miles out of the fifteen miles from Montcalm to the Canadian Pacific Railway, an instalment proportionate to the value of the ten miles out of the total mileage subsidized by chapter two of 1893, to be established as aforesaid, and the balance of the said subsidy on the completion of the remaining thirteen miles of the said railway.

No subsidies were authorized by 58-59 Vict. (1895), nor by 59 Vict. (1896).

By the Act 60-61, chapter 4, 1897 (*Assented to 29th June, 1897*).

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and includes the amount expended upon any bridge up to and not exceeding twenty-five thousand dollars, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

- 375.** To the Ottawa and New York Railway Company, for 53 $\frac{87}{100}$ miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by chapter 5 of the statutes of 1892;
- 376.** To the Kingston, Smith's Falls and Ottawa Railway Company, for 101 miles of their railway from Kingston, or a junction with the Grand Trunk Railway at Rideau or some other point near Kingston, to Ottawa, in lieu of the subsidy granted by chapter 5 of 1892;
- 377.** For a railway from a point on the Canadian Pacific Railway, at or near either Welsford or Westfield, or between the said two points, to Gagetown, in the county of Queen's, New Brunswick, not exceeding 30 miles, in lieu of the subsidy granted by chapter 2 of 1890;
- 378.** To the Cobourg, Northumberland and Pacific Railway Company, for 50 miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidies granted by chapter 5 of 1892;
- 379.** To the Ottawa and Gatineau Railway Company, for 20 miles of their railway from the end of the 62nd mile subsidized towards Désert, in lieu of the subsidies granted by chapter 4 of 1894;
- 380.** To the Great Northern Railway Company, for 9 miles of their railway, being shortage in distance between Montcalm and St. Tite;
- 381.** To the St. Gabriel de Brandon and Ste. Emélie de l'Énergie Railway Company, for 15 miles of their railway from St. Gabriel to Ste. Emélie de l'Énergie, and 5 miles from a point on the main line to St. Jean de Matha, making in all 20 miles, in lieu of the subsidy granted by chapter 4 of 1894;
- 382.** To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman Station to Newcastle Coal Fields, county of Queen's, in lieu of the subsidy granted by chapter 4 of 1894;

- 383.** To the Gulf Shore Railway Company, for $5\frac{1}{2}$ miles of their railway from the end of the section subsidized to Tracadie and thence to Big Tracadie, New Brunswick ;
- 384.** For a railway from Campbellton, on the Intercolonial Railway, towards Grand Falls, New Brunswick, a distance of 20 miles, commencing at Campbellton, in lieu of the subsidy granted by chapter 4 of 1894 ;
- 385.** To the Pontiac Pacific Junction Railway Company, for $7\frac{1}{2}$ miles of their railway from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890 ;
- 386.** To the Schomberg and Aurora Railway Company, for 15 miles of their railway from a point on the Grand Trunk Railway between King and Newmarket to Schomberg, in the province of Ontario ;
- 387.** To the Tilsonburg, Lake Erie and Pacific Railway Company, for $3\frac{5}{100}$ miles of their railway from the present terminus, through Tilsonburg to the Michigan Central Railway, in the province of Ontario.
- 388.** To the Ottawa, Arnprior and Parry Sound Railway Company, for 52 miles of their railway, from the crossing of the Northern Pacific Junction Railway to 55 miles west of Barry's Bay, and also for 4 miles of their railway across Parry Island ;
- 389.** To the Pembroke Southern Railway Company, for 20 miles of their railway from Pembroke to Golden Lake, in the province of Ontario ;
- 390.** To the Ontario and Rainy River Railway Company, for 80 miles of their railway from the Port Arthur, Duluth and Western Railway to Rainy Lake, in the province of Ontario ;
- 391.** To the Strathroy and Western Counties Railway Company, for 7 miles of their railway, commencing at a point at or near Caradoc Station on the Canadian Pacific Railway and extending to the town of Strathroy ;
- 392.** To the Phillipsburg Railway and Quarry Company, for $\frac{4}{100}$ mile of their railway from the end of the subsidized section to the government wharf at Phillipsburg ;
- 393.** To the United Counties Railway Company, for 1 mile of their railway from Johnson to St. Grégoire Station, in the province of Quebec ;
- 394.** To the St. Lawrence and Adirondack Railway Company, for $13\frac{1}{2}$ miles of their railway from Beauharnois to Caughnawaga, in the province of Quebec ;
- 395.** To the East Richelieu Valley Railway Company, for 24 miles of their railway from Iberville to St. Thomas, boundary of Missisquoi County, in the province of Quebec ;
- 396.** To the Portage du Fort and Bristol Branch Railway Company, for 15 miles of their railway to a point at or near Shawville, in the county of Pontiac ;
- 397.** For a railway from a point at or near Windsor Junction, on the Intercolonial Railway, to Upper Musquodoboit, for a distance of 40 miles ;
- 398.** To the St. Stephens and Milltown Railway Company, for $1\frac{14}{100}$ mile of their railway from Milltown to St. Stephen, in the province of New Brunswick ;
- 399.** For a railway from Sunny Brae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysboro', in the province of Nova Scotia, a distance of 65 miles ;
- 400.** For a railway from Port Hawkesbury, Nova Scotia, to Port Hood and Broad Cove, 53 miles, in lieu of the subsidy granted by chapter 4 of 1894 ;
- 401.** For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles ;
- 402.** For a railway from Indian Garden on the line of the Central Railway, to Shelburne, in the province of Nova Scotia, a distance of 35 miles ;
- 403.** To the Coast Railway Company of Nova Scotia, for 61 miles of their railway from Yarmouth to Port Clyde, in the province of Nova Scotia ;
- 404.** For a railway from Brookfield Station on the Intercolonial Railway to Eastville, 30 miles ;

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- 405.** To the Great Northern Railway Company, for 35 miles of their railway from St. Jérôme, in the province of Quebec, to Hawkesbury, in the province of Ontario ;
- 406.** To the Drummond County Railway Company, for $42\frac{1}{2}$ miles of their railway from Moose Park to Chaudière River, provided that the amount of the said subsidy shall be refunded to the Government of Canada in the event of the company's railway from Ste. Rosalie to Chaudière River being purchased or leased for a term of years by the government.

3. The Governor in Council may grant the subsidies hereinafter mentioned to the railway companies and towards the construction of the railways also hereinafter mentioned, that is to say :—

- 407.** To the Great Northern Railway Company, for 67 miles of their railway between Montcalm and its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the St. Maurice River, the balance remaining unpaid of the subsidies granted by chapter 2 of 1893, and by chapter 4 of 1894, between these points, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....\$ 182,400 00
- 408.** To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, also for bridging the Ottawa River, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, and by chapter 4 of 1894, not exceeding..... 114,272 00
- 409.** To the Ottawa and Gatineau Railway Company, for 62 miles of their railway from Hull towards Désert, in the province of Quebec, the balance remaining unpaid of the subsidy granted by chapter 2 of 1893, not exceeding in the whole..... 35,872 00
- 410.** To the Grand Trunk Railway Company of Canada, for a subsidy towards the rebuilding and enlargement of the Victoria Bridge at Montreal over the St. Lawrence River, 15 per cent upon the amount expended thereon, not exceeding..... 300,000 00
- 411.** To the Montfort Colonization Railway Company, for 33 miles of their railway from Montfort Junction to Arundel, in the province of Quebec, a subsidy not exceeding \$2,000 per mile, nor exceeding in the whole..... 66,000 00
- 412.** To the Irondale, Bancroft and Ottawa Railway Company, the balance remaining unpaid of the subsidy for the last five miles of the company's railway ; the eastern terminus to be either at the village of Bancroft or at some point near the Hastings Road, in the township of Herschell, in lieu of the subsidy granted by chapter 2 of 1893, not exceeding in the whole..... 16,000 00
- 413.** To the Great Northern Railway Company, towards the construction of a railway bridge over the Ottawa River at Hawkesbury, 15 per cent upon the amount expended thereon, not exceeding..... 52,500 00
- 414.** For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa and the city of Hull, 15 per cent upon the amount expended thereon, not exceeding..... 112,500 00

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively ; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and

upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make ; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

5. The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

6. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect of which it is hereinbefore otherwise provided.

7. Any company receiving a subsidy as aforesaid, in excess of \$3,200 per mile, shall be bound to carry Her Majesty's mails for a term of ten years free of charge over the portion of railway subsidized.

By the Special Act 60-61 Victoria, Chapter 5, 1897. (*Assented to 29th June, 1897.*)

1. Subject to the conditions hereinafter mentioned, the Governor in Council may grant to the Canadian Pacific Railway Company a subsidy towards the construction of a railway from Lethbridge, in the district of Alberta, through the Crow's Nest Pass to Nelson, in the province of British Columbia (which railway is hereinafter called "the Crow's Nest Line,") to the extent of eleven thousand dollars per mile thereof, and not exceeding in the whole the sum of three million six hundred and thirty thousand dollars, payable by instalments on the completion of each of the several sections of the said railway of the length respectively of not less than ten miles, and the remainder on the completion of the whole of the said railway ; provided that an agreement between the Government and the company is first entered into in such form as the Governor in Council thinks fit, containing covenants to the following effect, that is to say :—

On the part of the company :

(a.) That the company will construct or cause to be constructed, the said railway upon such route and according to such descriptions and specifications and within such time or times as are provided for in the said agreement, and, when completed, will operate the said railway for ever ;

(b.) That the said line of railway shall be constructed through the town of Macleod, and a station shall be established therein, unless the Governor in Council is satisfied by the company that there is good cause for constructing the railway outside the limits of the said town, in which case the said line of railway shall be located and a station established at a distance not greater than five hundred yards from the limits of the said town ;

(c.) That so soon as the said railway is opened for traffic to Kootenay Lake, the local rates and tolls on the railway and on any other railway used in connection therewith and now or hereafter owned or leased by or operated on account of the company south of the company's main line in British Columbia, as well as the rates and tolls between any point on any such line or lines of railway and any point on the main line of the company throughout Canada, or any other railway owned or leased by or operated on account of the company, including its lines of steamers in British Columbia, shall be first approved by the Governor in Council or by a railway commission, if and when such commission is established by law, and shall at all times thereafter and from time to time be subject to revision and control in the manner aforesaid ;

(d.) That a reduction shall be made in the general rates and tolls of the company as now charged, or as contained in its present freight tariff, whichever rates are now the lowest, for carloads or otherwise, upon the classes of merchandise hereinafter mentioned, westbound, from and including Fort William and all points east of Fort

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William on the company's railway to all points west of Fort William on the company's main line, or on any line of railway throughout Canada owned or leased by or operated on account of the company, whether the shipment is by all rail line or by lake and rail, such reduction to be to the extent of the following percentages respectively, namely:—

- Upon all green and fresh fruits, 33½ per cent ;
- Coal oil, 20 per cent ;
- Cordage and binder twine, 10 per cent ;
- Agricultural implements of all kinds, set up or in parts, 10 per cent ;
- Iron, including bar, band, Canada plates, galvanized, sheet, pipe, pipe-fittings, nails, spikes and horse shoes, 10 per cent ;
- All kinds of wire, 10 per cent ;
- Window glass, 10 per cent ;
- Paper for building and roofing purposes, 10 per cent ;
- Roofing felt, box and packing, 10 per cent ;
- Paints of all kinds and oils, 10 per cent ;
- Live stock, 10 per cent ;
- Wooden ware, 10 per cent ;
- Household furniture, 10 per cent ;

And that no higher rates than such reduced rates or tolls shall be hereafter charged by the company upon any such merchandise carried by the company between the points aforesaid ; such reductions to take effect on or before the first of January, one thousand eight hundred and ninety-eight ;

(e.) That there shall be a reduction in the company's present rates and tolls on grain and flour from all points on its main line, branches or connections, west of Fort William to Fort William and Port Arthur and all points east, of three cents per one hundred pounds, to take effect in the following manner :—One and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-eight, and an additional one and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-nine ; and that no higher rates than such reduced rates or tolls shall be charged after the dates mentioned on such merchandise from the points aforesaid ;

(f.) That the Railway Committee of the Privy Council may grant running powers over the said line of railway and all its branches and connections, or any portions thereof, and all lines of railway now or hereafter owned or leased by or operated on account of the company in British Columbia south of the company's main line of railway, and the necessary use of its tracks, stations and station grounds, to any other railway company applying for such grant upon such terms as such committee may fix and determine, and according to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament ; but nothing herein shall be held to imply that such running powers might not be so granted without the special provision herein contained ;

(g.) That the said railway, when constructed, together with that portion of the company's railway from Dunmore to Lethbridge, and all lines of railway, branches, connections and extensions in British Columbia south of the main line of the company in British Columbia shall be subject to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament ;

(h.) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it, as stipulated for in the said agreement, become entitled to and shall get any land as a subsidy from the Government of British Columbia, then such lands, excepting therefrom those which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, shall be disposed of by the company or by such other company to the public according to regulations and at prices not exceeding these prescribed from time to time by the Governor in Council, having regard to the then existing provincial regulations applicable thereto ; the expression "lands" including all mineral and timber thereon which shall be disposed of as aforesaid, either with or without the land, as the Governor in Council may direct :

(i.) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it as stipulated for in the said agreement, become entitled to and shall get any lands as a subsidy from the Government of British Columbia which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, then the company will cause to be conveyed to the Crown, in the interest of Canada, a portion thereof to the extent of fifty thousand acres, the same to be of equal value per acre as coal lands with the residue of such lands. The said fifty thousand acres to be selected by the Government in such fair and equitable manner as may be determined by the Governor in Council, and to be thereafter held or disposed of or otherwise dealt with by the Government as it may think fit on such conditions, if any, as may be prescribed by the Governor in Council, for the purpose of securing a sufficient and suitable supply of coal to the public at reasonable prices, not exceeding two dollars per ton of two thousand pounds free on board cars at the mines.

And on the part of the Government, to pay the said subsidy by instalments as aforesaid.

2. The company shall be bound to carry out in all respects the said agreement, and may do whatever is necessary for that purpose.

3. In order to facilitate such financial arrangements as will enable the company to complete the railway as aforesaid without delay and to acquire and consolidate with it the railway from Dunmore to Lethbridge, hereinafter called "the Alberta Branch," which, under the authority of chapter thirty-eight of the statutes of 1893, it now operates as lessee, and is under covenant to purchase, the company may issue bonds which will be a first lien and charge and be secured exclusively upon the said Alberta Branch and Crow's Nest Line together in the same way and with the same effect as if both the said pieces of railway to be so consolidated were being built by the company as one branch of its railway within the meaning of section one of chapter fifty-one of the statutes of 1888, and that section shall apply accordingly, such first lien to be subject to the payment of the purchase money of the Alberta Branch, as provided for in the said covenant to purchase.

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LAND SUBSIDIES.

By 47 Vic., chap. 25, clause 7, 1884 (*Assented to 19th April, 1884*):—

1. The Governor in Council is hereby authorized in aid of the construction of a railway from some point on the Canadian Pacific Railway to Hudson's Bay, to make a free grant of not more than six thousand four hundred acres for each mile of railway within Manitoba, and not more than twelve thousand eight hundred acres for each mile in the North-west Territories.

By 48-49 Vic., chap. 60, 1885 (*Assented to 20th July, 1885*):—

2. To the North-western Coal and Navigation Company (Limited), Dominion lands to an extent not exceeding three thousand eight hundred acres for each mile of the company's railway, from Medicine Hat to the coal banks on the Belly River, about one hundred and ten miles.
3. To the Manitoba and South-western Colonization Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from its commencement at Winnipeg to its terminus at Whitewater Lake, about one hundred and fifty miles.
4. To the Manitoba and North-western Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Portage la Prairie to the crossing of the South Branch of the River Saskatchewan, twenty miles from Prince Albert, about four hundred and thirty miles.
5. To the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from its commencement near Regina to the navigable waters of Long Lake.

"The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor."

By 49 Vic., cap. 11, 1886 (*Assented to 2nd June, 1886*):—

6. To the Manitoba and North-western Railway Company, Dominion lands to the extent of six thousand four hundred acres per mile for each mile of the company's branch railway running from a point on the main line of that railway, at or near Todburn, in a north-westerly direction through the county of Russell to the Assiniboine River, near the town of Shellmouth, about twenty-six miles.
7. To the North-west Central Railway Company, or to such other company as may undertake the construction of the railway, or a railway from a point on the Manitoba and North-western Railway via Rapid City, westward, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Brandon station on the Canadian Pacific Railway, or from such point on the Manitoba and North-western Railway as aforesaid, to Battleford, in the provisional district of Saskatchewan, about four hundred and fifty miles.

- 8.** To the Wood Mountain and Qu'Appelle Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway for the whole distance commencing at a point in township number four, in range number thirty, west of the second meridian, in the Dominion lands system of survey, passing through the town of Fort Qu'Appelle, to join the Manitoba and North-western Railway at a point to be fixed for that purpose by the Governor in Council, about two hundred and forty miles.

"The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor."

By section 5 of this Act authority was given for the incorporation by the Governor in Council of a company to construct the line from Brandon, or other point indicated, to Battleford, subsidized by this Act.

By 50-51 Vic., cap. 22, 1887 (*Assented to 23rd June, 1887*):—

- 9.** The subsidy to the North-western Coal and Navigation Company, granted by 49 Vic., chap. 60, was increased from 3,800 acres per mile to 3,840 acres per mile.

By 50-51 Vic., cap. 23, 1887 (*Assented to 23rd June, 1887*):—

- 10.** To the Alberta and Athabasca Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from some point on the Bow River or Canadian Pacific Railway, at or between Calgary and Crowfoot Creek, to a point near the town plot of Edmonton, about three hundred miles.
- 11.** To the Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from a point near the northern terminus of the completed portion of that railway, at or near Long Laketon, on the navigable waters of Long Lake, to a point at or near where the fifty-second parallel of latitude crosses the South Saskatchewan River, thence to a point at or near the elbow of the North Saskatchewan River, with branches to Prince Albert and Battleford, about three hundred and twenty-five miles.
- 12.** To the Medicine Hat Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from a point at or near Medicine Hat, on the line of the Canadian Pacific Railway, to the coal field in or near townships twelve and thirteen, range six, west of the fourth principal meridian, a distance of about eight miles, to be selected out of such lands as are at the disposal of the Government in the proximity of the line of the company's railway.

"The said grants, and each of them may be, so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof, each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor."

By 52 Vic., chap. 4, 1889 (*Assented to 2nd May, 1889*):—

- 13.** To the North-western Coal and Navigation Company (Limited), in addition to the grant provided for by section one of the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign and chaptered sixty, Dominion lands to an extent not exceeding two thousand six hundred

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acres for each mile of the company's railway from Dunmore station, on the Canadian Pacific Railway, to Lethbridge, on the Belly River, the present terminus of the said railway, a distance of one hundred and nine and one-half miles,—such additional grant to be made only on condition that the gauge of the said railway be made standard width; and also to the said North-western Coal and Navigation Company (Limited), Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from Lethbridge to the international boundary, a distance of about fifty miles.

14. To the Red Deer Valley Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from Cheadle Station, on the Canadian Pacific Railway, to its terminus at a point in or near township twenty-nine, range twenty-three, west of the fourth meridian, a distance of about fifty-five miles.
15. To the North-western Railway Company of Canada, Dominion lands to an extent not exceeding ten thousand acres for each mile of the company's railway from Calgary, on the Canadian Pacific Railway, northerly to a point on the North Saskatchewan River, at or near Edmonton, a distance of about two hundred and ten miles; and also to the said North-western Railway Company of Canada, Dominion lands to an extent not exceeding ten thousand acres for each mile of the company's railway from Calgary southerly to Lethbridge, a distance of about one hundred and twenty miles.
16. To the Lake Manitoba Railway and Canal Company, Dominion lands to an extent not exceeding six thousand acres for each mile of the company's railway from Portage la Prairie to the southern boundary of Lake Manitoba, a distance of about seventeen miles.

"The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof, and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor.

"The Governor in Council may make the grant of land provided for by section three of the Act forty-ninth Victoria, chapter eleven, being for the line of the Wood Mountain and Qu'Appelle Railway, of about two hundred and forty miles in length, applicable to the line of railway of the said company, as authorized by the Act respecting the Wood Mountain and Qu'Appelle Railway Company, passed during the present session of Parliament, upon the like terms and subject to the like conditions as those upon which the grant hereinbefore mentioned was authorized to be made to the said company by the Act in this section first cited."

By the Act 53 Vic., cap. 4, 1890 (*Assented to 16th May, 1890*):—

17. To the Canadian Pacific Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a branch line to be constructed from Glenboro' westerly a distance of about sixty miles to a point on the proposed branch railway of the said company running from Brandon south-westerly.
18. To the Canadian Pacific Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a branch line of railway from a point at or near Brandon, on the main line of the Canadian Pacific Railway, south-westerly to or near township three, range twenty-seven, west of the first principal meridian, and thence westerly, a total distance of one hundred miles; and also a similar grant, at the same rate per mile, for the said company's proposed branch railway from a point on the line just described at or near township three, range twenty-seven, west of the first principal meridian, easterly to Deloraine, a distance of about twenty-five miles, making the total length of railway to which this grant is applicable one hundred and twenty-five miles.

19. To the Brandon and South-western Railway Company, Dominion lands to an extent not less than six thousand four hundred acres per mile for the line of railway from a point in township one, in either range twenty-three or twenty-four west of the first principal meridian, to Deloraine, a distance of about seventeen miles.
20. To the Lac Seul Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point at or near Shelly Station, on the main line of the Canadian Pacific Railway, to a point at or near White Mud Lake, on the Winnipeg River, a distance of about eighteen miles.
21. To the Calgary and Edmonton Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from Calgary to a point at or near Edmonton on the North Saskatchewan River, a distance of about one hundred and ninety miles; and also a grant of six thousand four hundred acres for each mile of the company's railway from Calgary to a point on the international boundary between Canada and the United States, a distance of about one hundred and fifty miles.
22. To the North-western Coal and Navigation Company (Limited) Dominion lands to an extent not exceeding three thousand eight hundred and forty acres for each mile of the company's railway from Lethbridge to the Crow's Nest Pass, a distance of about one hundred miles.
23. To the Lake Manitoba Railway and Canal Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile, for a line of railway from Portage la Prairie to Lake Winnipegosis, at or near Meadow Portage, a distance of about one hundred and twenty-five miles.
24. To the Manitoba and South-eastern Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile, for a line of railway from Winnipeg southerly or south-easterly to a point on the west side of the Lake of the Woods, a distance of about one hundred and ten miles.

The said grants and each of them may be made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof, and except as to such conditions, the said grants shall be free grants; subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash, on the issue of the patents therefor.

The lands by this Act authorized to be granted to the Canadian Pacific Railway Company shall be taken and held, and may be disposed of, free and clear of any encumbrance on the lands or property of the said company created before the passing of this Act.

By the special Act 53 Vic., cap. 3, 1890 (*Assented to 26th March, 1890*):—

25. The Act 52 Victoria, chapter 4, authorizing, in error, the grant of land to the North-western Coal and Navigation Company, for fifty miles from Lethbridge to the international boundary, was amended—the said grant being made to the Alberta Railway and Coal Company.

By 54-55 Vic., cap. 9, 1891 (*Assented to 30th September, 1891*):—

26. In lieu of the subsidy in land authorized by the Act 52 Victoria, chapter 4, to be granted to the Red Deer Valley Railway and Coal Company, and subject to the conditions in the said Act mentioned, the Governor in Council may grant Dominion lands to the said company to an extent not exceeding six thousand four hundred acres for each mile of the said company's railway, from the town of Calgary, in the district of Alberta, in the North-west Territories, to a point in or near township twenty-nine, range twenty-three, west of the fourth meridian, a distance of about fifty-five miles.

Department of Railways and Canals.

By 54-55 Vic., cap. 10, 1891 (*Assented to 30th September, 1891*):—

- 27.** To the Manitoba South-western Colonization Railway Company, in addition to the subsidy for one hundred and fifty miles of railway authorized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter sixty, Dominion lands to the extent of six thousand four hundred acres per mile for the balance of the two hundred and twelve miles of railway which have been constructed and are in operation, that is to say, for a distance of sixty-two miles.
- 28.** Also, to the Manitoba South-western Colonization Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's branch line of railway from Carmen to Barnsley, a distance of about six and one quarter miles.
- 29.** To the Canadian Pacific Railway Company, in addition to the subsidy authorized by the Act 53 Victoria, chapter 4, for the company's branch line running in a south-westerly and westerly direction from a point at or near Brandon for a distance of one hundred miles, Dominion lands to the extent of six thousand four hundred acres for each mile of the extension westward of the said branch line, from the western limit of the said one hundred miles to a point at or near La Roche Percée, situated in township one, range six, west of the second meridian, a distance of about sixty miles.

"The said grants and each of them shall be made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof, and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively, of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash, on the issue of the patents therefor."

By the Act 57-58 Vic., cap. 6, 1894 (*Assented to 23rd July, 1894*):—

- 30.** To the Rocky Mountain Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point at or near Olds Station on the line of the Calgary and Edmonton Railway in a westerly direction to the Red Deer River and thence along the said river in a westerly direction to the coal fields, a distance of about sixty miles.
- 31.** To the Canadian Pacific Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point at or near Souris on the Souris Branch of the Canadian Pacific Railway, in a westerly direction to the Pipestone Valley, a distance of about thirty-two miles.
- 32.** To the Brandon and South-western Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from a point in township one, in either range twenty-three or twenty-four west of the first principal meridian, to a point at or near Deloraine, a distance of about seventeen miles.
- 33.** To the Saskatchewan and Western Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres per mile for a line of railway from Minnedosa to Rapid City, a distance of about fifteen miles.

The said grants and each of them may be made in aid of the construction of the said railways respectively in the proportion and upon the conditions fixed by the Orders in Council made with respect thereto; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of the survey of the lands and incidental expenses at the rate of ten cents per acre in cash on the issue of the patents therefor.

The lands authorized by this Act to be granted to the Canadian Pacific Railway Company shall be taken and held, and may be disposed of, free and clear of any encumbrance on the lands or property of the said company created before the passing of this Act

PART IV

MISCELLANEOUS STATEMENTS

No.

SUBSIDY Agreements for the Construction of Railways

File No. of Contract.	Date of Signature of Contract.	Name of Railway Company.	Line of Railway to be Constructed.	Acts of Canada granting Subsidy.
	1896.			
*12,306	July 3..	Lobinière and Megantic Ry. Co.	Amending Subsidy Contract No. 11908 of 19th Nov., 1894, by substituting $2\frac{1}{2}$ miles on the northern end of their line for the $2\frac{1}{2}$ miles from Lyster Station to Lyster.	57-58 V., c. 4
*12,479	July 30..	Midland Ry. Co.	From Newport or Windsor to a point on proposed branch of the Intercolonial Railway, also a railway bridge over Shubenacadie River.	57-58 V., c. 4
*12,511	July 30..	Montfort Colonization Ry. Co.	From end of the 21 miles already subsidized westward to a point on the Rouge River, County of Argenteuil.	57-58 V., c. 4

* These appeared in last report.

OTTAWA, 30th June, 1897.

Department of Railways and Canals

1.

entered into during the Fiscal Year ended 30th June, 1897.

Amount of Subsidy.		No. of miles subsidized.	Maximum Grade Feet per mile.	Radius of curvature not less than.—	Width of clearing each side.	Width of cutting.	Embankment.	Steel rails, lbs. per lineal yard.	Date for completion.
Per mile.	Not exceeding.								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	48,000	2½	80	1,910	50	20	14	56	July 1, 1897.
3,200	300,000	90	65	881	50	20	15	56	Aug. 1, 1898.
3,200	38,400	12	175	573	50	19	14	56	Aug. 1, 1897.

WALTER S. DOULL,
Law Clerk.

No. 2.

STATEMENT of Contracts entered into during the Fiscal Year ended 30th June, 1897.

1. INTERCOLONIAL RAILWAY.

No. of Contract.	Contractor.	Date of Signature.	General Description.
12556	Dominion Bridge Co., Ltd.	Aug. 12, 1896.	A 55-ft. turntable for Dartmouth, N.S.
12557	John McDougall & Co.	do 1, 1896.	1,500 car wheels.
12561	Galena Oil Works, Ltd.	Sept. 17, 1896.	Supply Sibleys and Galena oil for Govt. railways
12562	do do	do 23, 1896.	Supply oil for Intercolonial Railway.
12585	J. B. Manus	Aug. 4, 1896.	Build abutments, Missaquash Bridge (E. of Opohaqua station).
12584	Rhodes, Curry & Co.	do 1, 1896.	Deliver 1,500 double plate 33-inch chilled car wheels.
12620	Arthur Wetmore	Dec. 4, 1896.	Build section house at Lakeside, N.B.
12624	Frank McLeod	Oct. 23, 1896.	Painting buildings and bridges during year 1896.
12625	W. A. Metzler	do 20, 1896.	do do do
12626	L. B. McElhinney	do 24, 1896.	do do do
12641	George P. Rogers	do 23, 1896.	do do do
12635	F. Pichette	Dec. 31, 1896.	Sell newspapers, &c., at Lévis station.
12648	Charles G. Beaulieu	Jany. 8, 1897.	Remove rock at Rivière du Loup.
12661	Joseph Gosselin	do 26, 1897.	Build freight shed and platform at St. Flavie, P.Q.
12668	Alfred Samson	do 26, 1897.	Build a section house at Sacré Cœur, P.Q.
12665	Joseph McDonald	Feby. 6, 1897.	Construct coal shed and move and refit freight sheds at Pictou.
12668	Peter F. McConnell	do 1, 1897.	Construct 500 lineal rods of snow fencing between Oxford Junction and Pictou.
12669	Wm. Talbot	Jany. 25, 1897.	Construct 300 lineal rods of snow fencing between Point Tupper and Sydney.
12670	J. S. & A. S. Ross	Feby. 8, 1897.	Supply 50 standard switch stands.
12673	Charles McNeil	do 9, 1897.	do 480 farm crossing gates.
12682	H. Boulay	Jany. 25, 1897.	Build a freight shed at Causapecal.
12688	Hugh McDonald and E. W. Johnston.	Feby. 20, 1897.	Supply 44 standard switch gates.
12692	James Brown	do 24, 1897.	Extension freight shed at Truro.
12700	The Maryland Steel Co. of Baltimore Co.	April 13, 1897.	Supply 1,000 tons of steel rails for Prince Edward Island Railway and 3,000 tons for Intercolonial Railway.
12736	The Central Bridge and Engineering Co., Ltd.	March 24, 1897.	Construct two short span steel bridges near Pomquet Station.
12737	L. A. Cloutier	April 3, 1897.	Paint buildings and bridges, 1897.
12738	Joseph Malenfant	do 1, 1897.	Erect freight shed at Rivière du Loup.
12739	H. B. Hurley	do 6, 1897.	Paint buildings and bridges, 1897.
12746	Edward Crossman	do 19, 1897.	Erect 1,000 rods fence between Truro and Painsec Junction; and 1,000 rods between Moncton and Newcastle (Intercolonial and Windsor Branch Railways).
12747	The Dominion Bridge Co., Ltd.	do 6, 1897.	Manufacture deck plate girder bridge at Little Riv.
12762	John Kelly	do 24, 1897.	Erect 290 rods fence between Windsor Junction and Windsor 1,300 rods between Halifax and Stellarton—Windsor and Annapolis Railway and Intercolonial Railway.
12764	Peter P. Doucet	do 19, 1897.	Erect 1,000 rods fence between Newcastle and Campbellton.
12765	The American Furniture Co. of Oxford.	do 29, 1897.	Construct section house at Henderson's siding.
12775	Alphonse Caron	do 12, 1897.	Paint St. Eloi, St. Fabien and St. Anaclet Stations.
12776	Celestin Belanger	do 26, 1897.	Erect 3,000 rods fence between St. Flavie and Rivière du Loup.
12777	James Brown	May 14, 1897.	Move Intercolonial Railway freight shed at Moncton, N.B.

Department of Railways and Canals.

STATEMENT of Contracts entered into during the Fiscal Year ended 30th June, 1897—
Continued.

1. INTERCOLONIAL RAILWAY—Concluded.

No of Contract.	Contractor.	Date of Signature.	General Description.
12781	Michael Francoeur.....	April 26, 1897..	Erect 5,000 rods fence between Campbellton and St. Flavie and 1,760 rods between Rivière du Loup and Lévis.
12789	Smith H. Brown.....	June 11, 1897..	Move check office and unclaimed goods warehouse at Moncton, N.B.
12918	The Cumberland Railway and Coal Co.	do 30, 1897..	Supply 45,000 tons coal, 2,240 lbs each; also 5,000 tons slack coal.
12919	Intercolonial Coal and Mining Co.	do 30, 1897..	Supply 25,000 tons of coal (2,240 lbs.) during 12 months from 1st July, 1897.
12920	The Canada Coal and Railway Co.	do 30, 1897..	Supply 20,000 tons of coal (2,240 lbs.) during 12 months from 1st July, 1897.
12921	The Acadia Coal Co.	do 30, 1897..	Supply 25,000 tons of coal, season 1897-98.
12928	General Mining Association..	do 30, 1897..	do 5,000 do do

2. CHAMBLY CANAL.

12575	Chamblly Manufacturing Co..	Nov. 10, 1896..	Modifying agreement of 31st Jan., 1893, Cross Dam, Willett's Mills.
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3. CARILLON AND GRENVILLE CANALS.

12704	Pigott & Ingles	April 9, 1897..	Deepen and enlarge prism, construct weir, bridges, &c.
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4. RIDEAU CANAL.

12582	Hugh Grant.....	Oct. 30, 1896..	Masonry abutments, bywash, Smith's Falls.
12613	John R. Booth.....	Dec. 4, 1896..	Piling portion east side Deep Cut, Ottawa.
12654	Central Bridge and Engineering Co., Ltd.	Feb. 5, 1897..	Build 1 steel rivetted swing bridge, Burrets Rapids, and 1 high level steel fixed bridge, Newboro'.
12666	Central Bridge and Engineering Co., Ltd.	do 26, 1897..	Build steel rivetted bridge, bywash, Smith's Falls.
12676	Thomas McTiernan.....	March 2, 1897..	Supply 4,150 cubic feet white oak, 1897-98.

5. SAULT STE. MARIE CANAL.

12460	Lipsett & Gregg	July 6, 1896..	Erect residence for superintendent.
12671	J. & R. Miller	March 5, 1897..	Repair and strengthen gates, &c.

STATEMENT of Contracts entered into during the Fiscal Year ended 30th June, 1897—
Continued.

6. SOULANGES CANAL.

No. of Contract.	Contract.	Date of Signature.	General Description.
12693	M. J. Hogan.....	April 5, 1897..	Reletting section 12.
12701	Andrew Onderdonk.....	do 17, 1897..	Reletting sections 4, 5, 6 and 7.
12714	The Rathbun Co.....	do 12, 1897..	Supply 25,000 brls. Portland cement for Soulanges and Trent Canals.
12720	James Battle.....	do 29, 1897..	Supply 27,000 brls. Thorold hydraulic cement for Soulanges and Trent Canals.
12722	C. I. de Sola.....	do 29, 1897..	Supply 23,500 brls. Portland cement for Soulanges and Trent Canals.

7. TRENT CANAL WORKS.

12506	Larkin & Sangster.....	Aug. 12, 1896..	Construct abutments and piers G. T. Ry., Otanabee.
12547	Central Bridge and Engineering Co., Ltd.	Oct. 21, 1896..	do 4 highway swing bridges.
12549	Canadian Bridge and Iron Co., Ltd.	do 22, 1896..	do 1 fixed highway bridge.
12587	Hamilton Bridge Works Co., Ltd.	Nov. 13, 1896..	do railway bridge at Auburn.
12592	Canadian Bridge & Iron Co., Ltd.	do 9, 1896..	do do at Simcoe and Balsam Lake
12656	Central Bridge and Engineering Co., Ltd.	Feb. 13, 1897..	do railway swing bridge at Nassau.
12716	The Dominion Bridge Co.....	May 5, 1897..	do 1 plate bridge at Simcoe and Balsam Lake, and 1 highway bridge at Portage Road.
12718	Owen Sound Portland Cement Co., Ltd.	April 20, 1897..	Supply 10,000 brls. Portland cement.
12722	C. I. de Sola.....	do 29, 1897..	do 23,500 brls. Portland cement for Trent and Soulanges Canals.
12734	Central Bridge and Engineering Co., Ltd.	do 30, 1897..	1 steel railway swing bridge, C. P. Ry. crossing at Ashburnham.
12743	James Boque.....	May 10, 1897..	1 pivot pier and abutments for swing bridge at Ashburnham.
12714	The Rathbun Co.....	April 12, 1897..	Supply 25,000 brls. Portland cement for Trent and Soulanges Canals.
12720	James Battle..	do 29, 1897..	Supply 27,000 brls. Thorold hydraulic cement for Trent and Soulanges Canals.
12847	Central Bridge and Engineering Co., Ltd.	Dec. 1, 1896..	Construct 1 steel highway bridge at Norwood Road.

8. PRINCE EDWARD ISLAND RAILWAY.

12596	Schurman Lefursey Co., Ltd.	Oct. 21, 1896..	Build passenger station, Tignish.
12744	Dominion Bridge Co., Ltd.	May 3, 1897..	Manufacturing 2 short span steel bridges.
12700	The Maryland Steel Co. of Baltimore County.	April 13, 1897..	Steel rails; See I. C. Ry.

9. WELLAND CANAL CONTRACTS.

12630	John Riley.....	Jan. 16, 1897..	Remove portion present superstructure, and construct concrete superstructure.
12639	James Cunningham.....	do 20, 1897..	Supply iron, brass, &c.
12642	John McLean.....	Feb. 2, 1897..	do timber, old and new lines.
12644	Cooke & Son.....	do 2, 1897..	do do do
12646	Ray & German.....	March 22, 1897..	do do do
12652	P. D. Gordon & Co., agents, B. C. Mills.	Feb. 8, 1897..	do do do

Department of Railways and Canals.

STATEMENT of Contracts entered into during the Fiscal Year ended 30th June, 1897—
Concluded.

10. WILLIAMSBURG CANAL.

No. of Contract.	Contract.	Date of Signature.	General Description.
12458	The Gilbert Blasting and Dredging Co.	July 31, 1896..	Dredge and deepen Farran's Point Canal.
12605	Wm. Davis & Sons.....	Dec. 14, 1896..	do Galops Canal.
12756	Larkin & Sangster.....	May 20, 1897..	Deepen, strengthen and enlarge Iroquois section.
12758	Wm. Davis & Sons.....	do 10, 1897..	Enlarge Galops Canal, Cardinal section, north line.
12767	M. A. Cleveland.....	do 14, 1897..	Improve north channel, River St. Lawrence between Galops Canal and Prescott.
12769	Canadian Construction Co....	June 1, 1897..	Deepen, strengthen, enlarge and extend prism, Farran's Point, and construct lift lock, entrance piers, &c , &c.

WALTER S. DOULL,

Law Clerk.

OTTAWA, 30th June, 1897.

No.

GENERAL

SHOWING Water Power and other Public Property leased by the Department

Date of Signature.	Term of Lease.	Lessees.	Property Leased.	Area of Property Leased.
			<i>1. Beauharnois Canal.</i>	
Nov. 19, '96	4 years	Valleyfield Electric Co.	Pt. cadl. lot 830, Valleyfield, head of canal.	.....
			<i>2. Carillon and Grenville Canals.</i>	
May 18, '97	21 years	W. R. Hibbard	2,000 h. p. surplus water with the option of 2,000 h. p. extra at Point Fortune.	.....
do 22, '97	21 do	Geo. O. S. Conway..	Pt. Canal Reserve land between Grenville Canal and Ottawa River, excepting a right of way of 20 feet.	4'14 acres.
			<i>3. Cornwall Canal.</i>	
June 25, '96	21 do renewable.	M. P. Davis.....	Pt. lot 1, lower end Sheik's Island, and water privileges.	4'88 acres.
do 3, '97	Pleasure of Government.	L. A. Ross	Permission to construct a slide for hauling saw-logs and timber to his own saw-mill.	.....
			<i>4. Intercolonial Railway.</i>	
May 8, '97	3 years	The Canada Railway News Co.	Privilege of selling newspapers, &c., on the trains of I. C. Ry.	.....
			<i>5. Lachine Canal.</i>	
Nov. 15, '96	Pleasure of Government.	F. Tremblay.....	Lot 15, E. St. Gabriel's Basin, St. Ann's Ward, Montreal, N.W. side canal.	16,912 sq. ft.
Dec. 10, '96	do	Daniel Cream	150 ft. in New St. Gabriel's Shed No. 1, Montreal.	150 ft.
do 14, '96	do	Thibeault & Co.....	Lot 12, St. Gabriel's Basin, St. Ann's Ward, Montreal.	9,444 ft.
Mch. 11, '97	do	Standard Light and Power Co.	Lay an Electric Cable across Lachine Canal, end Seminary St. of Montreal.	.....
do 27, '97	do	Wm. Wainwright...	Lots 23 and 24, and Wharf abutting on canal, W. side of Basin No. 2.	43,740 sq. ft.
do 27, '97	do	do	Wharf lot at the head of Basin No. 2.....	5,250 sq. ft.
April 27, '97	do	T. Préfontaine & Co.	Parcel of land at Napoleon bridge, and privilege of laying siding between lot leased and G. T. Ry.	5,500 sq. ft.
			<i>6. Prince Edward Island Railway.</i>	
May 1, '96	1 year.....	Sydney Grey	License to sell newspapers on P. E. I. Ry..	.....
			<i>7. Rideau Canal.</i>	
*July 4, '96	Pleasure of Government.	Michael Keily	Pts. Nos. 1, 2, 3, 4, Rideau Canal Reserve, Deep Cut, Ottawa.	1'50 acres.
* do 4, '96	do	Ottawa Brick Manufacturing Co.	Reserve land, pt. tp. lot 35, con. Letter B, tp. Nepean.	3'18 acres.

* These appeared in last Report.

Department of Railways and Canals

3.

STATEMENT

of Railways and Canals during the Fiscal Year ended 30th June, 1897.

For what purpose used.	Amount of Water Power Leased.	Date from which Lease is reckoned.	Terms of Payment.				Remarks.
			Annual Rental.	Amount of each instalment.	When due each year.	When first instalment was due.	
			\$ cts.	\$ cts.			
Electric Light Station for lighting town.	75 h. p. . .	Jan 1, '96	\$15 for land; \$300 for use of 75 h. p. & \$5 for each h. p. over.		Jan. 1 and July 1.	Jan. 1, '96	This cancels Lease No. 8961.
Manufactur'g purposes.	2000 h. p. surplus water & 2,000 h.p. extra.	Apl. 1, '97	\$2,000 minimum; \$1 for each h. p. up to 2,000 h. p.; \$1 for each h. p. over said 2,000 h. p. up to 4,000 h. p.		April 1 . . .	July 1, '98	In advance.
do		May 1, '97	\$ 100 00		May 1 . . .	May 1, '97	do
Erection of electric plant, &c.		July 1, '96	1,000 00	500 00	Jan. 2 and July 1.	July 1, '96	1st 2 yrs. rent not charged on account of erection of necessary buildings, &c.
Hauling saw-logs.		Jan. 1, '97	50 00		Jan. 1 . . .	Jan. 1, '97	In advance.
Sell newspapers.		May 1, '97	{ 1st yr., \$3,600 cash. do \$500 advertis'g 2nd yr., \$3,700 cash. do \$500 advertis'g 3rd yr., \$3,800 cash. do \$500 advertis'g Monthly.		May 1 . . .	May 1, '97	
Storage of lumber.		Dec. 1, '96	190 26		Dec. 1 . . .	Dec. 1, '96	In advance.
do		do 1, '96	150 00	12 50 per month.	1st of each month.	do 1, '96	Cancelled by O. C. 165102.
do		do 1, '96	106 25		Dec. 1 . . .	do 1, '96	In advance.
		Jan. 1, '97	10 00		Jan. 1 . . .	Jan. 1, '97	do
		Apl. 1, '97	656 00		April 1 . .	Apl. 1, '97	do
		do 1, '97	78 00		do 1 . . .	do 1, '97	do
Hauling and piling lumber.		do 1, '97	50 00		do 1 . . .	do 1, '97	do
Sell newspapers.		May 1, '96	300 00	25 00 per month.	5th day of each mo.	May 5, '96	
		June 1, '96	8 00		June 1 . . .	June 1, '96	In advance.
		do 1, '96	1 00		do 1 . . .	do 1, '96	do

GENERAL STATEMENT showing Water Power and other Public Property

Date of Signature.	Term of Lease.	Lessees.	Property Leased.	Area of Property Leased.
<i>Rideau Canal—Concluded.</i>				
*Aug. 12, '96	Pleasure of Government.	Thomas Birkett.....	Wharf lots 9 and 10, W. side canal, between Sapper's bridge and Basin, Ottawa.	6,000 sq. ft.
*Sept. 18, '96	do	Elizé G. Laverdure..	Wharf lots 5 and 6, W. side Canal Basin, Ottawa.	do
Mch. 24, '97	do	Francis Hourigon..	Pt. lot 2, tp. S. Elmsley, pt. canal land at Smith's Falls detached lock station.	1,500 sq. ft.
do 30, '97	do	A. G. McCormick...	Wharf lots Nos. 7 and 8, western side Rideau Canal, between Sapper's bridge and Basin, Ottawa.	6,000 sq. ft.
June 24, '97	do	John Spendlow.....	Pt. Reserve land, Rideauville, tp. of Nepean, Co. of Carleton.	4½ acres.
<i>S. Welland Canal.</i>				
*July 2, '96	do	Ontario Peat Fuel Co	Cross Welland Canal Feeder by a swing bridge.	.....
* do 3, '96	do	Wm. L. Rice.....	Pt. lot 26, 5th con., Crowland.....	0·70
*Aug. 20, '96	do	W. B. Clark.....	Pts. lots 20 and 21, 2nd con., tp. Grantham.	15·00
*Oct. 6, '96	21 yrs. renewable once only	Whitman & Barnes Manufacturing Co.	Lot 14, 7th con., tp. Grantham, old Lock House lot at Lock No. 6.	†
do 30, '96	21 years.....	The Toronto Rubber Shoe Mfg. Co., Ltd.	Pt. Canal Reserve land, Co. of Lincoln...	1st pt. of an acre.
Nov. 19, '96	During corporate existence of Co.	Port Dalhousie, St. Catharines & Thorold Street Ry. Co.	Lay a street ry. track to cross with their electric cars Welland Canal bridges on Queenston and Grimsby road and on Ontario street.	.....
Dec. 15, '96	Pleasure of Government.	Mutual Natural Gas Co., Ltd.	Lay a pipe at Augustine's saw mill, under canal.	.....
Jan. 13, '97	do	Grand Trunk Ry. Co.	Lot of land, Co. of Welland.....	255 suppl. ft.
Feb. 2, '97	do	Corporation of the Town of Welland.	Pt. lot 26, 5th con., town of Welland, Co. of Welland.	0·03 acre.
Mch. 27, '97	During corporate existence of Co.	Lincoln Radial Electric Ry. Co.	Cross swing bridge over old Welland Canal on St. Paul street.	.....
April 1, '97	10 years.....	N. J. Wigle.....	Pt. lot 21, 5th con., Grantham, with privilege of erecting a wharf and storehouse.	0·82
June 16, '97	Pleasure of Government.	Herbert Reuter.....	Pt. lot 223, tp. Thorold, and pt. lot 00, Welland, Co. of Welland.	6½ acres.
do 26, '97	do	Morwood Manufacturing Co.	Pt. lot 26, 5th con., town of Welland.....	0·04

* These appeared in last Report.

June 30, 1897.

Department of Railways and Canals

leased by the Department of Railways and Canals, &c.—*Concluded.*

For what purpose used.	Amount of Water Power Leased.	Date from which Lease is reckoned.	Terms of Payment.				Remarks.
			Annual Rental.	Amount of each instalment.	When due each year.	When first instalment was due.	
			\$ cts.	\$ cts.			
		July 1, '96	54 60		July 1	July 1, '96	In advance.
Loading car- go.		May 1, '96	54 60		May 1	May 1, '96	do
Ice house		Apl. 1, '97	3 00		April 1	Apl. 1, '97	do
Storage of flour.		Nov. 1, '96	100 00		Nov. 1	Nov. 1, '96	do
Pasturage		June 1, '97	9 50		June 1	June 1, '97	do
Connect with C. S. Ry.		do 1, '96	1 00		do 1	do 1, '97	do
Coal & lumber yard.		July 1, '96	25 00		July 1	July 1, '96	do
		do 1, '96	37 50		do 1	do 1, '97	do
Flour & card mill.		Oct. 1, '96	75 00		Oct. 1	Oct. 1, '96	do
		do 1, '96	10 00		do 1	do 1, '96	do
Electric street railway.		July 1, '94	1 00		July 1	July 1, '94	do
	1½-in. pipe	Dec. 1, '96	10 00		Dec. 1	Dec. 1, '96	do
Signal cabin.		Oct. 1, '96	1 00		Oct. 1	Oct. 1, '96	do
Hose reel house.		Jan. 1, '97	1 00		Jan. 1	Jan. 1, '97	do
Passing their electric cars.		do 1, '97	1 00		do 1	do 1, '97	do
Wharf and storehouse.		Apl. 1, '97	15 00		April 1	Apl. 1, '97	do
Pasturage		May 1, '97	13 00		May 1	May 1, '97	do
Yard and site for store- house.		do 1, '97	8 00		do 1	do 1, '97	do

WALTER S. DOULL,
Law Clerk.

No. 4.

PROPERTY conveyed and damages released to the Department of Railways and Canals during the fiscal year ended 30th June, 1897.

Date of Signature.	Grantor.	Lot.	District.	County.	Area of Land.	Amount paid.	Remarks.
Sept. 1, 1896. Feb. 9, 1897.	Pierre Lacouture, <i>et al.</i> Alphonse Robert.	24, Con. 1 25.	<i>Chambly Canal.</i> St. Luc. do	St. Jean do		\$ cts. 1,310 98 150 00	Release, damages. do do
Jan. 2, 1897. April 30, 1897.	John Burns, <i>et ux.</i> Wm. A. Roys.	W $\frac{1}{2}$ 19, Con. 1. W $\frac{1}{2}$ 24, Con. 1.	<i>Cornwall Canal.</i> Cornwall do	Stormont. do	2.43 acres. 0 $\frac{1}{2}$ do	800 00 950 00	
Oct. 21, 1896. June 14, 1897.	J. M. Robinson. John B. & Wm. C. Magee.	Harbour Pt. Wharf Lot.	<i>Intercolonial Railway.</i> St. John. Reed's Point.	St. John Kings, N.B.		2,000 00 3,414 79	and \$786.40 costs, dam. Release, judgment.
Jan. 7, 1897.	J. J. Cook	Pt. 140.	<i>Lachine Canal.</i> Parish Montreal	Hochelaga.		150 00	Leakage claim.
Nov. 13, 1896.	Ellen Wood.	B. & 9b, etc.	<i>Oxford & New Glasgow Ry.</i> Oxford	Cumberland	18.60 acres. 0.57 do	158 22	Release.
Mch. 25, 1897. May 7, 1897.	James H. Gould, <i>et ux.</i> Benson S. Snyder.	Pts. 5, 89 R 9. Pt. ft. 4 N.E. 4 13, Con. 7.	<i>Rideau Canal.</i> Smith's Falls. North Elmsley.	Lanark do	0.52 do 0.14 do 0.06 do 3 ac. 2 r. 35 poles.	1,350 00 1,000 00	do do
Sept. 17, 1896.	James Bedford.	S.E. 4, Sec. 17, Tp. 2, R. 3 Pembina Branch East.	<i>C. P. Railway.</i>		5.3 acres.		Torrens Certificate.
Oct. 26, 1896. Feb. 19, 1897.	Timothée Moreau. Joseph Dumesnil.	22. 138.	<i>Soulanges Canal.</i> St. Michael de Vaudreuil. St. Ignace.	Vaudreuil Soulanges	15 pch. 200 ft. 15 pch. 200 ft.	65 00 900 00	

Department of Railways and Canals

Trent Valley Canal.									
*Sept. 26, 1896.	Robert Lunan, <i>et ux.</i>	Pts. 18 & 19, Cons. 3-4.	Eldon	Victoria.	64.70 acres.	975 00	Agreement to take possession.		
Oct. 27, 1896.	Can. Bk. of Commerce.	Dam	Nassau, Douro	Peterborough.			Received too late for last report.		
June 19, 1896.	Robert Hodgson.	Pt. 12, Con. 9.	Thorah.	Ontario.	4.60 acres.	175 00			
Oct. 10, 1896.	James Baprie, <i>et ux.</i>	26 & 27, Con. V	Smith.	Peterborough.	12.14 do	600 00			
July 13, 1896.	Jane Montgomery, Estate John Montgomery.	Pt. 12, Con. C.	Mara	Ontario.	4.80 do	500 00			
*do 7, 1896.	Hamilton Provident L. Sy.	Pt. 2, Con. A.	do	do	5 do	200 00			
do 14, 1896.	Alex. F. McRae, <i>et al.</i>	Pt. 2, Con. B, Pt. E. 1 of N. 1	do	do	2.00 do	60 00			
June 18, 1896.	Mary Ann McQuig.	9, Con. 10	Thorah.	do	5.70 do	475 00	do		
May 16, 1896.	Angus McDonald, <i>et ux.</i>	Pt. 46, S. Portage Road.	Eldon	Victoria.	11.10 do	120 00	do		
*Aug. 6, 1896.	Esther E. Stabback.	Pt. 4.	do	do	0.05 do	15 00			
*do 10, 1896.	Ben. Madill, <i>et ux.</i>	Portage Lot 11, Pt. 27, Con. 2 & Pt. 27, Con. 1.	do	do	47.10 do	1,300 00			
*July 18, 1896.	John McKay, executor.	Pt. 6, Con. B.	Mara	Ontario.	1 do	30 00	Est. of Jas. McGregor.		
*do 23, 1896.	Wm. Kean, <i>et ux.</i> , executors	Pt. 1, Cons. A & B, road allowance.	do	do	9.30 do	250 00	Executors John Gov.		
Oct. 31, 1896.	Mary A. Robinson <i>et al.</i> executors Ed. Chamberlen	W. Pt. Blk. H. & Pt. 27, Con. 8.	Smith.	Peterborough.	0.51 acre.	950 00			
Nov. 28, 1896.	Michael Byrne, <i>et al.</i>	{ Pt. 4, Con. 5.	Cardon	Victoria.	305 do	3,700 00			
Dec. 10, 1896.	Wm. McFarlane, <i>et ux.</i>	{ Pt. 32, Cons. 5-6.	Eldon.	Peterborough.	1 1/2 do	150 00	Release damages.		
Dec. 19, 1896.	Wm. Moffatt.	Cellar and Pt. Lot 3.	Smith.	do	30.63 do	76 00	Injury to crops.		
52Sept. 4, 1896.	Frances McElroy, <i>et ux.</i>	E 1/2 2 Con. 12.	Duro.	Victoria.	57.34 do	1,065 00			
Sept. 23, 1896.	W. S. Burns, <i>et ux.</i>	Pts. 2 and 3 on Con. V. & 3 Con. VI.	Cardon.	do					
Jan. 23, 1897.	James Steele.	Pt. 3, Con. B.	Mara	Ontario.	15.10 do	1,000 00			
Jan. 27, 1897.	David Smith, <i>et ux.</i>	Pt. W 1/2 2nd Con. & E. 1/2 1st Con. 27.	Eldon.	Victoria.	0.90 do	70 00			
Mch. 16, 1897.	John Barrett.	Pt. 1 E. Caroline, N. Maria Sta.	Lakefield.	Peterborough.	0.15 do	2,350 00			
Mch. 19, 1897.	Patrick Cronan.	Pt. W. 1/2 2, Con. 7.	Cardon.	Victoria.	8.10 do	190 00			
Feb. 18, 1897.	Eliz. J. Killingsworth.	E. 1/2 Con. 7.	do	do	0.60 do	8 00			
Apr. 14, 1897.	Richard Fitzgerald.	Pt. 2, N. side King St.	Balover, Eldon.	do	0.15 do	15 00			
Apr. 26, 1897.	John Henry Davis.	Pt. 1, 2, Con. 7.	Cardon	do	20.25 do	175 00			
May 18, 1897.	Mary A. Robinson, <i>et al.</i> Edward Jos. Desautel.	W. Pt. Blk. H.	Lakefield Tp. Smith	Peterborough.	0.51 do	110 00	Release damages.		
June 18, 1896.	John McRae, <i>et al.</i>	Pt. 6, Con. X.	Duro.	do	3.91 do	800 00			
May 13, 1896.	The Grand Trunk Ry. Co.	Pts 14 & 15, bet. Maria and Catherine Sta.	Lakefield.	do	0.27 do	500 00			
		{ Pts 1, 2, & 3, Con XI.	Thorah.	Ontario.	48.90 do	4,040 00	Received too late for last report.		
		{ Pts. 2, Con A.	Mara.	do					
			Welland Canal.						
			Thorold.	Welland	9.21 do	2,226 00			
		{ Pts. 15.	Grantham.	Lincoln	2.91 do				
		{ Pts. 18, 3 & 4 Con..			1.10 do				

* These appeared in last report.

PROPERTY conveyed and damages released to the Department of Railways and Canals during the fiscal year ended 30th June, 1897.—*Con.*

Date of Signature.	Grantor.	Lot.	District.	County.	Area of Land.	Amount paid.	Remarks.
Sept. 30, 1896.	Patrick Keef.	Pt. W. & 24.	Williamsburg Canal.	Dundas, s. side	Iroquois cnl.	\$ 7,897 38	
May 31, 1897.	John A. Hutchcroft.	Pt. E. & 7, Con. 1.		Grenville.	0.13 acres.	1,850 00	
do	Mary Thompson.	do		do	0.21 do	1,700 00	
June 4, 1897.	Joseph Cooms et ux.	5, S. side Morrison St., E. of West Street.		do	0.10 do	800 00	
do	Eleanor Boyer	11, S. side Morrison St. & W. of West St.		do	0.06 do	850 00	
do	Chas. Wm. Wright, et ux.	Pt. E. & 7.		do	0.31 do	2,650 00	
do	Mahala Todd, et al.	N. & 6, E. side W. St.		do	0.09 do	1,010 00	
do	Samuel H. Webb, et ux.	Pt. E. & 7, Con. 1.		do	0.32 do	4,300 00	
May 31,	Margaret Wylie.	Pt. E. & 7.		do	0.32 do	2,800 00	
do	Silas Shaver, et ux.	Pt. E. & 7, W. & 7, Con. 1.		do	0.22 do	500 00	
May 31, 1897.	Joseph Scott, et ux.	Pt. E. & 7, W. & 7, Con. 1.		do	2.05 do	5,950 00	
do	Wm. Hiram Bass, et ux.	Pt. E. & 7, W. & 7, Con. 1.		do	0.36 do	450 00	
do	Anson Hawley, et ux.	N. & 10 & 11 S. side Elgin St.		do	0.11 do	600 00	
do	George Hawley, et ux.	13 & 14, N. side Elgin St.		do	0.23 do	950 00	
do	Andrew Ferguson, et ux.	Pt. 18		do	0.13 do	400 00	
do	Daniel Saver, et ux.	7, S. side Elgin St.		do	0.24 do	900 00	
do	John Feeney.	4, W. side Waddell St.		do	0.23 do	1,000 00	
do	Alex. Fawcett, et ux.	Lots lettered R. & S., N. side Dundas St.		do	0.26 do	1,300 00	
do	John Mills, et ux.	22 & 23, S. side North St.	do	do	0.23 do	275 00	
do	Thomas Hunter, et ux.	Pt. Lot lettered N., N. side Queen's highway.		do	0.008 do	65 00	
do	Abigail Morrison, et al.	Pt. E. & 6, N. Morrison St.		do	2.67 do	2,500 00	
do	Barbara L. Lambert, et al., executors and trustees of late J. P. Lambert.	All of 24 & 25, S. side N. St. and W. Lower St., Pt. 24 & 25 N. Lambert St., Blk. Z.		do	0.22 do	550 00	
do		Pts. 20 & 21, N. Lambert St., Blk. Z., and Pt. 7 W. Walter St.		do	0.02 do		
do		7, E. side Walter St., and 12, S. Side Morrison St., Blk. Z.		do	0.16 do		
do	Albert Kelly, et ux	15, N. side Elgin St., W. Lower St.		do	0.02 do	1,050 00	
do	J. H. Lamson. et ux.	Pt. of Pt. W. & 4, 1st Con.		do	0.29 do		
do	James Hodge, et ux.	Edwardsburg		do	0.11 do	700 00	
do				do		2,525 00	

WALTER S. DOULL, Law Clerk.

OTTAWA, 30th June, 1897.

PART V.

CANAL STATISTICS

Department of Railways and Canals.

CANAL STATISTICS

FOR

SEASON OF NAVIGATION 1896.

REVENUE.

The total revenue, exclusive of hydraulic rents for two years, is as follows :

For 1895.....	\$ 283,211 41
For 1896.....	350,061 03

By comparing the statistics of 1895 with 1896, it will be seen that the gross revenue has increased \$66,849.62.

The increases and decreases are as follows :—

	Increase.	Decrease.
On the Welland Canal	\$56,210 32	
“ St. Lawrence Canals	10,700 72	
“ Chambly Canal		\$ 1,773 93
“ Ottawa Canals		1,455 58
“ Rideau Canal		986 18
“ St. Peter's Canal	4,284 73	
“ Trent Valley Canals		217 56
“ Murray Canal	77 10	
“ Sault Ste. Marie Canal	10 00	
Total.....	\$ 71,282 87	\$ 4,433 25
Total increase	66,849 62	

In compliance with the renewed request of forwarders and shippers of Montréal for a continuance of the reduction of tolls on certain agricultural products, His Excellency the Governor General in Council on 23rd April, 1896, authorized a reduction of canal tolls, as follows :—

For the season of 1896 the canal tolls for the passage of the following food products, wheat, indian corn, pease, barley, rye, oats, flax-seed and buckwheat for passage eastward through the Welland Canal, shall be ten cents per ton, and for passage eastward through the St. Lawrence canals only, ten cents per ton, payment of the said tolls of ten cents per ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals.

In consequence of the reduced rates of tolls as above, being applicable to the said food products, irrespective of their destination, the reduced rate of ten cents a ton only was collected, and therefore no refunds were made on these articles for 1896.

It may be observed, however, that the reduction of tolls from twenty to ten cents per ton on the articles referred to, for passage through the Welland Canal, amounts to \$68,951.70.

QUANTITY OF GRAIN PASSED DOWN THE WELLAND CANAL.

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 fifteen years is as follows :—

QUANTITY PASSED DOWN TO MONTREAL.		QUANTITY ON WHICH FULL TOLLS WERE PAID.	
		To ports in Ontario.	Quantity from U.S. Ports to U.S. Ports.
	Tons.	Tons.	Tons.
1882.....	180,694		63,881
1883.....	186,814	10,650	121,876
1884.....	142,194	12,153	104,537
1885.....	96,569	11,909	117,346
1886.....	203,940	9,881	151,551
1887.....	185,034	11,838	134,868
1888.....	160,358	25,599	169,664
1889.....	267,769	19,075	213,766
1890.....	288,513	16,899	245,932
1891.....	295,509	6,805	202,710
1892.....	261,954	8,942	201,540
1893.....	501,806	25,555	222,958
1894.....	273,651	16,699	203,979
1895.....	231,491	32,096	133,823
1896.....	461,049	73,386	160,372

The tolls on grain for passage through the Welland Canal prior to 1884, were 20 cents a ton, since that date, however, reductions have been made by Orders in Council from year to year as follows:—Upon the urgent request of forwarders and others interested in the grain trade, a reduction was made of one-half the usual rate of tolls on grain passing down the Welland Canal and the St. Lawrence Canals to Montreal; and in 1885 tolls were reduced to 2 cents a ton, and thereafter from year to year, including 1891.

In 1892 the tolls were reduced to 2 cents a ton on grain passed down the Welland and St. Lawrence Canals and exported, and in such cases only.

In 1893, by Order in Council of 13th February, the tolls were reduced to ten cents a ton on grain passing eastward through the Welland Canal irrespective of its destination, and the same rate of tolls for 1894 were allowed by O. C., 16th April, 1894.

For the year 1895 (O. C., April 1st, 1895,) the same rate of tolls was allowed as was granted for the year 1894.

For the year 1896 (O. C., April 23rd, 1896) the same rate of tolls was allowed as was granted for the year 1895.

The rate through the St. Lawrence Canals only, was 10 cents a ton.

It may be remarked that goods having paid full tolls on the Welland Canal are allowed to pass down the St. Lawrence Canals to Montreal free from payment of any further tolls.

During the last decade the quantity of agricultural products, as above passed down the Welland and St. Lawrence Canals to Montreal, has increased from 185,034 tons in 1887 to 461,049 tons in 1896; and the quantity passed down the Welland Canal from United States ports to United States, has increased from 134,868 to 160,372 tons for the same years.

* 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, and in 1896, 77,355 tons.

Department of Railways and Canals.

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 1884	142,231
1885	160,821
1886	165,613
1887	191,760
1888	113,794
1889	94,943
1890	119,208
1891	184,410
1892	291,680
1893	147,610
1894	60,666
1895	51,114
1896	153,717

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 1884	174,496
1885	134,824
1886	272,133
1887	237,881
1888	166,191
1889	275,414
1890	242,571
1891	320,434
1892	302,899
1893	532,084
1894	288,015
1895	247,550
1896	495,898

Comparative shipments of grain by the St. Lawrence route, and rail and water via the state of New York, are as follows :—

QUANTITY OF GRAIN TO SEA-BOARD BY COMPETING ROUTES.

The quantity of grain and pease passed down the whole length of the St. Lawrence Canals to Montreal, is as follows :—

	Tons.
For 1895	247,550
1896	495,898
Showing an increase of	<u>248,348</u>

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways, is reported as follows :—

	Tons.
For 1895	51,114
1896	153,717
Showing an increase of	<u>102,603</u>

The quantity of grain arrived at tide-water by New York Canals, is reported as follows :—

	Tons.
For 1895	380,431
1896	753,039
Showing an increase of	<u>372,608</u>

The quantity of grain carried to tide-water by the New York railways, is reported as follows :—

	Tons.
For 1895	2,341,079
1896	3,864,760
Showing an increase of	<u>1,523,681</u>

The increases and decreases for 1896 as compared with 1895 on the several routes, competing for the carrying trade to the sea-board, are as follows :—

	Increase.	Decrease.	Increase.	Decrease.
On the St. Lawrence Canals	248,348		100·32	
do Canadian Pacific and Grand Trunk Railways	102,603		200·08	
do New York Canals	372,608		97·95	
do do Railways	1,523,681		65·08	

By reference to Appendix U, it will be seen that the quantity of freight from ports west of Port Colborne to the United States ports, Oswego, Ogdensburg, &c., has increased from 165,543 tons in 1884 to 311,349 tons in 1896, and the quantity to Ontario ports, between Port Dalhousie and Cornwall, has increased from 100,425 tons in 1884 to 112,950 tons in 1896. The quantity passed down to Montreal shows an increase from 168,715 tons in 1884 to 479,442 tons in 1896.

TRANSHIPMENT OF GRAIN.

The quantity of grain passed down the Welland Canal in Canadian and United States vessels to Kingston for thirteen years, is as follows :—

In Canadian vessels there were in

	Tons.
1884, 111 cargoes, with an aggregate quantity of	70,475
1885, 75 do	45,639
1886, 244 do	143,330
1887, 284 do	178,233
1888, 182 do	143,025
1889, 208 do	165,117
1890, 203 do	184,275
1891, 209 do	190,664
1892, 158 do	159,018
1893, 146 do	148,962
1894, 125 do	159,145
1895, 123 do	136,617
1896, 196 do	227,912

Department of Railways and Canals.

In United States vessels there were in—

			Tons.
1884,	117	cargoes with an aggregate quantity of	75,787
1885,	79	do do	55,982
1886,	97	do do	62,222
1887,	19	do do	12,477
1888,	60	do do	43,667
1889,	114	do do	108,358
1890,	35	do do	35,560
1891,	77	do do	90,153
1892,	89	do do	109,812
1893,	257	do do	328,269
1894,	84	do do	106,236
1895,	56	do do	73,987
1896,	158	do do	217,978

Three vessels took cargoes of 1,176 tons through to Montreal intact in 1896, four of 1,344 tons in 1895, two cargoes of 810 tons in 1894, none in 1893, two in 1892 of 924 tons, and three in 1891 of 1,441 tons. Sixteen vessels lightened a portion of their cargoes in 1896, against six in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891. Three hundred and thirty-five vessels discharged the whole of their cargoes at Kingston in 1896, against 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

The quantity of grain transhipped at Port Colborne in 1896 and the four previous years is given below.

The total number of grain laden vessels lightened at this port in 1896 was 238 against 162 the previous year.

The quantity of grain lightened was as follows :—

Articles.	1892.	1893.	1894.	1895.	1896.
	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat.	68,736	47,558	104,827	322,662	660,190
Corn.	576,289	759,000	260,657	870,705	908,833
Rye.	2,467	11,540	Nil	Nil	8,197
Oats.	102,529	35,353	63,412	71,648	79,585
Barley.				21,003	6,377

WELLAND CANAL.

The total quantity of freight passed on the Welland Canal during the season of 1896 was 1,279,987 tons; of this quantity 36,392 tons were way or local freight.

There were 988,718 tons of freight passed eastwards, and 291,269 tons passed westwards.

East and west bound through freight.

The total quantity of freight passed through the whole length of the Welland Canal during the season of 1896 was 1,243,595 tons.

Of this quantity 957,928 tons were east bound and 285,667 west bound freight.

Of the east bound freight Canadian vessels carried 325,839 tons and United States vessels carried 632,089 tons; and of the west bound freight Canadian vessels carried 15,291 tons, and United States vessels carried 270,376 tons, or a total of 341,130 tons for Canadian and 902,465 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1896 was 1,113,690 tons, of this quantity 896,523 tons passed eastward and 217,167 tons passed westward.

East and west bound through freight.

The total quantity of through freight was 739,168 tons ; of this quantity 709,834 tons were east bound and 29,334 tons were west bound.

Way freight.

Of the total quantity of (way) or local freight, 186,689 tons were east bound and 187,833 tons west bound freight.

THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, &c.

The total quantity of through freights passed eastward and westward through the Welland and St. Lawrence Canals, from Lake Erie to Montreal, during fifteen years, is as follows :—

	Eastward, to Montreal. Tons.	Westward, from Montreal. Tons.
1882.....	108,835	24,488
1883.....	205,394	27,488
1884.....	168,715	9,425
1885.....	132,968	16,115
1886.....	244,514	16,801
1887.....	213,834	14,075
1888.....	183,899	19,310
1889.....	298,197	25,370
1890.....	231,746	31,951
1891.....	309,593	14,060
1892.....	263,144	9,452
1893.....	508,016	16,545
1894.....	292,191	9,439
1895.....	266,659	10,555
1896.....	480,077	10,050

FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of freight passed eastward and westward through the Welland Canal, from United States ports to United States ports, for a period of fifteen years, is as follows :—

	Eastward. Tons.	Westward. Tons.	Total. Tons.
1882.....	110,286	172,520	282,806
1883.....	174,912	257,699	432,611
1884.....	163,998	243,081	407,079
1885.....	168,212	216,297	384,509
1886.....	224,916	239,562	464,478
1887.....	189,427	151,074	340,501
1888.....	221,062	213,689	434,751
1889.....	297,353	266,231	563,584
1890.....	318,259	215,698	533,957
1891.....	306,257	247,543	553,800
1892.....	300,733	240,332	541,065
1893.....	384,559	247,108	631,667
1894.....	361,319	230,948	592,267
1895.....	255,259	214,520	469,779
1896.....	385,695	267,518	653,213

Department of Railways and Canals.

The total quantity of freight passed through the Welland Canal from United States ports to United States ports shows an increase of 183,434 tons as compared with the previous year ; and an increase of 370,407 tons as compared with 1882.

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 1896 inclusive :

Fiscal Year.	Aggregate number of Vessels.	Total quantity transported on the Welland Canal.	Quantity passed from United States ports to United States ports.
	No.	Tons.	Tons.
1867	5,405	933,260	458,386
1868	6,157	1,161,821	641,711
1869	6,069	1,231,903	688,700
1870	7,356	1,311,956	747,567
1871	7,729	1,478,122	772,756
<i>Season of Navigation.</i>			
1872	6,063	1,333,104	606,627
1873	6,425	1,506,484	656,208
1874	5,814	1,389,173	748,557
1875	4,242	1,038,050	477,809
1876	4,789	1,099,810	488,815
1877	5,129	1,175,398	493,841
1878	4,429	968,758	373,738
1879	3,960	865,664	284,043
1880	4,104	819,934	179,605
1881	3,332	686,506	194,173
1882	3,334	790,643	282,806
1883	3,267	1,005,156	432,611
1884	3,138	837,811	407,079
1885	2,738	784,928	384,509
1886	3,589	980,135	464,478
1887	2,785	777,918	340,501
1888	2,647	878,800	434,753
1889	2,975	1,085,273	563,584
1890	2,883	1,016,165	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

The total quantity of freight passed through the several divisions of the canals during the season of 1896 is as follows :—

	Farm Stock.	Forest, Produce of Wood.	Manu- factures.	Merchan- dise.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland.	38	160,232	38,579	287,776	793,362	1,279,987
St. Lawrence	1,163	106,053	65,461	343,473	597,540	1,113,690
Chambly	328	221,853	11,239	99,522	11,993	344,935
Ottawa	900	490,482	134	6,566	3,964	502,046
Rideau	21	46,102	3,540	20,297	3,347	73,307
St. Peter's		6,332		51,137	8,039	65,508
Murray	15	2,489	1,584	6,122	2,846	13,056
Trent Valley	93	20,650	178	160	64	21,145

The total quantity of freight moved on the Welland Canal was 1,279,987 tons, of which 793,362 tons were agricultural products.

On the St. Lawrence Canals the total quantity of freight moved was 1,113,690 tons, of which 597,540 were agricultural products, and 343,473 tons were merchandise.

On the Ottawa Canals the total quantity of freight moved was 502,046 tons, of this quantity 490,482 tons were the produce of the forest.

STATISTICAL COMPARISON OF VARIOUS UNITED STATES ROUTES.

The statistical comparisons heretofore given in respect to the quantities of the principal articles carried through the Welland Canal, and those carried over routes in the United States, in competition with that work, have been continued to date.

By reference to statement H, as to the quantity of vegetable food carried to tide-water, it will be observed that the quantity carried by the New York Canals was 957,182 tons in 1896, 602,505 in 1895, 1,400,129 in 1894, 1,452,563 in 1893, 937,999 in 1892, and 1,092,355 in 1891.

The quantities of vegetable food carried by the New York Central, Erie and New York, West Shore and Buffalo Railways being:—

	Tons.		Tons.
In 1896.....	5,183,540	In 1887.....	*3,847,766
1895.....	3,798,574	1886.....	*3,802,262
1894.....	4,281,056	1885.....	4,105,594
1893.....	5,107,426	1884.....	3,639,805
1892.....	5,913,013	1883.....	4,422,461
1891.....	3,565,381	1882.....	3,888,557
1890.....	4,336,199	1880.....	4,732,385
1889.....	3,654,984	1869.....	1,087,809
1888.....	3,197,634		

* Flour and grain only.

The following figures are an abstract of the quantities of vegetable food carried to tidewater by the canals and railways of the state of New York, during twenty-eight years.

	Canals.	Railways.	Total.	Proportions by Canals.
	Tons.	Tons.	Tons.	
1869.....	1,302,613	1,087,809	2,390,342	545
1870.....	1,295,010	1,766,457	3,061,467	423
1871.....	1,850,198	2,205,589	4,055,787	456
1872.....	1,674,320	1,870,614	3,544,934	472
1873.....	1,745,171	2,036,992	3,782,163	461
1874.....	1,767,598	2,791,517	4,559,115	387
1875.....	1,306,550	2,343,241	3,648,791	357
1876.....	1,064,293	2,875,803	3,940,096	270
1877.....	1,498,984	2,493,683	3,992,667	375
1878.....	1,912,734	3,695,764	5,608,498	341
1879.....	1,833,399	4,353,617	6,187,016	296
1880.....	2,371,090	4,732,385	7,103,475	333
1881.....	1,116,561	4,983,722	6,100,283	183
1882.....	1,118,776	3,885,557	5,004,333	223
1883.....	1,379,000	4,422,461	5,801,461	237
1884.....	1,236,986	3,639,805	4,876,791	253
1885.....	1,063,310	4,105,594	5,168,904	206
1886.....	1,489,886	3,802,262	5,292,148	281
1887.....	1,539,403	3,847,766	5,387,169	285
1888.....	1,166,958	3,197,734	4,364,692	267
1889.....	1,296,896	3,654,984	4,951,880	262
1890.....	1,167,901	4,336,199	5,504,100	212
1891.....	1,092,355	3,565,381	4,657,736	234
1892.....	937,999	5,913,013	6,851,012	137
1893.....	1,452,563	5,107,426	6,599,989	284
1894.....	1,400,129	4,281,056	5,681,185	327
1895.....	602,205	3,798,574	4,401,079	159
1896.....	957,182	5,183,540	6,140,722	156

Department of Railways and Canals.

COMPARATIVE STATEMENT OF TRAFFIC BY RAILWAYS AND CANALS VIA THE STATE OF NEW YORK.

On reference to the returns made by the railways to the state authorities of New York, and to the canal statistics submitted to the state legislature, I find that of the total tonnage of freight carried by the canals and railways, the state canals carried:—

	Per cent.		Per cent.
In 1859	68·9	In 1883	18·7
1869	47·0	1884	19·0
1870	38·9	1885	17·1
1871	38·9	1886	16·9
1872	40·1	1887	16·3
1873	34·9	1888	18·8
1874	31·7	1889	15·1
1875	28·4	1890	13·9
1876	24·6	1891	13·4
1877	28·3	1892	9·8
1878	27·1	1893	10·1
1879	23·7	1894	10·2
1880	25·1	1895	9·7
1881	18·5	1896	8·5
1882	19·0		

The quantity of freight carried by the canals and railways was greater in 1896 by 7,585,712 tons than the quantity carried in 1895, and an increase of 31,302,877 tons over 1869.

The quantities carried were as follows:—

	Total Tonnage.	Proportion by Canals.
In 1859	5,485,076	·6890
1869	12,453,174	·4705
1870	15,148,274	·3895
1871	15,844,152	·3896
1872	16,631,609	·4012
1873	18,200,208	·3497
1874	18,283,547	·3174
1875	17,101,758	·2841
1876	16,948,627	·2462
1877	17,489,770	·2833
1878	19,017,301	·2719
1879	22,590,766	·2373
1880	25,706,586	·2512
1881	27,857,394	·1859
1882	28,693,054	·1905
1883	30,167,119	·1877
1884	26,293,844	·1905
1885	27,543,948	·1718
1886	31,168,744	·1698
1887	34,029,791	·1632
1888	26,244,610	·1883
1889	35,466,042	·1514
1890	37,624,199	·1394
1891	38,524,179	·1343
1892	43,618,569	·0982
1893	42,953,233	·1009
1894	37,916,412	·1024
1895	36,170,339	·0967
1896	43,756,051	·0849

Average freight rates, grain, Chicago to Buffalo:—

Year.	Wheat.	Year.	Wheat.
1878.....	3·1	1889.....	2·5
1879.....	4·7	1890.....	1·9
1880.....	5·7	1891.....	2·5
1881.....	3·2	1892.....	2·2
1882.....	2·5	1893.....	1·6
1883.....	3·5	1894.....	1·2
1884.....	2·1	1895.....	1·9
1885.....	2·0	1896.....	1·7
1886.....	3·6		
1887.....	4·1	Average nineteen years..	2·7
1888.....	2·7		

Department of Railways and Canals

COMPARATIVE STATEMENT of the Commerce through the U. S. St. Mary's Falls Canal, and Canadian Sault Ste. Marie Canal, for the Seasons of 1895 and 1896.

	TRAFFIC FOR 1896.		TOTAL TRAFFIC FOR		INCREASE.	DECREASE.
	United States Canal.	Canadian Canal.	Season of 1896.	Season of 1895.	Amount.	Amount.
Vessels.....	13,441	5,136	18,577	17,984	593	
Lockages.....	6,423	3,042	9,465	7,738	1,927	
Tonnage registered.....	12,896,968	4,395,166	17,292,144	16,839,404	452,740	
Tonnage freight.....	12,679,024	4,677,399	17,256,423	15,067,485	2,188,938	
Passengers.....	22,438	14,658	37,096	33,236	3,860	
Coal (hard).....	282,469	153,369	435,838	449,537		13,699
Coal (soft).....	1,780,545	811,980	2,592,525	2,123,904	468,621	
Flour.....	7,073,174	1,797,708	8,870,882	8,898,161		27,279
Wheat.....	44,151,539	19,312,277	63,463,816	46,091,767	17,372,109	
Grain (excluding wheat).....	21,158,325	6,556,940	27,715,265	8,542,210	19,173,055	
Manufactured and pig iron.....	102,201	27,670	129,871	102,513	27,358	
Salt.....	224,324	19,551	243,875	271,073		27,198
Copper.....	103,065	14,692	117,697	107,452	10,245	
Iron ore.....	5,402,166	2,492,905	7,895,071	8,064,355		169,284
Lumber.....	658,640,000	30,233,800	688,873,800	741,015,144	52,141,344	
Silver ore.....	240		240	100	140	
Building stone.....	16,591	1,140	17,731	23,910		5,179
+Unclassified freight.....	420,802	99,264	520,066	468,379	62,087	

+ Included in unclassified freight for,—

	1895.	1896.	Tons.
Wool.....	2,250		2,358
Hides.....	397		31

The United States canal was open to navigation during the season of—

1889	234 days.
1890	228 do
1891	225 do
1892	233 do
1893	219 do
1894	234 do
1895	231 do
1896	232 do

The Canadian canal was open to navigation during the season of—

1895	87 days.
1896	218 do

The average number of vessels passing per day through the two canals for the whole season of 1896 was over forty-one.

R. DEVLIN,
Compiler of Canal Statistics.

OTTAWA, Oct. 16, 1897.

EXPORTS by Lake from the port of Chicago during 1896. From Report of Board of Trade, Chicago.

Commodities.		Quantity.	Value.
			\$ cts.
Wheat.....	Bush.	549,500	326,701 00
Corn.....	"	5,276,550	1,399,617 00
Oats.....	"	575,668	110,813 00
Rye.....	"	42,000	15,120 00
Steel rails.....	Tons.	21,608	477,959 00
Angle bars.....	"	1,499	34,691 00
Steel billets.....	"	306	4,049 00
Wire rods.....	"	3,563	67,451 00
Pig and scrap iron.....	"	1,497	15,295 00
Machinery.....	Pieces	10	520 00
Merchandise.....	Pckgs.	3	6,000 00
Total value.....			2,458,216 00

SHIPMENTS of Grain (in Transit and Export) by Lake from Chicago during 1896.
From Report of Board of Trade, Chicago.

	CORN, BUSHEL.			OATS, BUSHEL.		WHEAT, BUSH.	RYE, BUSH.	TOTALS.
	Transit.	Export.	Totals.	Transit.	Export.	Export.	Export.	
Collingwood, Ont.....	42,968		42,968					42,968
Goderich, Ont.....	89,740		89,740					89,740
Kingston, Ont.....		2,248,349	2,248,349			246,361	42,000	2,536,710
Midland, Ont.....	617,883	678,553	1,296,436			116,969		1,413,405
Prescott, Ont.....		2,325,398	2,325,398		575,668	186,170		3,087,236
Point Edward, Ont....	198,350		198,350					198,350
Sarnia, Ont.....	899,287		899,287	2,045,502				2,944,789
Walkerville, Ont.....		24,250	24,250					24,250
Totals.....	1,841,228	5,276,550	7,124,778	2,045,502	575,668	549,500	42,000	10,337,448

Department of Railways and Canals.

GRAIN FREIGHTS BY LAKE, SEASON OF 1896.

The following were the current rates of freight on wheat and corn from Chicago to Buffalo, Kingston, Ogdensburg and Montreal (steam) also to New York by Lake and Erie Canal ; for each week during the season of Navigation.

	To BUFFALO.		To OGDENSBURG	To KINGSTON.		To MONTREAL. (STEAM.)		ERIE CANAL, BUFFALO TO NEW YORK.		CHICAGO TO NEW YORK LAKE AND CANAL INCLUDING BUFFALO CHARGES.	
	Wheat per Bush.	Corn per Bush.		Wheat per Bush.	Corn per Bush.	Wheat per Bush.	Corn per Bush.	Wheat per Bush.	Corn per Bush.	Wheat per Bush.	Corn per Bush.
April 18.	Cts.	Cts.									
" 25.	18	4									6
May 2.	18	4									6½
" 9.	18	3½									6½
" 16.	18	3½									6½
" 23.	18	3½									6½
" 30.	18	3½									6½
June 6.	18	3½									6½
" 13.	18	3½									6½
" 20.	18	4									6½
" 27.	18	4									6½
July 4.	18	4									6
" 11.	18	3½									5½
" 18.	18	3½									5½
" 25.	18	3½									5½
Aug 1.	18	3									5½
" 8.	18	2½									5½
" 15.	18	2½									5½
" 22.	18	2½									5½
" 29.	18	3½									5½
Sept. 5.	18	3½									5½
" 12.	18	3½									5½
" 19.	18	3									5½
" 26.	18	3									5½
Oct. 3.	18	3½									5½
" 10.	18	3½									5½
" 17.	18	3½									5½
" 24.	18	3½									5½
" 31.	18	4									5½
Nov. 7.	21	4									6½
" 14.	21	4									6½
" 21.	21	5									5½
" 28.	21	5									5½
Dec. 5.	21	5									5½
" 12.	21	5									5½
" 19.	21	5									5½

LAKE FREIGHTS FROM CHICAGO TO BUFFALO ON WHEAT AND CORN.

STATEMENT showing the dates of the changes of the ruling rates of lake freights on wheat and corn from Chicago to Buffalo during 1896 (as reported by the Secretary of Merchants' Exchange, Buffalo) :—

1896.	Wheat, bush.	Corn, bush.	1896.	Wheat, bush.	Corn, bush.
Opening.	Cts.	Cts.	Opening.	Cts.	Cts.
April 8.	1 $\frac{1}{2}$	1 $\frac{1}{2}$	Aug. 24.	1 $\frac{1}{4}$	1 $\frac{1}{4}$
do 10.	1 $\frac{1}{8}$		do 26.		1 $\frac{1}{8}$
do 14.	2		do 27.		1 $\frac{1}{4}$
do 20.		1 $\frac{1}{8}$	do 28.		1 $\frac{1}{8}$ to 1 $\frac{1}{4}$
do 22.	1 $\frac{1}{4}$	1 $\frac{1}{8}$	do 29.		1 $\frac{1}{4}$
do 28.	1 $\frac{1}{2}$	1 $\frac{1}{4}$	Sept. 5.	1 $\frac{1}{8}$	
May 5.		2	do 16.		1 $\frac{1}{8}$
do 6.	2 $\frac{1}{4}$	2	do 18.		1
do 7.	2 $\frac{1}{4}$		do 22.		1 $\frac{1}{8}$
do 9.		1 $\frac{1}{8}$	do 25.		1 $\frac{1}{4}$
do 11.		1 $\frac{1}{8}$	do 28.		1 $\frac{1}{8}$
do 12.		1 $\frac{1}{8}$	Oct. 2.	1 $\frac{1}{8}$	1 $\frac{1}{4}$ to 1 $\frac{1}{8}$
do 15.		1 $\frac{1}{8}$	do 5.		1 $\frac{1}{8}$
do 16.		1 $\frac{1}{4}$	do 8.		1 $\frac{1}{8}$
do 19.		1 $\frac{1}{8}$	do 9.		1 $\frac{1}{4}$
do 20.		1 to 1 $\frac{1}{8}$	do 12.		2
do 23.	1 $\frac{1}{4}$	1 $\frac{1}{8}$	do 21.		2 $\frac{1}{4}$
do 27.	1 $\frac{1}{8}$	1 $\frac{1}{4}$	do 22.		2 $\frac{1}{8}$
do 29.	1 $\frac{1}{2}$	1 $\frac{1}{8}$	do 29.	2 $\frac{1}{8}$	
June 2.		1 $\frac{1}{8}$ to 1 $\frac{1}{4}$	do 30.		2 $\frac{1}{8}$
do 3.		1 $\frac{1}{2}$	Nov. 5.		2 $\frac{1}{8}$ to 2 $\frac{1}{4}$
do 4.	1 $\frac{1}{8}$		do 6.		2 $\frac{1}{8}$
do 8.		1 $\frac{1}{8}$	do 7.	2 $\frac{1}{4}$	2
do 9.		1 $\frac{1}{4}$	do 9.		1 $\frac{1}{8}$
do 16.	1 $\frac{1}{2}$		do 12.		1 $\frac{1}{8}$ to 1 $\frac{1}{4}$
do 17.		1 $\frac{1}{8}$	do 13.		1 $\frac{1}{4}$
do 20.	1 $\frac{1}{4}$	1 $\frac{1}{8}$	do 14.	2	
do 22.	1 $\frac{1}{8}$	1 $\frac{1}{8}$	do 16.	2 $\frac{1}{4}$	
do 29.	1 $\frac{1}{4}$	1 $\frac{1}{8}$	do 18.	2 $\frac{1}{8}$	
July 1.		1 $\frac{1}{4}$	do 19.		1 $\frac{1}{8}$
do 9.		1	do 20.		1 $\frac{1}{4}$
do 10.	1 $\frac{1}{8}$		do 21.	2	
do 27.		1 $\frac{1}{8}$	do 23.		2
do 30.		1 $\frac{1}{4}$	do 24.	1 $\frac{1}{4}$ to 2	1 $\frac{1}{4}$
Aug. 1.	1 $\frac{1}{8}$		do 25.	1 $\frac{1}{8}$	
do 12.		1 $\frac{1}{8}$ to 1 $\frac{1}{4}$	Dec. 1.	2 $\frac{1}{4}$	bid 2
do 13.		1 $\frac{1}{4}$	do 3.		2
do 21.		1	do 5 to close.		2 $\frac{1}{8}$
do 22.		1 to 1 $\frac{1}{8}$			

Highest on oats, 1 $\frac{1}{2}$ c. ; lowest, $\frac{7}{8}$ c. per bushel.

NOTE.—Corn from Chicago to Kingston ranged from 2 $\frac{1}{2}$ c. to 4 $\frac{1}{8}$ c., and wheat from 2c. to 3c. cents per bushel during the season. Corn to Port Huron, 1c. to 2 $\frac{1}{4}$ c., and oats, 1c. to 1 $\frac{1}{8}$ c., and to Ogdensburg, June 13th, at 2 $\frac{3}{4}$ c. per bushel. Wheat to Toledo, 1 $\frac{1}{8}$ c. to 1 $\frac{1}{4}$ c. per bushel; corn to Oswego in July, 2 $\frac{1}{2}$ c. per bushel; wheat to Erie in May, 2c. per bushel; wheat to Detroit in April, 1 $\frac{1}{8}$ c. per bushel.

Rates from Milwaukee about the same as from Chicago.

Department of Railways and Canals.

AVERAGE LAKE FREIGHTS.

The following statement shows the average rates of lake freights on wheat and corn between Chicago and Buffalo during each month in the past ten years, the highest and lowest rate on wheat in each year, and the average rate on wheat each year, in cents, per bushel :—

(Per Report of the Secretary of Merchants' Exchange, Buffalo.)

Grain, Bushels.	May. Cents.	June. Cents.	July. Cents.	August. Cents.	Sept. Cents.	Oct. Cents.	Nov. Cents.
1887 { Wheat	3·4	5·1	3·8	3·5	4·1	4·7	3·9
{ Corn	3·1	4·7	3·5	3·3	3·8	4·4	3·6
Highest rate, wheat, 1887, 6c. ; lowest, 3c. ; average for the season, 4·1c.							
1888 { Wheat	2·1	1·9	2·2	3·2	3·5	2·4	2·5
{ Corn	1·8	1·7	1·9	2·9	3·2	2·1	2·3
Highest rate, wheat, 1888, 4c. ; lowest, 2c. ; average for the season, 2·7c.							
1889 { Wheat	2·2	2·0	2·1	2·7	3·0	3·0	2·5
{ Corn	2·0	1·8	1·9	2·4	2·7	2·7	2·3
Highest rate, wheat, 1889, 3·6c. ; lowest, 2c. ; average for the season, 2·5c.							
1890 { Wheat	1·8	2·2	2·3	1·5	2·0	1·8	2·0
{ Corn	1·6	2·0	2·0	1·3	1·8	1·6	1·8
Highest rate, wheat, 1890, 2½c. ; lowest, 1·5c. ; average for the season, 1·9c.							
1891 { Wheat	1·4	1·2	2·1	2·7	3·3	2·2	4·1
{ Corn	1·2	1·1	2·0	2·5	3·0	2·1	3·8
Highest rate, wheat, 1891, 5¼c. ; lowest, 1c. ; average for the season, 2·4c.							
1892 { Wheat	1·9	1·8	2·0	2·3	2·3	2·3	2·6
{ Corn	1·7	1·6	1·8	2·1	2·1	2·1	2·3
Highest rate, wheat, 1892, 3c. ; lowest, 1c. ; average for the season, 2·2c.							
1893 { Wheat	1·3	1·8	1·2	1·3	1·7	2·1	2·0
{ Corn	1·2	1·6	1·1	1·2	1·5	1·9	1·8
Highest rate, wheat, 1893, 2¾c. ; lowest, 1c. ; average for the season, 1·6c.							
1894 { Wheat	1·4	1·2	0·9	1·0	1·4	1·1	1·3
{ Corn	1·2	1·1	0·9	0·9	1·3	1·0	1·3
Highest rate, wheat, 1894, 3c. ; lowest, ¾c. ; average for the season, 1·2c.							
1895 { Wheat	1·2	1·2	1·1	1·6	2·1	3·0	3·0
{ Corn	1·1	1·1	1·0	1·4	1·9	2·9	2·7
Highest rate, wheat, 1895, 3c. ; lowest, 1c. ; average for the season, 1·9c.							
1896 { Wheat	1·6	1·5	1·2	1·3	1·4	2·0	2·1
{ Corn	1·4	1·3	1·1	1·2	1·2	1·9	1·9
Highest rate, wheat, 1896, 2½c. ; lowest, 1¼c. ; average for the season, 1·7c.							

LAKE FREIGHTS FROM DULUTH TO BUFFALO ON WHEAT (AS REPORTED BY THE
SECRETARY OF THE MERCHANTS' EXCHANGE, BUFFALO, N. Y.)

The following statement shows the weekly ruling lake freight rates on wheat from Duluth to Buffalo, during the season of 1896 :—

1896.	Wheat, Bushels.	1896.	Wheat, Bushels.
	Cts.		Cts.
Opening of navigation to May 5	3	August 27 to August 28	1½
May 6 to May 10	2½	do 29 to September 2	1½
do 11 to do 15	3	September 3 to September 7	1½
do 16 to do 18	2½	do 8 to do 24	1½
do 19 to June 18	2½	do 25 to do 27	1½
June 19	2½	do 28	1½
do 20 to June 22	2½	do 29 to October 1	1½
do 23 to do 29	2½	October 2 to October 4	1½
do 30	2½	do 5 to do 7	1½
July 1 to July 4	2	do 8 to do 13	2
do 5 to do 8	1½	do 14 to do 20	2½
do 9 to do 10	1½	do 21	2½
do 11 to do 14	1½	do 22	2½
do 15 to do 21	1½	do 23 to November 3	3
do 22 to do 27	1½	November 4 to November 8	2½
do 28 to do 31	1½	do 9 to do 10	2½
August 1 to August 9	1½	do 11 to do 15	2½
do 10 to do 21	1½	do 16 to do 18	2½
do 21 to do 22	1½	do 19	2½
do 23 to do 24	1½	do 20 to do 26	3
do 25 to do 26	1½	do 27 to close	2

In 1885, the range of freight on wheat, Duluth to Buffalo, was 1½ to 5 c.; in 1886, 3¼ to 8 c.; in 1887, 5 to 8 c.; in 1888, 2 to 5 c.; in 1889, 2 to 5 c.; in 1890, 2 to 5 c.; in 1891, 1½ to 9½ c.; in 1892, 2½ to 4 c.; in 1893, 1½ to 3½ c.; in 1894, 1½ to 3 c.; in 1895, 2 to 6 c.; and in 1896, 1½ to 3 c. per bushel.

The first departure by lake at Duluth in 1896 was on April 22nd, and in 1895 on April 27th. In 1894, season opened on April 19th; in 1893, on May 8th; in 1892, on April 21st; in 1891, on April 30th; in 1890, on March 26th; in 1889, on April 20th; in 1888, on May 12th; in 1887, on May 4th; and in 1886, on May 7th.

Wheat was shipped at Kingston, Canada, per bushel, during the season of 1887, at 6¼ to 7½ c.; in 1888, at 4 to 5 c.; in 1889 at —; in 1890, 5½, 5½, 4½, 4½ and 4 c.; in 1891, during May, 3½, 3½ and 2½ c.; during June, 3c; and on July 25th, 2½c.; in 1892, 5 c. in April; 5 to 5½ c. in May; 4 c. in June; 4½ c. in July; 3 c. in August; 6 to 6½ c. in October. In 1893, ranged from 5½ to 4½c. in April; 4½ to 4½ c. in May; 4 to 3½ c. in June; 2½ to 3 c. in July; 3½ to 3½ c. in September; no figures quoted after that date. In 1894, ranged from 3½ to 3½ c. in May; 3½ c. in June; 2½ c. in July; 2½ to 3½ c. in August; 4 c. in September, and 4½ c. in October. On August 25th and November 3rd, 1894, wheat to Ogdensburg at 3¼ and 4½ c. respectively. In 1895, wheat to Kingston from 3 to 5 c., according to time of year. In 1896 wheat to Kingston from 3 to 5½ c., according to time of year.

Department of Railways and Canals.

LAKE FREIGHT RATES FROM TOLEDO TO BUFFALO ON WHEAT.

The following statement shows the ruling rates of lake freight on wheat from Toledo to Buffalo during the season of 1896 on the date specified, (as reported by the Secretary, Merchants' Exchange, Buffalo) :—

Date, 1896.	Wheat. Bush.	Date, 1896.	Wheat. Bush.
	Cts.		Cts.
Opening to May 16th.....	1½	November 5th to 9th.....	1½
May 17th to October 30th.....	1½	do 10th to close.....	1½
October 31st to November 4th.....	1½		

The range for 1886 was 1¼ to 3c. ; for 1887, 2¼ to 3c. ; for 1888, 1½ to 2½c. ; for 1889, 1¼ to 2c. ; for 1890, 1½ to 2c. ; for 1891, 1 to 3c. ; for 1892, 1½ to 2½c. ; for 1893, 1 to 2c. ; for 1894, 1 to 2c. ; for 1895, 1 to 2½c. ; and for 1896, 1½ to 1¾c. per bushel.

From Toledo to Ogdensburg, wheat and corn shipped at 6 to 7c. in 1887 ; at 4½ to 6c. for wheat and 5c. for corn in 1888 ; and 5 to 5½c. for wheat in 1889 per bushel. From Toledo, on October 8, 1887, corn shipped to Kingston at 3½c., and on November 12th at 4½c. per bushel. In 1888, corn, Toledo to Kingston, at 4½ to 3c. ; and wheat at 3½ to 3c. per bushel. In 1889, wheat, Toledo to Kingston at 3c., and in 1891, rye Toledo to Kingston at 3c. per bushel. From Toledo, on June 2, 1887, wheat shipped to Montreal by propeller at 6½c. ; on June 14th the corn at same price ; but on September the 26th the rate on corn was only 5c. per bushel. In 1888, corn, Toledo to Montreal at 6 to 5½c., and wheat at 5½c. per bushel. From 1889 to 1896 no shipments to Montreal or other places in Canada reported.

CANAL FREIGHTS FROM BUFFALO TO NEW YORK.

The following table shows the changes in the ruling rates of freight to New York, from Buffalo, on the days specified, in 1896 (as reported by the Secretary, Merchants' Exchange, Buffalo).

Date, 1896.	Wheat. Bush.	Corn. Bush.	Date, 1896.	Wheat. Bush.	Corn. Bush.
	Cts.	Cts.		Cts.	Cts.
May 1st.....	3½	3½	November 18th.....	3½	3½
do 4th.....	3½	3½	do 19th.....	3½	3
November 2nd.....	4	3½	do 20th to close.....	3½	2½

The freight on oats varied from 2½ to 2¾c. per bushel. Pine lumber, per 1,000 feet, was carried from Buffalo and Tonawanda to New York as follows : Opened at \$2.00 ; changed on November 2nd to \$2.25 and continued at that rate to the close. Rates to Albany, 50c. per 1,000 feet less than preceding figures.

AVERAGE CANAL FREIGHTS.

BUFFALO TO NEW YORK.

The following statement shows the average rates of canal freights on wheat and corn between Buffalo and New York during each month in the past ten years, and the highest and lowest rates on wheat, and average rate on wheat in each:—

Grain.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
1887 { Wheat	5.1	4.5	3.8	4.0	4.5	4.8	5.8
{ Corn	4.6	4.1	3.4	3.6	4.1	4.4	5.3
Highest rate, wheat, 1887, 7c. ; lowest, 3.5c. ; average for the season, 4.6c.							
1888 { Wheat	3.4	2.5	2.5	4.1	3.9	3.7	3.5
{ Corn	3.1	2.3	2.3	3.8	3.6	3.4	3.2
Highest rate, wheat, 1888, 4.5c. ; lowest, 2c. ; average for the season, 3.4c.							
1889 { Wheat	4.0	3.8	4.0	4.4	5.0	5.0	5.0
{ Corn	3.6	3.4	3.6	3.9	4.5	4.5	4.4
Highest rate, wheat, 1889, 5c. ; lowest, 3.7c. ; average for the season, 4.8c.							
1890 { Wheat	3.9	3.8	3.6	3.8	3.9	4.0	3.5
{ Corn	3.5	3.4	3.2	3.4	3.5	3.6	3.1
Highest rate, wheat, 1890, 4.2c. ; lowest, 3c. ; average for the season, 3.8c.							
1891 { Wheat	2.8	2.9	2.8	3.8	4.2	4.6	4.0
{ Corn	2.5	2.6	2.5	3.5	3.8	4.2	3.6
Highest rate, wheat, 1891, 3½c. ; lowest, 2.5c. ; average for the season, 3.5c.							
1892 { Wheat	2.7	2.2	2.4	3.0	3.8	4.7	4.6
{ Corn	2.4	2.0	2.2	2.6	3.4	4.4	4.3
Highest rate, wheat, 1892, 6c. ; lowest, 2½c. ; average for the season, 3.5c.							
1893 { Wheat	4.8	4.8	4.6	4.6	4.0	4.7	4.8
{ Corn	4.4	4.4	4.3	4.2	3.6	4.3	4.5
Highest rate, wheat, 1893, 5c. ; lowest, 3.6c. ; average for the season, 4.6c.							
1894 { Wheat	3.1	2.9	3.3	3.4	3.6	2.9	3.0
{ Corn	2.8	2.6	3.0	3.1	3.3	2.6	2.7
Highest rate, wheat, 1894, 4c. ; lowest, 2.6c. ; average for the season, 3.2c.							
1895 { Wheat	1.9	1.7	2.0	2.0	2.1	2.5	2.7
{ Corn	1.7	1.5	1.7	1.7	2.0	2.2	2.5
Highest rate, wheat, 1895, 3c. ; lowest, 1.9c. ; average for the season, 2.2c.							
1896 { Wheat	3.7	3.7	3.7	3.7	3.7	3.7	3.8
{ Corn	3.5	3.5	3.5	3.5	3.5	3.5	3.6
Highest rate, wheat, 1896, 4c. ; lowest, 3.1c. ; average for the season, 3.7c.							

NOTE.—Canal free of tolls since 1882.

Department of Railways and Canals

FREIGHT, TOLLS, ELEVATING AND STORAGE RATES COMPARED.

The following statement shows the receipts of grain and flax-seed at Buffalo, the average canal freight on wheat, and the tolls on wheat to New York, and the elevating, and storage rates at Buffalo for a series of years (as reported by Secretary, Merchants' Exchange, Buffalo):

Year.	Grain received.	Average Canal Freight on Wheat.	Tolls on Wheat.	Elevating, including Storage.
	Bush.	Cts.	Cts.	Cts.
1870.....	32,208,039	11·2	3·1	1½
1871.....	61,319,313	12·6	3·1	1½
1872.....	58,703,666	13·0	3·1	1½
1873.....	65,498,955	11·4	3·1	1½
1874.....	55,660,198	10·0	3·1	1½
1875.....	52,833,451	7·9	2·0	1
1876.....	44,207,121	6·6	2·0	1
1877.....	61,822,292	7·4	1·0	1
1878.....	78,828,443	6·0	1·0	1
1879.....	75,089,768	6·8	1·0	1
1880.....	105,133,009	6·5	1·0	1
1881.....	56,389,827	4·7	1·0	7
1882.....	51,501,503	5·4	1·0	5
1883.....	65,722,080	4·9	None.	5
1884*.....	58,011,800	4·2	do	5
1885*.....	52,671,090	3·8	do	5
1886*.....	75,570,850	5·0	do	5
1887*.....	87,073,570	4·6	do	5
1888*.....	73,977,390	3·4	do	5
1889*.....	92,290,550	4·8	do	5
1890*.....	91,994,680	3·8	do	5
1891*.....	135,315,510	3·5	do	5
1892*.....	138,872,560	3·5	do	5
1893*.....	140,796,410	4·6	do	5
1894*.....	105,435,577	3·2	do	5
1895*.....	121,225,497	2·2	do	5
1896*.....	161,470,745	3·7	do	5

NOTE.—Prior to 1870 tolls 6·21 cents per bushel, and the elevating charge 2 cents per bushel

* Including flax-seed.

AVERAGE FREIGHT CHARGES PER BUSHEL.

For the transportation of wheat and corn from Chicago to New York for a series of years.

(From Report of Board of Trade, Chicago.)

	CORN.			WHEAT.		
	By lake and canal.	By lake and rail.	By all rail.	By lake and canal.	By lake and rail.	By all rail.
1858	127		3619	1550		3861
1859	1570		3248	1663		3490
1860	a 0833		3248	a 095		3480
1861	a 1062		3881	a 1210		4158
1862	a 0957		4480	a 1062		4800
1863	a 063		4592	a 072		4920
1864	a 09		5600	a 0952		60
1865	a 0864		4188	a 0894		4488
1866	a 1075		4312	a 1377		4620
1867	a 0511		4176	a 08		4475
1868	a 0604		3532	a 0802		3784
1869	a 0584	2355	3320	a 0651	2520	3557
1870	a 16	2220	28	a 0677	2250	30
1871	a 0754	2372	2968	a 0687	2542	3180
1872	a 1072	2660	3266	a 1110	2950	3499
1873	a 0816	2298	2893	a 0917	2461	3102
1874	a 0382	1388	2450	a 0400	1709	2625
1875	a 034	1303	2240	a 0378	1389	2400
1876	b 0875	1079	1574	b 0982	1196	1686
1877	b 0959	1406	1890	b 1109	1546	2050
1878	b 0883	1053	1652	b 0996	1209	1770
1879	b 1049	1220	1456	b 1187	1313	1774
1880	b 1341	1443	1748	b 1313	1580	1990
1881	b 0777	0942	1340	b 0867	1049	1440
1882	b 0672	1028	1350	b 0723	1091	1447
1883	b 0803	11	1512	b 0901	1163	1620
1884	b 0655	085	1232	b 07	10	1320
1885	b 063	0801	1232	b 0654	0902	1320
1886	b 0845	1120	14	b 0910	12	1500
1887	b 0850	1120	1470	b 0950	12	1575
1888	b 0671	1026	1354	b 0705	1114	1450
1889	b 0632	0819	126	b 0692	0897	1500
1890	b 0593	0732	1136	b 0676	0852	1430
1891	b 0632	0753	1400	b 0695	0857	1500
1892	b 0595	0721	1296	b 0645	0759	1380
1893	b 0718	0797	1365	b 0766	0848	1463
1894	b 0493	0650	1232	b 0511	0700	1320
1895	b 0450	0640	1029	b 0486	0696	1189
1896	b 0575	0615	1050	b 0619	0661	1200

a To Buffalo only. b Including Buffalo charges and tolls.

Department of Railways and Canals.

FOREIGN FREIGHT RATES.

ANNUAL average Freight Rates on Grain, Flour and Provisions (per 100 lbs.) from Chicago to European Ports, by all Rail to Sea-board and thence by steamers.

Shipped to	Articles.	1896.	1895.	1894.	1893.
		\$	\$	\$	\$
Liverpool.....	Grain.....	3350	3200	3250	3410
do.....	Sacked flour.....	3430	3400	3316	3515
do.....	Provisions.....	4491	4181	4406	4547
Glasgow.....	Grain.....	3422	3419	3463	3585
do.....	Sacked flour.....	3650	3625	3503	3625
do.....	Provisions.....	4997	4969	4659	4828
London.....	Grain.....	3348	3329	3288	3760
do.....	Sacked flour.....	3528	3513	3493	3794
do.....	Provisions.....	4715	4603	4575	4828
Antwerp.....	do.....	4969	4828	4688	4828
Hamburg.....	do.....	5100	5000	5000	5250
Amsterdam.....	do.....	5200	5000	5000	5000
Rotterdam.....	do.....	5200	4800	5000	5000
Copenhagen.....	do.....	5812	5531	5531	5531
Stockholm.....	do.....	6937	6656	6656	6656
Stettin.....	do.....	5812	5531	5531	5531
Bordeaux.....	do.....	6413	6413	6250	6000

LAKE FREIGHTS ON COAL FROM BUFFALO TO CHICAGO AND OTHER PORTS.

The following statement shows the ruling freight rates on coal per ton, in cents, from Buffalo to the Ports named, during the season of 1895, for the week ending on the dates specified.

1896. Week ending.	Chicago.	Milwaukee.	Duluth and Superior Ports.	Green Bay.	Gladstone.	Shebogan.	Toledo.	Detroit.	Racine.	Saginaw.	Bay City.	Washburn.	Ashland.
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
April 25.....	40	40	25	25	25	25	25	45	45	40	25	25	25
May 2.....	40	40	25	25	25	25	25	45	45	35	30	25	25
do 9.....	40	40	25	25	25	25	25	50	50	40	35	25	25
do 16.....	50	40 to 45	25	45	25	25	25	50	50	40	35	25	25
do 23.....	50	45 to 55	25	55	25	25	25	60	60	40	35	25	25
do 30.....	50 to 60	55	25	55	25	25	25	60	60	40	35	25	25
June 6.....	60	55 to 45	30	45	35	35	25	50	50	40	30	25	25
do 13.....	60 to 50	55 to 45	30	45	35	35	25	50	50	40	30	25	25
do 20.....	50	45	30	45	35	35	25	50	50	40	30	25	25
do 27.....	50	45	30	45	35	35	25	50	50	40	30	25	25
July 4.....	50 to 40	45 to 35	30 to 25	40	25	25	25	40	40	35	25	25	25
do 11.....	40	35	25	40	25	25	25	40	40	30	25	25	25
do 18.....	40 to 30	35 to 30	25	25	25	25	25	40	40	30	25	25	25
do 25.....	30 to 25	30 to 25	25	25	25	25	25	40	40	30	25	25	25
Aug. 1.....	20	20	20	20	20	20	20	25	25	40	25	25	25
do 8.....	20	20	20	20	20	20	20	25	25	40	25	25	25
do 15.....	20	20	20	20	20	20	20	25	25	40	25	25	25
do 22.....	20	20	20	20	20	20	20	25	25	40	25	25	25
do 29.....	20	20	20	20	20	20	20	25	25	40	25	25	25
Sept. 5.....	20	20	20	20	20	20	20	20	20	40	25	25	25
do 12.....	20	20	20	20	20	20	20	20	20	40	25	25	25
do 19.....	20	20	20	20	20	20	20	20	20	40	25	25	25
do 26.....	20	20	20	20	20	20	20	20	20	40	25	25	25
Oct. 3.....	20	20	20	20	20	20	20	20	20	40	25	25	25
do 10.....	20	20	20	20	20	20	20	20	20	40	25	25	25
do 17.....	20 to 30	20 to 30	20	40	30	30	25	25	40	40	30	30	30
do 24.....	30	30	20	40	30	30	25	25	40	40	30	30	30
do 31.....	30	30	20	40	30	30	25	25	40	40	30	30	30
Nov. 7.....	30	30	20	40	30	30	25	25	40	40	30	30	30
do 14.....	30	30	20	40	30	30	25	25	40	40	30	30	30
do 21.....	30 to 40	30 to 40	30	40	30	30	25	25	40	40	30	30	30
do 28.....	60	60	50	50	50	50	30	30	30	30	30	30	30
Dec. 5 to close..	60	60	50	50	50	50	30	30	30	30	30	30	30

NOTE.—All coal carried on the lakes is loaded and unloaded free of expense to the vessel.

Department of Railways and Canals

TOTAL VALUES of Merchandise Received from British North America for Immediate Transit across United States Territory, for Immediate Transshipment in Ports of the United States to British North America, and so shipped, during each year from 1873 to 1896 inclusive.

YEAR ENDING 30TH JUNE.	COUNTRIES FROM WHICH RECEIVED.					COUNTRIES TO WHICH SHIPPED.				
	British North America.					British North America.				
	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, Ontario, Manitoba and the Northwest Territories.	British Columbia.	Newfoundland and Labrador.	Total.	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, Ontario, Manitoba and the Northwest Territories.	British Columbia.	Newfoundland and Labrador.	Total.
1873.....	495,289	12,894,164	5,240	.....	13,394,693	5,282,290	21,320,174	181,720	.....	26,784,184
1874.....	449,655	13,616,344	97,691	.....	14,163,690	7,150,036	19,843,169	317,534	.....	27,310,739
1875.....	443,570	17,342,933	256,074	.....	18,042,577	8,990,596	20,283,639	517,060	.....	29,800,295
1876.....	261,443	22,134,275	195,047	1,137	22,591,902	9,102,600	14,658,368	658,836	94	24,419,888
1877.....	160,658	12,092,619	218,418	.....	12,471,695	2,879,422	16,551,238	544,018	2,475	18,977,153
1878.....	163,978	11,627,114	412,966	.....	12,204,058	951,268	11,436,470	524,013	934	12,912,085
1879.....	194,129	11,606,832	280,079	55	12,081,085	889,539	11,520,877	476,824	2,347	12,889,587
1880.....	215,131	16,782,315	137,271	.....	17,134,717	1,643,716	14,866,663	531,436	288	17,042,103
1881.....	171,383	16,788,108	72,555	.....	17,002,046	1,778,836	20,857,827	719,268	333	23,356,264
1882.....	164,990	28,265,083	113,018	87	28,543,178	2,732,665	34,006,846	855,784	1,190	37,595,484
1883.....	561,791	29,204,031	36,973	25	29,802,820	2,455,557	35,878,369	971,307	7,335	39,312,568
1884.....	656,233	12,574,963	188,041	.....	13,419,227	1,740,900	19,717,466	1,475,833	5,185	22,939,385
1885.....	933,906	12,280,483	308,691	633	13,523,613	1,635,442	16,448,942	1,615,293	781	19,700,458
1886.....	1,165,973	9,303,864	359,104	32,079	10,861,020	2,040,298	16,869,429	1,825,178	6,174	20,241,079
1887.....	1,684,730	9,606,175	213,816	.....	11,504,721	1,621,748	19,930,286	636,841	70	22,187,955
1888.....	1,525,048	6,417,701	372,934	27,134	8,542,817	1,781,028	13,459,169	370,322	1,137	13,611,556
1889.....	2,596,233	8,355,178	294,859	89,853	11,336,123	2,484,787	18,993,967	665,527	2,704	23,146,975
1890.....	3,070,657	12,449,772	306,897	174,584	15,001,910	5,277,210	21,140,198	913,106	4,690	27,335,204
1891.....	3,859,079	15,310,945	422,806	187,640	19,780,470	5,065,614	21,695,992	547,144	34,273	27,883,023
1892.....	4,393,062	19,006,704	201,373	328,116	23,928,255	2,079,783	24,189,181	428,188	6,962	26,704,114
1893.....	3,090,597	16,404,425	89,565	17,885,573	2,052,357	2,052,357	20,232,400	409,055	26,289	22,720,111
1894.....	1,070,676	15,649,881	348,659	273,467	17,342,093	1,831,417	19,890,688	463,471	6,640	20,182,216
1895.....	1,199,782	17,774,108	411,557	286,415	19,621,862	1,894,745	19,320,714	558,991	7,844	21,722,294
1896.....	1,118,185	18,038,931	582,469	404,020	20,143,605	1,572,783	19,441,279	772,586	1,708	21,788,416

TOTAL VALUES of Merchandise received from the Principal and other Foreign Countries for immediate Transit across United States Territory or for immediate Transshipment in Ports of the United States to other foreign countries, and so shipped, for each Year from 1868 to 1896 inclusive.

Year ending June 30.	COUNTRIES FROM WHICH RECEIVED.										Countries to which shipped					Total Value of Merchandise received and shipped.
	British North American Possessions.					Cuba.					Other Countries.					
	Great Britain and Ireland.	Germany.	British North American Possessions.	Mexico.	Cuba.	Other Countries.	Great Britain and Ireland.	Germany.	British North American Possessions.	Mexico.	Cuba.	Other Countries.				
1868	10,664,576	132,074	4,864,200	14,967	4,263,621	1,576,157	2,025,023	3,212,123	14,375,419	481,643	116,521	1,304,875	21,516,604			
1869	10,891,698	150,382	5,852,678	60,715	2,373,474	1,767,037	2,693,525	1,547,602	15,033,821	448,300	72,875	1,299,861	21,095,984			
1870	10,210,455	302,806	7,215,975	103,977	3,309,227	2,049,422	2,946,063	2,116,249	16,689,037	321,331	135,915	983,275	23,191,860			
1871	13,473,915	322,110	7,964,060	344,179	1,367,573	1,913,200	4,031,319	1,033,307	18,406,475	346,872	345,224	1,211,840	25,375,037			
1872	17,633,231	227,232	9,276,169	174,104	2,227,422	1,847,162	2,743,494	2,263,819	24,042,790	358,151	179,570	1,797,496	31,365,320			
1873	19,144,815	236,704	13,394,693	286,607	5,737,904	1,284,462	5,144,175	3,622,325	26,784,184	235,113	319,771	1,993,617	40,069,185			
1874	18,832,900	211,907	14,168,680	151,920	4,563,809	926,390	5,331,201	3,866,642	27,310,739	665,214	590,493	1,096,387	38,890,676			
1875	18,657,276	325,648	18,042,577	226,315	2,962,963	1,785,947	7,229,912	1,405,285	29,860,295	1,155,004	248,358	757,429	40,686,283			
1876	14,304,197	290,489	22,591,902	226,315	2,962,963	1,686,789	11,791,200	2,958,538	24,419,888	1,129,440	600,061	1,163,508	42,062,665			
1877	13,732,085	337,897	12,471,695	158,852	1,095,451	1,460,793	7,758,501	1,108,298	18,977,153	329,577	306,911	1,776,933	29,256,773			
1878	10,064,510	376,768	12,204,058	146,822	3,041,957	1,481,033	9,577,060	2,965,280	12,912,685	316,664	319,611	1,305,908	27,337,148			
1879	8,795,340	521,917	17,081,095	222,920	1,954,042	1,521,153	8,175,951	2,252,572	12,889,387	330,968	174,757	1,272,032	25,095,867			
1880	10,311,139	620,704	17,134,747	239,655	3,006,069	1,942,405	10,856,579	3,658,477	23,356,264	300,148	224,848	1,775,594	33,857,749			
1881	14,898,052	721,344	27,002,046	217,444	2,642,550	2,222,122	9,122,079	2,723,246	23,356,264	671,008	177,340	1,648,121	37,704,048			
1882	18,911,637	755,560	28,543,178	390,100	5,062,926	3,812,068	11,592,806	5,336,361	27,588,994	800,025	319,257	2,421,526	58,065,459			
1883	20,242,222	1,149,195	29,802,820	281,309	3,126,069	4,276,712	11,089,865	2,758,994	22,939,385	2,282,473	352,552	3,081,875	58,878,392			
1884	14,038,694	948,901	13,419,227	408,124	3,655,568	4,345,878	7,235,519	2,960,488	19,700,488	2,748,434	221,061	2,346,146	36,814,392			
1885	11,064,186	1,140,548	13,523,613	308,293	4,853,354	3,645,644	7,235,519	3,771,524	22,939,385	1,262,515	119,376	2,656,635	34,435,538			
1886	13,142,644	1,462,414	10,861,020	216,078	6,797,879	4,558,229	8,510,097	3,803,566	20,241,079	2,279,399	452,700	2,751,423	37,038,284			
1887	17,977,200	1,670,952	11,504,721	111,635	6,780,853	4,720,760	10,052,219	4,353,992	22,187,955	2,002,476	608,131	3,997,596	42,766,121			
1888	13,707,240	1,817,511	8,342,817	120,497	4,820,846	4,534,298	6,853,195	2,551,043	15,611,656	3,766,180	563,539	3,997,596	33,343,209			
1889	19,060,647	2,582,456	11,336,123	236,654	9,054,736	5,052,610	9,233,659	4,581,064	27,146,975	4,781,110	892,158	5,768,287	47,403,253			
1890	20,664,427	2,735,546	16,002,384	639,050	9,759,266	5,898,763	10,666,465	5,097,434	27,335,678	5,062,318	1,966,851	7,985,977	55,699,426			
1891	20,879,851	2,819,238	19,780,470	565,338	6,977,901	6,475,119	11,968,808	6,905,419	26,704,114	4,953,911	1,472,980	9,239,451	67,949,837			
1892	21,334,783	2,990,571	23,928,255	1,383,455	11,054,445	8,936,298	20,141,862	7,986,637	22,720,111	4,607,549	2,034,919	12,089,492	71,507,575			
1893	20,367,339	3,466,885	17,885,573	1,652,200	10,131,171	14,026,669	18,391,287	11,154,933	20,182,216	4,543,455	2,586,919	16,645,917	65,677,193			
1894	19,641,622	3,717,740	17,342,093	1,806,367	9,916,742	19,031,011	18,944,887	10,562,325	21,722,294	4,512,293	1,951,985	10,243,561	65,677,193			
1895	18,631,683	4,122,899	19,621,862	2,515,091	10,420,727	10,465,981	20,562,325	6,684,735	21,722,294	5,210,607	1,890,705	12,907,932	69,762,770			
1896	19,420,751	3,460,489	20,143,605	1,797,161	11,668,243	13,272,521	20,022,263	7,942,844	21,788,416	5,210,607	1,890,705	12,907,932	69,762,770			

Department of Railways and Canals

FOREIGN CARRYING TRADE.

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, in American vessels and in foreign vessels during each Fiscal Year, from 1857 to 1896 inclusive, with the percentage carried in American vessels (coin and bullion are included from 1857 to 1879, inclusive,) as method of transportation of specie and merchandise cannot be separately stated.

Year ending June 30.	IMPORTS.			EXPORTS.			TOTAL IMPORTS AND EXPORTS.				Percentage carried in American vessels.
	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	Total.	
1857.....		\$	\$	\$	\$	\$	\$	\$	\$	\$	70.5
1858.....		259,116,170	101,773,971	251,214,857	111,745,825	510,331,027	213,519,796	723,850,823			73.7
1859.....		203,700,016	78,913,134	243,491,288	81,153,133	447,191,304	160,066,267	607,257,571			66.9
1860.....		216,123,428	122,644,702	249,617,953	107,171,509	465,741,381	225,040,793	762,288,550			65.2
1861.....		228,164,855	134,001,399	279,082,902	121,030,304	507,247,757	255,040,793	762,288,550			50.0
1862.....		201,544,055	134,108,098	179,972,733	69,372,180	381,516,788	203,478,278	584,995,066			41.4
1863.....		92,274,100	113,497,629	125,421,318	104,517,667	217,695,418	218,015,296	435,710,714			27.5
1864.....		109,744,580	143,175,340	132,127,891	199,880,091	241,872,471	343,056,031	584,928,502			32.2
1865.....		81,212,077	248,350,818	102,849,409	237,442,730	184,061,486	485,793,548	669,855,034			27.7
1866.....		74,885,116	174,170,336	93,017,756	262,839,588	167,402,872	437,010,124	604,412,996			33.9
1867.....		112,040,395	333,471,763	213,671,466	351,754,928	297,834,904	581,330,403	879,165,307			35.1
1868.....		117,209,536	300,622,035	180,623,368	280,708,368	297,981,573	550,546,074	848,527,647			35.6
1869.....		136,802,024	309,512,231	175,106,548	301,886,491	289,956,772	586,492,012	876,448,784			31.2
1870.....		153,237,077	309,140,510	153,154,748	285,979,871	289,956,772	586,492,012	876,448,784			28.5
1871.....		163,285,710	363,020,644	190,378,462	392,801,932	352,969,401	638,927,488	991,896,889			26.7
1872.....		17,635,681	177,286,302	168,044,799	393,929,579	845,341,101	755,822,576	1,132,472,258			25.8
1873.....		17,070,548	174,739,834	171,566,758	494,915,886	346,306,592	839,346,362	1,212,328,233			26.7
1874.....		14,513,335	176,027,778	174,424,216	533,885,971	350,451,994	939,265,106	1,312,680,640			25.8
1875.....		13,083,859	157,872,726	382,949,568	7,304,356	156,385,066	894,788,517	1,119,434,544			27.2
1876.....		12,148,667	143,389,704	167,686,467	492,215,487	311,076,171	813,354,987	1,194,045,627			25.9
1877.....		10,697,640	151,834,067	6,707,170	530,354,703	316,660,281	859,920,536	1,210,519,399			22.6
1878.....		12,965,999	146,499,282	307,407,565	164,561,624	313,090,906	876,991,129	1,202,708,609			17.18
1879.....		11,983,823	143,590,363	310,499,599	128,425,339	272,015,692	911,269,252	1,203,593,404			16.22
1880.....		15,142,465	149,317,368	503,494,913	5,838,928	258,346,577	1,224,265,434	1,503,593,404			15.40
1881.....		17,193,213	133,631,146	491,840,269	116,955,324	277,162,714	1,269,002,983	1,475,181,831			16.60
1882.....		22,854,946	130,266,826	571,517,802	12,118,371	227,229,745	1,212,978,769	1,547,020,316			14.76
1883.....		23,003,048	136,002,290	564,175,576	25,089,844	34,973,317	1,258,506,024	1,408,211,302			15.01
1884.....		20,140,294	135,046,207	512,511,192	615,287,007	46,714,068	1,079,518,566	1,319,717,084			13.80
1885.....		21,149,476	112,964,032	443,513,891	82,001,691	636,004,765	1,073,911,113	1,314,960,966			
1886.....		24,555,683	118,942,817	491,937,636	78,406,680	581,973,477	1,165,194,508	1,408,502,979			
1887.....		27,562,069	121,365,493	543,392,212	72,991,253	621,802,292	1,165,194,508	1,408,502,979			

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, etc.—*Concluded.*

Year ending June 30.	IMPORTS.			EXPORTS.			TOTAL IMPORTS AND EXPORTS.				Percentage carried in American vessels.
	In cars and other land vessels.	In American vessels.	In Foreign vessels.	In cars and other land vehicles.	In American vessels.	In Foreign vessels.	In cars and other land vehicles.	In American vessels.	In Foreign vessels.	Total.	
1886.....	32,209,459	123,525,298	568,222,357	22,147,368	67,332,175	606,474,964	54,356,827	190,857,473	1,174,697,321	1,419,911,621	13.44
1889.....	38,227,861	120,782,910	586,120,881	28,436,517	83,022,198	630,942,660	66,664,378	203,805,108	1,217,063,541	1,487,533,927	13.70
1890.....	40,621,361	124,948,948	623,740,100	32,949,902	77,502,138	747,376,644	73,576,263	202,451,086	1,371,116,744	1,647,139,093	12.29
1891.....	40,932,755	127,471,678	676,511,763	31,923,439	78,968,047	773,589,324	72,836,194	206,439,725	1,450,101,087	1,729,397,006	11.94
1892.....	39,726,595	139,139,891	648,535,976	33,220,629	81,033,844	916,023,675	72,947,224	220,173,735	1,564,559,651	1,857,680,610	11.85
1893.....	44,121,064	127,096,434	695,184,394	43,862,947	70,670,073	733,132,174	87,984,041	197,765,507	1,428,316,568	1,714,066,116	12.2
1894.....	29,623,095	121,561,193	503,810,334	49,221,427	73,707,023	769,212,122	78,844,522	195,268,216	1,273,022,456	1,547,135,194	13.3
1895.....	33,201,988	108,229,615	590,538,362	49,902,754	62,277,581	695,357,530	83,104,742	170,507,196	1,285,896,192	1,589,508,130	11.7
1896.....	35,535,079	117,299,074	626,890,521	61,131,125	70,392,813	751,083,000	96,066,204	187,691,887	1,377,973,521	1,662,331,612	12.00

NOTES.—1. The amounts carried in cars and other land vehicles, were not separately stated prior to July 1, 1870. 2. Exports are stated in mixed gold and currency values from 1862 to 1879, inclusive.

Department of Railways and Canals.

STATEMENT showing the Total Values of Foreign Merchandise transported in the In-Transit and Transhipment Trade of the United States with the British North American Possessions during each year from 1871 to 1896.

Year ending 30th June.	Received for transit and transhipment from British North American Possessions.			Shipped in transit to or transhipment for British North American Possessions.		
	By Land.	By Water.	Total.	By Land.	By Water.	Total.
	\$	\$	\$	\$	\$	\$
1871.....	6,035,585	1,918,475	7,954,060	15,624,591	2,781,884	18,406,475
1872.....	8,237,859	1,038,310	9,276,169	19,357,342	4,685,448	24,042,790
1873.....	11,700,787	1,693,906	13,394,693	20,178,666	6,605,518	26,784,184
1874.....	12,695,590	1,468,100	14,163,690	20,572,299	6,938,430	27,510,739
1875.....	16,890,022	1,152,555	18,042,577	23,794,129	6,006,166	29,800,295
1876.....	21,301,262	1,290,640	22,591,902	19,369,958	5,049,930	24,419,888
1877.....	10,835,642	1,636,053	12,471,695	17,066,855	1,910,298	18,977,153
1878.....	10,314,534	1,889,524	12,204,058	11,914,321	998,364	12,912,685
1879.....	10,098,998	1,982,097	12,081,095	12,030,635	858,952	12,889,587
1880.....	15,265,177	1,869,570	17,134,747	16,388,673	653,430	17,042,003
1881.....	15,200,967	1,801,079	17,002,046	22,828,270	527,994	23,356,264
1882.....	24,665,029	3,878,149	28,543,178	36,613,465	982,019	37,595,484
1883.....	26,382,370	3,420,450	29,802,820	38,389,318	923,250	39,312,568
1884.....	13,043,498	375,729	13,419,227	22,120,587	818,798	22,939,385
1885.....	12,755,686	767,927	13,523,613	19,105,476	594,982	19,700,458
1886.....	9,593,344	1,267,676	10,861,020	19,428,867	812,212	20,241,079
1887.....	9,377,041	2,127,680	11,504,721	20,178,365	2,009,590	22,187,955
1888.....	6,309,024	2,033,793	8,342,817	13,347,876	2,063,780	15,411,656
1889.....	8,303,171	3,032,952	11,336,123	19,299,966	2,849,263	22,149,229
1890.....	13,524,298	2,477,612	16,001,910	24,788,152	2,547,052	27,335,201
1891.....	18,065,925	1,714,545	19,780,470	25,185,706	2,697,317	27,883,023
1892.....	21,346,413	2,581,842	23,928,255	23,989,746	2,714,368	26,704,114
1893.....	13,807,662	4,077,911	17,885,573	20,151,432	2,568,679	22,720,111
1894.....	13,501,664	3,840,429	17,342,093	17,974,332	2,207,884	20,182,216
1895.....	14,068,922	5,552,940	19,621,862	18,752,226	2,970,068	21,722,294
1896.....	13,408,578	6,735,027	20,143,605	18,335,373	3,453,043	21,788,416

NOTE.—This movement forms no part of the import and export trade.

C.—TABLE showing the Tonnage of the undermentioned Articles moved on

YEARS.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Vegetable Food.*
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869.....	71,051	670,534	256,475	99,012	92,309	13,489	99,743
1870.....	54,978	658,524	193,129	123,191	117,941	19,520	127,727
1871.....	41,211	748,549	672,057	113,992	129,891	34,563	109,935
1872.....	20,534	403,903	902,753	120,061	92,959	13,357	120,753
1873.....	19,307	803,064	637,296	70,586	70,023	30,160	114,735
1874.....	29,134	772,163	519,203	98,654	59,408	8,215	280,821
1875.....	17,635	744,293	282,031	104,475	62,717	8,309	86,090
1876.....	9,290	416,376	365,254	96,494	52,147	19,949	104,783
1877.....	8,923	448,043	723,458	139,453	66,045	35,948	77,114
1878.....	5,904	844,555	734,993	89,534	85,029	64,613	88,106
1879.....	7,164	949,466	621,180	96,144	23,164	59,210	77,071
1880.....	8,266	966,052	1,156,619	106,247	20,893	26,340	86,673
1881.....	6,926	444,832	475,823	81,587	30,321	15,484	61,588
1882.....	9,372	642,215	251,687	96,650	22,180	43,372	53,300
1883.....	9,047	573,740	522,978	58,787	51,607	95,246	67,595
1884.....	7,251	790,409	198,216	65,008	52,696	71,462	51,944
1885.....	6,869	565,922	359,982	64,587	8,234	10,211	47,505
1886.....	9,005	993,129	354,765	62,854	7,278	3,073	59,782
1887.....	4,089	936,840	446,617	75,458	35,365	6,717	47,678
1888.....	3,287	491,419	499,218	41,100	70,315	12,532	49,087
1889.....	4,429	484,141	592,550	66,110	63,674	36,329	49,663
1890.....	3,489	353,738	616,702	90,754	48,438	21,657	33,123
1891.....	3,126	756,101	142,141	71,903	16,362	68,771	33,951
1892.....	4,879	620,768	150,269	51,596	72,444	4,236	33,807
1893.....	2,367	1,093,927	252,283	49,651	24,714	6,518	20,656
1894.....	2,909	903,361	275,377	89,700	100,874	5,288	22,620
1895.....	2,240	280,550	94,403	77,868	87,839	205	59,400
1896.....	7,963	408,872	100,227	109,967	197,713	77,210	55,230

* Apples, meal all kinds, pease, potatoes.

Department of Railways and Canals.

all Canals in the State of New York, during a series of twenty-eight years.

HEAVY GOODS.						
Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
Ton.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1,302,613	137,677	79,652	263,333	1,324,408	183,992	1,989,062
1,295,010	135,930	89,708	266,740	1,558,185	238,802	2,289,365
1,850,198	178,269	100,310	248,709	1,194,037	289,952	2,011,277
1,674,320	161,667	96,996	248,558	1,462,590	377,592	2,347,403
1,745,171	53,363	62,581	216,706	1,625,859	415,968	2,374,477
1,767,598	24,511	82,955	173,590	1,413,162	232,544	1,926,762
1,305,550	36,603	95,305	186,785	1,217,091	283,219	1,819,003
1,064,293	11,691	69,450	114,070	1,036,698	173,530	1,405,439
1,498,984	10,341	58,828	156,918	1,286,881	250,573	1,763,541
1,912,734	8,385	65,642	139,927	889,873	210,078	1,313,905
1,833,399	27,634	99,568	136,021	971,074	314,411	1,548,708
2,371,090	93,613	139,993	144,487	959,342	370,884	1,709,319
1,116,561	78,650	205,005	113,756	1,092,003	337,873	1,827,287
1,118,776	58,921	122,796	108,040	1,228,435	364,361	1,882,543
1,379,000	46,553	47,412	190,392	1,152,849	293,892	1,731,098
1,236,986	28,513	54,471	161,788	954,288	210,610	1,400,670
1,063,310	12,215	38,726	161,272	1,025,941	196,750	1,433,904
1,489,886	10,878	152,030	112,002	857,884	269,914	1,402,708
1,552,764	21,368	224,979	124,054	905,424	243,578	1,539,403
1,166,958	2,596	43,881	106,344	1,219,680	259,269	1,631,770
1,296,896	3,278	78,135	112,100	1,094,897	234,948	1,523,358
1,167,901	5,800	26,304	93,181	830,154	202,072	1,157,291
1,092,355	1,960	36,770	81,232	881,502	215,686	1,217,150
937,999	524	40,073	93,216	832,397	136,612	1,102,822
1,450,116	536	25,204	52,094	741,934	102,275	922,043
1,400,129	267	22,614	70,353	609,368	37,641	740,243
602,505	4,263	59,402	71,334	766,723	144,076	1,045,798
957,182	1,568	74,651	83,309	682,167	89,998	931,693

D.—TABLE showing the Tonnage of the undermentioned Articles, moved through

YEAR.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles, †
	Tons.	Tons.	Ton.	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.....	42,465	320,563	320,444	11,368	28,178	9,409	56,591

*Fiscal.

†Apples, meal, all kinds, pease, potatoes.

Department of Railways and Canals.

the Welland Canal, during a period of Twenty-six Years ended 31st Dec., 1896.

HEAVY GOODS.							
Total.	Railway Iron.	Other Iron.	Salt.	Iron and salt having paid full tolls on St. Lawrence Canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	68,064	16,924	91,575	37,153	103,126	58,781	275,623
538,147	26,217	17,141	50,540	44,243	186,932	98,605	423,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	543,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	81,654	378,540
464,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,135	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
789,018	1,192	6,332	82	3,264	223,445	1,158	235,473

E.—TABLE showing the Tonnage of the undermentioned Articles cleared at Buffalo and Tonawanda, for transit through the Erie Canal, for a series of twenty-eight years.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.....	5,609	490,904	219,874	1,978	63,728	2,150	2,193	786,436	.....	.....
1870	8,258	502,158	165,577	19,944	89,156	10,593	6,906	802,592	2 05	.....
1871.....	5,607	570,849	579,709	19,810	106,391	27,622	5,705	1,315,693	67 59	.....
1872.....		330,032	866,169	41,515	73,572	5,900	88	1,317,276	67 50	.....
1873.....	6	737,167	611,675	8,636	51,615	22,441	634	1,432,174	82 10	.....
1874.....		650,161	459,728	3,192	44,079	112	237	1,157,509	47 18	.....
1875.....	5,859	695,315	273,006	1,156	36,609	2,242	3,372	1,017,559	29 38	.....
1876.....	231	377,317	356,064	6,334	24,488	12,205	4,691	783,331	.....	0 39
1877.....	1,710	398,416	709,723	26,351	52,559	27,365	4,976	1,223,100	55 52	.....
1878.....	987	775,953	718,714	21,665	69,256	51,064	6,662	1,644,301	109 08	.....
1879.....	1,239	892,404	602,171	7,193	14,537	40,471	7,528	1,565,543	99 07	.....
1880.....	2,743	897,603	131,857	434	16,154	12,137	4,256	2,065,184	162 06	.....
1881.....	1,491	386,605	458,318	86	24,751	107	7,484	878,842	11 75	.....
1882.....	1,123	586,019	241,406	1,858	9,046	19,158	6,216	864,826	9 96	.....
1883.....	538	535,150	517,219	6,816	47,190	79,010	6,051	1,191,974	51 06	.....
1884.....	520	767,784	194,368	4,910	47,060	57,856	4,411	1,078,909	37 18	.....
1885.....	323	540,533	356,737	3,317	5,610	6,405	5,427	918,352	14 36	.....
1886.....	488	955,851	351,272	6,799	5,180	.....	4,001	1,353,591	72 11	.....
1887.....	334	914,152	438,069	15,207	32,907	4,612	44,693	1,449,934	85 64	.....
1888.....	534	469,965	494,110	6,589	68,922	10,997	1,717	1,052,834	33 87	.....
1889.....	845	457,922	579,526	16,380	61,175	34,167	5,160	1,155,175	46 88	.....
1890.....	195	329,531	498,641	58,563	45,202	16,903	4,362	953,397	21 23	.....
1891.....	1,071	733,967	137,679	43,779	14,803	66,278	2,594	1,000,171	27 18	.....
1892.....	2,485	611,177	141,506	37,570	70,363	3,997	3,472	870,570	10 69	.....
1893.....	424	1,086,834	240,767	38,986	21,981	6,156	243	1,395,391	77 43	.....
1894.....	327	887,908	265,947	69,707	99,898	5,191	2,123	1,331,101	69 26	.....
1895.....	98	271,957	83,611	71,185	85,507	205	15	508,596	.....	35 21
1896.....	6,971	402,114	89,726	101,154	194,442	77,162	5,575	877,144	11 53	.....

* Apples, meals all kinds, pease, potatoes.

Department of Railways and Canals.

STATEMENT to Table E showing the shipment at Oswego, during the same period.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.....	7,361	141,360	28,585	66,794	1,113	8,569	14,033	267,815	.....	.. ..
1870.....	11,440	115,732	10,120	77,906	3,953	7,402	11,628	238,181	.....	11·06
1871.....	10,043	123,173	70,218	72,675	1,806	6,250	13,259	297,424	11·05	.....
1872.....	4,773	57,865	27,148	62,172	684	6,751	10,425	169,818	.....	36·59
1873.....	4,061	53,361	10,578	46,337	670	6,019	10,739	131,765	.....	50·80
1874.....	.....	108,288	46,127	77,007	1,103	7,053	3,747	245,525	.....	9·14
1875.....	1,728	32,690	3,034	75,083	3,308	4,989	5,931	126,763	.....	52·67
1876.....	967	21,890	1,324	63,336	117	5,703	6,638	99,975	.....	62·67
1877.....	855	28,955	3,308	80,306	316	6,603	6,556	126,399	.....	52·61
1878.....	1,394	24,171	1,383	50,381	.....	10,598	5,222	93,149	.....	65·21
1879.....	734	25,740	9,268	71,693	.....	16,623	3,110	127,168	.....	52·51
1880.....	951	17,466	15,656	82,743	.....	12,593	5,996	135,410	.....	49·43
1881.....	758	25,352	8,064	62,793	200	14,444	4,027	115,638	.....	56·82
1882.....	813	20,274	4,401	70,862	416	22,265	7,773	126,804	.....	62·65
1883.....	432	22,634	535	32,557	.....	14,384	1,967	72,507	.....	73·00
1884.....	404	5,932	413	48,391	.....	12,173	2,819	70,132	.....	73·43
1885.....	519	6,484	22	45,264	.....	4,613	2,945	59,847	.....	77·62
1886.....	787	9,579	154	42,261	.....	1,671	4,814	59,216	.....	77·88
1887.....	790	675	2	44,580	.....	716	1,370	48,133	.....	82·02
1888.....	384	2,206	168	6,237	.....	.....	2,196	11,191	.....	95·82
1889.....	473	8,002	8,950	40,096	16	1,405	1,003	59,945	.....	77·61
1890.....	545	10,378	10,408	26,639	8	4,635	2,356	54,969	.....	79·47
1891.....	292	4,298	1,652	27,418	.....	2,130	3,620	39,410	.....	85·28
1892.....	273	4,806	5,657	5,283	.....	199	2,340	18,558	.....	93·07
1893.....	119	2,036	3,968	8,476	.....	237	2,784	17,620	.....	93·43
1894.....	8	10,293	10,514	17,160	.....	.....	2,609	40,584	.....	84·84
1895.....	66	3,073	7,352	1,900	1,816	.....	258	14,465	.....	94·23
1896.....	.....	1,825	7,778	7,552	.....	.....	2,468	19,623	.....	93·01

* Apples, meal all kinds, potatoes.

F.—TABLE showing the Tonnage of the undermentioned Articles cleared downward on the Welland Canal, during a series of Twenty-six Years, ended 31st December, 1896.

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	243,555	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	394,807
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	490,795
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

* Fiscal. † Apples, meal all kinds, pease, potatoes.

Department of Railways and Canals

G.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland Canal in transit between Ports in the United States during a series of Twenty-six Years, ended 31st December, 1896.

Year.	VEGETABLE FOOD.							HEAVY GOODS.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.*	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	30,681	211,085	91,149	2,942	7,400	667	1,006	337,530	68,064	14,334	89,086	23,566	35,912	235,962
1870	10,482	124,695	89,761	1,391	7,400	3	608	234,337	24,040	13,239	49,843	95,741	59,401	242,264
1871	10,806	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	232,176
1872	8,230	229,653	125,627	1,920	5,948	500	5,368	374,226	5,742	8,941	22,868	203,673	19,651	260,895
1873	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	14	4,123	12,031	192,767	34,616	244,451
1874	5,187	96,247	58,138	1,905	1,905	525	403	162,405	8,976	5,631	20,395	167,110	25,808	227,844
1875	3,342	107,396	65,260	1,003	2,314	258	413	180,586	8,976	8,688	8,386	172,868	41,107	239,975
1876	1,316	65,542	60,026	859	277	464	341	128,361	2,405	10,713	3,892	150,583	13,535	178,723
1877	159	53,791	33,401	1,551	464	296	11	87,826	4,743	3,648	6,318	118,573	17,797	148,741
1878	30,611	34,320	30,031	924	296	684	10	65,285	1,313	5,570	371	65,945	18,380	92,954
1879	107	30,227	32,433	537	731	731	14	64,002	1,209	4,076	8	158,552	14,583	177,161
1880	2,041	54,382	66,128	735	9,874	882	8,579	132,496	698	6,901	8	196,462	24,891	223,471
1881	1,715	40,956	53,707	735	9,874	882	8,170	114,422	698	599	1,594	210,790	15,100	227,187
1882	124	53,235	63,229	732	882	882	1	118,203	156	5,328	1	189,964	11,364	206,813
1883	7,591	53,258	94,048	1,732	4,790	179	13,201	172,888	156	5,328	1	82,780	627	87,828
1884	11,780	37,678	83,431	1,732	12,060	179	10,859	157,530	15	4,406	56	173,259	2,309	177,288
1885	8,563	39,969	102,974	2	26,510	179	11,598	189,823	63	1,601	896	227,476	1,204	231,163
1886	5,017	39,229	147,045	6,519	27,492	20,497	17,225	236,208	504	504	208	162,231	1,620	164,563
1887	9,204	31,527	180,842	8,113	27,030	20,497	26,115	275,619	292	292	706	186,572	1,773	189,342
1888	6,802	32,097	127,494	6,433	36,935	864	31,992	244,560	576	576	2	183,895	.....	184,472
1889	11,018	26,950	131,222	198,777	16,751	864	36,352	311,389	344	344	.....	206,827	.....	207,171
1890	6,588	23,187	198,777	28,095	23,870	.....	60,462	198,358	181	246	.....	149,490	.....	188,818
1891	17,795	53,846	10,539	7,904	17,020	490	46,316	209,892	.....	297	.....	.....	.....	149,917
1892	10,169	27,881	100,512	7,904	17,020	490	46,456	300,407	.....	146	.....	207,348	.....	207,494
1893	16,224	34,878	175,094	11,128	16,137	.....	46,456	300,407	.....	.....	.....	.....	.....	.....

* Apples, meals all kinds, pease, potatoes.

H.—TABLE showing the Tonnage of Vegetable Food carried on each of the Lines of Canals and the two principal Railways, competing for the Carrying Trade between Lake Erie and Tidewater, for a series of Twenty-six years, ended 31st December, 1896.

Year.	Total on New York Canals.	Total on Welland Canal.	Total on New York Central and Erie Railways.	Quantity cleared at Buffalo and Tonawanda by Erie Canal.	Quantity cleared at Oswego by Canal.	Quantity charged through the Welland Canal in transit between ports in the United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	1,302,613	503,860	1,087,809	786,436	267,815	337,530
1872.....	1,674,320	538,147	1,870,614	1,317,276	169,818	234,337
1873.....	1,745,171	579,880	2,036,992	1,432,174	131,765	243,366
1874.....	1,767,598	647,397	2,791,517	1,557,509	243,325	374,226
1875.....	1,306,550	417,936	2,343,241	1,017,559	126,763	177,908
1876.....	1,064,293	409,788	2,875,803	783,331	99,975	162,405
1877.....	1,408,984	464,181	2,493,683	1,223,100	126,899	180,586
1878.....	1,912,734	403,403	3,695,764	1,644,301	93,149	128,361
1879.....	1,833,399	438,564	4,353,617	1,565,543	127,168	87,826
1880.....	2,371,090	442,182	4,732,385	2,065,184	135,410	48,580
1881.....	1,116,561	269,395	4,983,722	878,842	115,638	65,285
1882.....	1,118,776	306,482	3,885,577	864,826	126,804	64,002
1883.....	1,379,000	372,236	4,422,461	1,191,974	72,507	132,496
1884.....	1,236,986	305,734	3,639,805	1,078,909	70,132	114,422
1885.....	1,063,310	273,905	4,105,594	918,352	59,847	118,203
1886.....	1,489,886	414,812	3,802,262	1,353,591	59,216	172,888
1887.....	1,552,764	394,971	3,847,766	1,449,984	48,133	157,530
1888.....	1,166,958	419,786	3,197,734	1,052,834	11,191	189,825
1889.....	1,296,896	542,043	3,654,984	1,155,175	59,945	236,208
1890.....	1,167,901	519,291	4,336,199	953,397	54,969	275,619
1891.....	1,092,355	367,177	3,565,381	1,000,171	39,410	253,444
1892.....	937,999	527,426	5,913,013	870,570	18,558	244,550
1893.....	1,452,563	805,250	5,107,426	1,395,391	17,620	311,389
1894.....	1,400,129	590,409	4,281,056	1,331,101	40,584	293,148
1895.....	602,505	486,421	3,798,574	508,596	14,465	209,802
1896.....	957,182	798,018	5,183,540	877,144	19,623	300,407

*Fiscal.

Department of Railways and Canals

I.—STATEMENT showing the Quantity of Freight passed down the Welland Canal in Canadian and United States Vessels entering the Canal at Port Colborne during the Seasons of Navigation in 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895 and 1896.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.
	Steam.		Sail.		Steam.		Sail.		Steam and Sail
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	199	67,461	347	80,828	81	35,613	350	106,873	977 290,775
	Tons.		Tons.		Tons.		Tons.		Tons.
1885.									
Wheat.....		26,025		3,153		6,882		72,478	108,538
Corn.....		16,046		2,462		20,589		78,439	117,536
Barley.....				228					228
Oats.....						217		665	882
Pease.....		11							11
Rye.....									
Coal.....		1,005		20,318				18,560	39,883
Miscellaneous merchandise...		1,941		3,689		1,111		1,086	7,827
Shingles, woodenware, &c....		223		9		53		58	343
Sawed lumber..... Ft. B.M.		7,725,105		8,681,081		9,381,654		20,935,270	46,723,110
Square timber..... Cub. ft.		601,516		2,849,526		20,692		113,682	3,585,416
Staves..... No.		104,000		44,000		83,500			231,500
Firewood..... Cords.				783					783
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	261	95,928	426	123,297	118	86,937	358	108,344	1163 414,506
1886.									
	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....		38,984		30,834		2,937		70,019	142,774
Corn.....		48,547		33,315		36,852		99,644	218,358
Barley.....								572	572
Oats.....		6		41		4,331		459	4,837
Pease.....		450		158					608
Rye.....									
Coal.....		4,007		45,018				11,647	60,672
Miscellaneous merchandise...		2,936		6,728		23,687		281	33,622
Shingles, woodenware, &c....		329				252		215	1,152
Sawed lumber..... Ft. B.M.		6,915,390		15,719,631		8,953,478		18,405,961	49,994,460
Square timber..... Cub. ft.		564,827		2,335,205				35,500	2,935,532
Staves..... No.		221,280		697,933					919,213
Firewood..... Cords.				390					390
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	250	86,344	372	101,745	107	94,029	163	46,152	892 328,270
1887.									
	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....		80,757		81,652		200		46,186	208,796
Corn.....		12,341		14,775		65,981		20,582	113,679
Barley.....						9		575	584
Oats.....				1,376		11,098		279	12,753
Pease.....				362					362
Rye.....									
Coal.....		1,436		25,165				2,108	28,709
Miscellaneous merchandise...		2,179		4,609		24,395		415	31,598
Shingles, woodenware, &c....		1,716		1,081		26			2,823
Sawed lumber..... Ft. B.M.		2,894,767		12,329,728		4,161,349		15,091,355	34,477,199
Square timber..... Cub. ft.		498,770		1,285,594					1,784,364
Staves..... No.				266,697					266,697
Firewood..... Cords.		299		466					765

I.—STATEMENT showing the Quantity of 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.
	242	86,838	339	93,450	114	104,505	219	60,500	914 345,293
1888.	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....	45,481		60,379		1,353		40,779		147,992
Corn.....	38,620		14,251		71,988		71,175		196,024
Barley.....									
Oats.....	672				24,967		1,311		26,950
Pease.....			54		57				111
Rye.....					71		632		703
Coal.....	1,603		20,064				4,208		25,897
Miscellaneous merchandise...	2,165		3,291		22,719		3,722		31,875
Shingles, woodenware, &c....	66		84		141		6		297
Sawed lumber..... Ft. B. M.	5,262,700		11,977,905		4,451,360		12,539,672		34,230,637
Square timber..... Cub. ft.	687,728		1,555,307		19,000				2,262,035
Staves..... No.	106,972		211,436				34,000		352,408
Firewood..... Cords.	179		201						380
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	317	106,048	427	118,071	208	172,873	268	92,442	1220 489,434
1889.	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....	38,127		28,054		1,679		46,767		114,627
Corn.....	60,218		43,819		152,858		96,700		353,595
Barley.....									
Oats.....	320				25,347		2,145		27,812
Pease.....									
Rye.....	948		634		336				1,918
Coal.....	3,976		21,148		712		1,664		27,500
Miscellaneous merchandise...	6,339		5,749		25,082		3,030		40,200
Shingles, woodenware, &c....			1				51		52
Sawed lumber..... Ft. B. M.	5,789,226		11,632,330		11,792,850		21,026,211		50,240,617
Square timber..... Cub. ft.	924,645		2,934,989						3,859,634
Staves..... No.	35,700		194,649						220,349
Firewood..... Cords.			46						46
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	342	110,056	443	117,400	202	204,542	142	50,622	1129 482,620
1890.	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....	43,308		35,633		7,514		32,239		118,694
Corn.....	63,095		51,439		172,756		40,104		327,394
Barley.....					3,304		3,215		6,519
Oats.....	479		73		27,030				27,682
Pease.....					14				14
Rye.....	1,121								1,121
Coal.....	1,049		21,732				615		23,396
Miscellaneous merchandise...	3,146		5,683		32,194		2,510		43,533
Shingles, woodenware, &c....	15		1,266		8				1,289
Sawed lumber..... Ft. B. M.	5,921,240		5,167,201		10,274,335		14,290,800		35,653,576
Square timber..... Cub. ft.	1,141,194		3,395,832						4,537,026
Staves..... No.	12,255		19,947						32,202
Firewood..... Cords.	15		566						581

Department of Railways and Canals

I.—STATEMENT showing the Quantity of 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.
	256	107,575	173	68,061	241	241,317	130	50,063	800	467,016
1891.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.	62,859		56,953		36,425		33,853		190,090	
Corn.	20,510		9,550		137,852		17,039		184,951	
Barley.					5,444		4,061		9,505	
Oats.					50,212		1,076		51,288	
Pease.	390								390	
Rye.	29,581		11,296		16,361		7,343		64,581	
Coal.	158		20,388				3,851		24,397	
Miscellaneous merchandise..	8,369		6,007		37,537		2,573		54,491	
Shingles, woodenware, &c.							4		4	
Sawed lumber. Ft. B.M.	4,268,874		4,648,824		8,067,351		18,745,628		35,730,677	
Square timber. Cub. ft.	449,406		566,109						1,015,515	
Staves. No.	1,000								1,000	
Firewood. Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	239	100,324	186	73,140	245	248,837	134	52,087	804	474,388
1892.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.	74,578		54,764		60,304		36,898		226,604	
Corn.	17,477		7,369		146,080		21,631		192,548	
Barley.					3,995		2,438		6,433	
Oats.					36,935				36,935	
Pease.	524								524	
Rye.	5,066				3,718		608		9,392	
Coal.	775		13,350				1,365		15,490	
Miscellaneous merchandise..	2,139		2,786		44,117				49,042	
Shingles, woodenware, &c.	1				45		9		55	
Sawed lumber. Ft. B.M.	6,278,253		7,504,256		10,494,692		26,832,564		51,109,765	
Square timber. Cub. ft.	754,213		1,421,260		2,601		1,310		2,179,384	
Staves. No.	46,800		32,838						79,638	
Firewood. Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	193	100,107	143	58,652	390	375,682	236	122,326	962	656,767
1893.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.	83,447		31,185		72,671		68,628		255,931	
Corn.	23,817		12,946		313,246		91,083		441,092	
Barley.	1,527		183		16,189		562		18,461	
Oats.	223				27,903		3,038		31,164	
Pease.										
Rye.					3,216		455		3,671	
Coal.	638		13,580				5,849		20,067	
Miscellaneous merchandise..	6,179		286		44,976		1,647		53,088	
Shingles, woodenware, &c.			15		22				37	
Sawed lumber. Ft. B.M.	13,750,267		2,748,941		17,359,573		41,863,852		75,722,633	
Square timber. Cub. ft.	836,048		1,437,893		5,133				2,279,074	
Staves. No.			18,484						18,484	
Firewood. Cords.										

I.—STATEMENT showing the Quantity of 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.
	199	104,649	112	57,668	287	279,621	144	63,770	742 505,708
1894.	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....	98,586		54,444		79,715		37,095		268,840
Corn.....	10,368		5,614		122,211		31,040		169,233
Barley.....	258				28,095				28,353
Oats.....	175		107		27,621				27,903
Pease.....									
Rye.....									
Coal.....	1,483		1,892		61		11,109		14,545
Miscellaneous merchandise..	16,949		664		83,198		1,977		102,788
Shingles, woodenware, &c....	22								22
Sawed lumber..... Ft. B.M.	8,423,295		279,330		11,719,664		31,891,456		52,313,745
Square timber..... Cub. ft.	771,328		1,578,981						2,350,309
Staves..... No.									
Firewood..... Cords.									
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	209	108,776	151	73,895	205	223,743	101	41,327	666 447,741
1895.	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....	72,895		68,935		29,345		30,723		201,898
Corn.....	16,854		3,724		126,943		17,369		164,890
Barley.....	798		162		7,729				8,689
Oats.....	1,531		246		16,442				18,219
Pease.....									
Rye.....									
Coal.....	2		3,984				4,426		8,412
Miscellaneous merchandise..	37,356		2,361		67,705		1,324		108,746
Shingles, woodenware, &c....	20				863		1,079		1,962
Sawed lumber..... Ft. B.M.	1,057,146		248,071		9,385,890		14,929,734		25,620,841
Square timber..... Cub. ft.	1,027,913		2,049,368				35,000		3,112,281
Staves..... No.									
Firewood..... Cords.									
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	224	122,521	181	82,543	343	337,983	163	96,506	911 639,553
1896.	Tons.		Tons.		Tons.		Tons.		Tons.
Wheat.....	113,331		90,979		78,741		34,476		317,527
Corn.....	9,360		3,855		218,315		88,914		320,444
Barley.....	240				11,128				11,368
Oats.....	441		1,270		24,847		1,620		28,178
Pease.....	1,403		1,354				273		3,030
Rye.....	5,035		644		2,837		454		8,970
Coal.....	7		11,106		1,255		629		12,997
Miscellaneous merchandise..	29,820		1,452		82,319		4,374		117,965
Shingles, woodenware, &c....	134				22				156
Sawed lumber..... Ft. B.M.	2,123,213				18,259,810		27,796,146		48,179,169
Square timber..... Cub. ft.	942,923		1,649,145				246,024		2,838,092
Staves..... No.									
Firewood..... Cords.							55		55

Department of Railways and Canals.

STATEMENT showing the Quantity of Through Freight passed up the Welland Canal in Canadian and United States Vessels, during the Season of 1896.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	120,614	184	81,618	331	327,911	163	95,791	894	625,934
1896.	Tons.		Tons.		Tons.		Tons.		Tons.	
Class 3.										
Cement and water lime.	1,363		323		200				1,886	
Fish	11				477				488	
Iron, railway.	1,687								1,687	
do pig	28								28	
do all other.....	906		18		146				1,070	
Salt	822								822	
Steel										
Articles not enumerated.....	191		493		3,438		17		4,139	
Class 4.										
Crockery and earthenware ...	84				138				222	
Marble.....										
Manilla	3								3	
Nails	336		79						415	
Paint	42		9						51	
Pitch and tar	56		40		29				125	
Sugar.....	1,869				7,128				8,997	
Tin.....	195				247				442	
Merchandise not enumerated.	3,009		96		50,626				53,731	
Class 5.										
Produce of wood	44				119				163	
Special										
Coal	697		2,890		148,443		58,210		210,240	
Unenumerated					672		486		1,158	
Total..	11,343		3,948		211,663		58,713		285,667	

Canadian steam vessels carried.....	11,343	tons
do sailing do	3,948	do
United States steam vessels carried.....	211,663	do
do sailing do	58,713	do

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 1896, is as follows :—

SUMMARY.	Tons.	Tons.
In Canadian steam vessels.....	11,343	
do sail do	3,948	
Total quantity in Canadian vessels.....		15,291
In United States steam vessels.....	211,663	
do sail do	58,713	
Total in United States vessels.....		270,376
Grand total quantity of freight passed up the Welland Canal in Canadian and United States vessels.....		285,667

STATEMENT of the Quantity of Through Freight passed on the Welland Canal, during the season of Navigation in 1896.

SUMMARY.	Tons.	Tons.
In Canadian steam vessels up.....	11,344	
do do down	182,180	
Total in Canadian steam vessels.....		193,523
In Canadian sail vessels up.....	3,948	
do do down	143,659	
Total in Canadian sail vessels.....		147,607
Total quantity in Canadian vessels.....		341,130
In United States steam vessels up.....	211,663	
do do down	449,911	
Total in United States steam vessels.....		661,574
In United States sail vessels up.....	58,713	
do do down	182,178	
Total in United States sail vessels.....		240,891
Total quantity in United States vessels.....		902,465
Total in Canadian and United States vessels.....		1,243,595
	East bound.	West bound.
In Canadian vessels.....	325,839	15,291
In United States vessels.....	632,089	270,376
Total	957,928	285,667

CANADIAN STEAM VESSELS

CANADIAN SAILING VESSELS

UNITED STATES STEAM VESSELS

[illegible]

[illegible]

UNITED STATES STEAM VESSELS.

[illegible]

UNITED STATES SAILING VESSELS.

[illegible]

RECAPITULATION.

[illegible]

Department of Railways and Canals.

K.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, during the Seasons of Navigation in 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895 and 1896.

[illegible]

K.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, &c.—*Concluded.*

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Nails.....	1			1									
Oil.....	78	7		14				6				6	23
Paint.....												2	
Pitch and tar.....													
Rags.....													4
Sugar.....				15									1
Stone, wrought.....	317			12									
Turpentine.....	1												
Whisky, beer, and other spirits.....					3	20	26	105	6	1		101	
Merchandise not enumerated.....	37	29	100	72	105	193	142	278	36	4	330	538	376
Total, Class 4.....	480	138	193	236	198	324	246	426	60	28	551	801	679
<i>Class 5.</i>													
Barrels, empty.....	37	128		88	40				1				
Sawed lumber.....	7,531	19,945		7,001	5,175			3,908	1,678	667		1,117	657
Staves, pipe and barrel.....	200	856		184	139				8				
do West India and pipe.....	863			131	1,623	270			200				
Timber, square, in vessels.....		639											
do do rafts.....	7,365	11,128	15,410	14,390	11,586	9,302		5,980	400				1,200
Woodenware.....	68	76	101	45	25		1				6		
Total, Class 5.....	16,064	32,772	36,173	21,839	18,588	15,690	3,580	9,588	2,327	667	689	1,118	1,857
<i>Special Class.</i>													
Coal.....													
Grand total.....	168,715	132,968	244,514	213,834	183,899	292,827	224,371	291,776	263,144	508,016	292,191	266,659	480,077

Department of Railways and Canals

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canals to Lake Erie, during the Seasons of Navigation in 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895 and 1896.

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Bricks	200	44	66	3	187	84	252	469	1,570	3,169	1	24	15
Cement and water lime	219	117	498	1,740	1,177	823	62	2,380	2,281	1,859	2,281	1,859	1,686
Clay, lime and sand			1	134	95	3	8	206	240	465	253		
Fish			1	95	1	80	26	7	426		512		11
Gypsum		13											
Iron, railway	2,031	12,356	6,629	153	9,148	15,513	20,003	2,855	1,171	6,576	20		1,687
do pig	43	23	10	368	573	250	20	112	74	25		56	28
do all other	366	290	76	1,997	297	290	584	595	387	543	114	1,831	727
Salt	802	1,574	5,609	4,197	3,509	4,216	7,440	4,391	2,034	995	843	932	822
Steel	142		1	423	3	3	1		269	426	248	528	4
Stone for cutting		7					12		145	3			
Flour							48					124	
Hay					31						15		
Meals													
Oats													
Potatoes				4	24	215	100				33	25	99
Seeds, all kinds													
Agricultural products not enumerated, vegetables	1	1			35	19		52			5	26	
Hides and skins												26	
Horses						2						1	1
Lard and lard oil		3		3			72		16				
Pork	45						33						
Wool			6	4	77		13	2	13		10		
All other articles not enumerated				4			1	2					
Total, Class 3	3,849	14,428	12,897	9,125	15,247	21,498	28,675	11,071	6,345	12,202	4,335	5,432	5,080
<i>Class 4.</i>													
Ashes, pot and pearl		226	20				10	31	88				
Crockery and earthenware	47	10	40	164	336	112	11	251	8	98	107	12	83
Dye woods, &c.			1	4									
Furniture	1	1	9		1			1	3				

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canals to Lake Erie, &c.—*Concluded.*

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Glass, all kinds.	160	32	39	53	77	71	23	30	152	365	175	394	612
Manilla.	17		7	5	1				11		11		
Molasses.			23	1	7	56			32	43	42	20	1
Nails.	160	205	389	147	578	736	453	560	276	472	500	1,149	409
Oil, in barrels.	80	10	82	28	22	9	11	64	2	44	8	31	33
Paint.	161	24	36	80	59	49	24	61	15	70	8	75	49
Pitch and tar.	1		5	1			13	22	15	26	152	67	60
Resin.													
Soda, ash.	1,427	164	975	1,116	1,196	766	554	377	352	68	94	84	74
Stone, wrought.													
Sugar.	290	64	316	207	98	7	551	412	1,320	2,218	2,724	1,430	1,873
Tin.	1,832	10	549	2,225	198	480	40	23	27	34	327	396	395
Turpentine.	1		1	1	1	1	2						
White lead.	3		3	4	2	1	19	3	6	35	2	7	10
Whiting.		9		7		33	34	50	71	31	1	113	56
Whisky, beer, &c.	364	259	174	287	228	124	350	294	220	26	53	77	51
Merchandise not enumerated.	1,001	712	1,008	619	1,259	1,422	1,180	810	538	799	900	1,268	1,247
Total, Class 4.	5,545	1,725	3,677	4,950	4,063	3,870	3,276	2,989	3,125	4,343	5,104	5,123	4,970
<i>Class 5.</i>													
Barrels, empty.													
Lumber sawn, in vessels.			227			2							
Woodenware.	3	2											
Total, Class 5.	3	2	227			2							
<i>Special Class.</i>													
Coal.	28												
Grand Total.	9,425	16,155	16,801	14,075	19,310	25,370	31,951	14,060	9,470	16,545	9,439	10,555	10,050

Department of Railways and Canals.

M.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1884 to 1896, inclusive.

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Bricks.....			41		4								
Cement and water lime.....			31					1			5		
Fish.....				2								181	
Iron, railway.....								10	1	102		214	
do all other.....	40		45			520	1	494					
Salt.....			1										
Steel.....					3				1				498
Stone for cutting.....	15												
Apples.....													
Barley.....				1,709			6,519	8,113	6,433	16,751	28,095	7,904	11,128
Barren.....	53,707	63,229	93,503	83,431	102,974	147,045	180,842	127,494	131,222	198,777	105,329	100,512	175,094
Flour.....	1,715	124	7,591	11,780	8,563	5,017	9,204	6,802	11,018	6,588	17,795	10,169	16,324
Hay, pressed.....	13												
Meal, all kinds.....	8,170		13,201	10,726	11,598	17,224	20,482	28,096	31,724	36,352	60,390	46,316	46,456
Oil cake.....											29		
Oats.....	9,874	882	4,790	12,050	26,510	27,492	27,030	52,823	36,935	23,870	27,621	16,442	16,137
Potatoes.....					179	1	1			864			490
Rye.....	511		236	44	48	151	135	256	50	16		14	78
Seeds, all kinds.....	40,956	53,235	53,258	37,678	39,999	39,229	31,527	32,097	26,950	28,187	53,846	27,881	34,878
Wheat.....			2	2			14	42					
Agricultural products, vegetable.....	73		414	170	39		1	3			4	8	41
Hides and skins, &c.....													3
Horses.....	6		1	2			32	10		2		6	1,348
Lard and lard oil, &c.....	7		13	14	19	32	30	2	29	1		30	
Meats, other than pork.....	4		1	18	14	3	15	2					
Pork.....			106	108	19	21	88	73	1	52	56	87	390
Sheep.....	1												
Wool.....			1,125	86	18	452		1,237	70	80	1,484	1,536	900
Total, Class 3.....	115,092	117,470	174,359	157,820	189,986	237,198	275,893	255,553	244,433	311,647	294,654	211,300	303,665
<i>Class 4.</i>													
Agricultural implements.....				9									
Crockery and earthenware.....													
Furniture.....	16		21	24	30	1		7		6		2	

M.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports, during the Season of Navigation from 1884 to 1896, inclusive—*Concluded*.

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Glass, all kinds	1		2					1					
Nails	26		4										
Oil, in barrels	255		6	8			3	1	44		57	30	1,005
Paint													
Soda, ash	7		38			2							
Stone, wrought													
Sugar													
White lead	26		21	63	151	190	228	167	46	83		15	
Whisky, beer and all other spirits	481	2	824	469	1,453	1,679	1,822	1,865	1,331	1,693	2,976	7,656	3,990
Merchandise, not enumerated													
Total, Class 4	812	2	916	573	1,638	1,902	2,075	2,041	1,422	1,782	3,033	7,762	5,160
<i>Class 5.</i>													
Empty barrels										9			10
Firewood in vessels								45,504	54,173	68,985	62,905	41,974	165
Lumber, sawn, in vessels	43,713	44,668	43,776	29,845	28,333	55,074	38,030						75,515
Hoops													
Railway ties, in vessels												446	
Shingles	76	111	463		6	51				13			
Staves, barrel					82								
Timber, square, in vessels													
Woodenware, &c	11		2	26	141	333	8	4	54			500	12
Total, Class 5	43,800	44,779	44,241	29,871	28,562	55,458	38,038	45,508	54,227	69,007	62,905	42,920	75,702
<i>Special Class.</i>													
Coal	4,293	4,974	5,400	1,163	878	1,124	615	1,382	651	2,123	727	603	1,255
Stone, not suitable for cutting						1,681	18	1,773					
Krylite							1,620						
Total, Special Class	4,293	4,974	5,400	1,163	878	2,805	2,253	3,155	651	2,123	727	603	1,255
Grand Total	163,997	167,225	224,916	189,427	221,064	297,353	318,259	306,257	300,733	384,559	361,319	262,585	385,782

Department of Railways and Canals.

N.—STATEMENT showing the number of Vessels which took their cargoes of Wheat through the Welland Canal from ports west of Port Colborne ; the quantity transhipped at Kingston and Prescott, and the quantity of each cargo through the St. Lawrence Canals to Montreal, during the Season of Navigation in 1896.

Name of Vessels.	Original quantity through the Welland Canal.	Quantity transhipped at Kingston and Prescott.	Cargo through the St. Lawrence Canals to Montreal.
	Tons.	Tons.	Tons.
Canadian steamer "Acadia".....	636	203	433
" " ".....	447		325
" " ".....	628	201	427
" " "Arabian".....	1,201	665	536
" " "Lake Michigan".....	496	188	308
" " ".....	420	145	275
" " ".....	504	183	321
Canadian Brig "Dunmore".....	1,221	451	770
" " "Hiawatha".....	1,170	687	483
" " "Thrush".....	1,245	421	824
" " "Winnipeg".....	1,481	852	629
Total	9,449	3,996	5,331

Number of cargoes of wheat.....	11
Quantity through Welland Canal to Kingston and Prescott.....	9,449 tons.
" transhipped at Kingston and Prescott.....	3,996 "
" taken to Montreal in vessels in which it arrived at Kingston and Prescott.....	5,331 "

N.—STATEMENT showing the number of Vessels which took their cargoes of Corn through the Welland Canal from ports west of Port Colborne ; the quantity transhipped at Kingston and Prescott, and the quantity of each cargo through the St. Lawrence Canals to Montreal, during the Season of Navigation in 1896.

Name of Vessel.	Original quantity through the Welland Canal.	Quantity transhipped at Kingston and Prescott.	Cargo through the St. Lawrence Canals to Montreal.
	Tons.	Tons.	Tons.
Canadian steamer "Acadia".....	611	157	454
" " "Arabian".....	1,143	597	546
" " "Cuba".....	672	284	388
" " ".....	504	198	306
" " ".....	392		392
" " ".....	392		392
" " "Melbourne".....	392		392
Canadian Brig "Winnipeg".....	1,501	842	659
Total	5,607	2,078	3,529

Number of cargoes of corn.....	8
Quantity through Welland Canal to Kingston and Prescott.....	5,607 tons.
" transhipped at Kingston and Prescott.....	2,078 "
" taken to Montreal in vessels in which it arrived at Kingston and Prescott.....	3,529 "

RECAPITULATION of the number of Vessels passed down the Welland Canal with Cargoes of Grain for Montreal, the Quantity transhipped at Kingston and Prescott, and the Quantity taken to Montreal, for the Season of 1896.

	Number of Cargoes.	Total Number.
Wheat.....	11	
Corn.....	8	
Total.....		19
Quantity of wheat through the Welland Canal bound for Montreal.....	Tons. 9,449	Tons.
do corn.....	5,607	
Total through Welland Canal.....		15,056
Quantity of the above transhipped at Kingston and Prescott :—		
Wheat.....	3,996	
Corn.....	2,078	
Total transhipped.....		6,074
Quantity of the above cargoes taken to Montreal in vessels in which it arrived at Kingston and Prescott :—		
Wheat.....	5,331	
Corn.....	3,529	
Total quantity to Montreal.....		8,860
Total.....		14,934

Department of Railways and Canals

O.—STATEMENT showing the Quantity of Grain passed down the Welland Canal to Kingston and Prescott, in Canadian and United States Vessels, entering the Canal at Port Colborne during the Season of Navigation in 1896.

	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	116	80,893	80	49,016	109	105,441	49	35,743	354	271,093
	Tons.		Tons.		Tons.		Tons.		Tons.	
Barley.....	240								240	
Corn.....	9,360		3,855		84,832		40,923		138,970	
Oats.....	441		1,270		8,710		1,620		12,041	
Pease.....	1,403		1,354				273		3,030	
Rye.....	5,035		644		2,347		454		8,480	
Wheat.....	112,431		91,879		54,568		24,251		283,129	
Total.....	128,910		99,002		150,457		67,521		445,890	

116	cargoes in Canadian steam vessels, total quantity.....	128,910	tons.
80	do do sail do do	99,002	do
109	do United States steam vessels, total quantity.....	150,457	do
49	do do do do	67,521	do

P.—STATEMENT of the total Quantity of Grain arrived at Kingston and Prescott in Vessels which passed down the Welland Canal during the season of Navigation in 1896.

Summary.	Tons.	Tons.
Canadian steam vessels—116 cargoes of grain.	128,910	
do sail do 80 do	99,002	
Total in Canadian vessels.		227,912
United States steam vessels—109 cargoes of grain.	150,457	
do sail do 49 do	67,521	
Total in United States vessels.		217,978
Total in Canadian and United States vessels.		445,890
Distributed as follows, viz. :—		
19 cargoes arrived at Kingston and Prescott in Canadian vessels, with an aggregate quantity of.	15,056	
Transhipped at Kingston and Prescott.	6,074	
Quantity taken to Montreal in vessels in which it arrived at Kingston and Prescott.		8,982
Vessels arrived at Kingston and Prescott and discharged all their cargoes as follows :		
177 cargoes in Canadian vessels	212,856	
158 do United States vessels.	217,978	
Aggregate quantity discharged	430,834	
Quantity transhipped to Montreal.	372,183	
Total quantity transhipped from Kingston and Prescott to Montreal.		378,657
do remaining at Kingston and Prescott.		58,251
Total.		445,890

Department of Railways and Canals.

Q.—COMPARATIVE STATEMENT of the Quantity of Grain passed down the Welland Canal to Kingston and Prescott for the Seasons of Navigation in 1895 and 1896.

	1895.		1896.	
	No. of Cargoes.	Tons.	No. of Cargoes.	Tons.
Quantity arrived at Kingston and Prescott in Canadian vessels	123	136,617	196	227,912
Quantity arrived at Kingston and Prescott in United States vessels	56	73,987	158	217,978
Total	179	210,604	354	445,890
Quantity transhipped at Kingston and Prescott in Canadian Vessels for Montreal		203,658		378,257
Quantity taken to Montreal in vessels in which it arrived at Kingston and Prescott		4,488		8,982
Quantity remaining at Kingston and Prescott		2,458		58,651
Total		210,604		445,890

3 vessels took their cargoes through to Montreal intact in 1896, against 4 in 1895.

16 vessels discharged part of their cargo in 1896, against 4 in 1895.

335 vessels discharged all of their cargoes in 1896, against 169 in 1895.

R.—STATEMENT showing the number of Vessels, their Tonnage, number of Passengers and Tons of Freight passed down the Rapids of the St. Lawrence Canals during the Season of Navigation in 1896.

Destination.	No. of Sec.	No. of Vessels	Tonnage of Vessels.	No. of Passengers.	Class Three.	Class Four.	Class Five.	Tolls.
					Tons.	Tons.	Tons.	\$ cts.
Prescott to Montreal	4	82	46,478	7,887	557	836		1,388 31
do Lachine	3	21	11,475	1,062	629	247		252 45
do Valleyfield	2	18	11,644	1,484	198	138		146 68
Dickinson's Landing to Montreal	3	4	2,270	173		10		27 29
do do Lachine	2	1	691					2 60
Valleyfield to Montreal	2	39	23,749	2,310	82	172		228 08
do Lachine	1	181	21,908	1,877	1,025	278	1	143 18
Lachine to Montreal	1	298	62,377	19,240	628	272		544 22
Total		644	180,592	34,033	3,119	1,953	1	\$2,732 81

S.—THE quantity of Coal passed through the Welland Canal during a series of years from 1885 to 1896 inclusive, and the amount of Tolls collected thereon, is as follows :—

Year.	From Canadian Ports to Canadian Ports.	From Canadian Ports to Canadian Ports.	From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total Tons.	Amount of Tolls Paid. — Rate, 20 cents a ton.
	Up.	Down.	Up.	Down.	Up.	Down.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		\$ cts.
1885			193,442	4,974	10,321	31,350	240,087	48,017 40
1886			184,564	5,400	22,187	49,724	261,875	52,375 00
1887			81,617	1,163	26,775	25,968	135,523	27,104 60
1888			172,381	878	17,365	27,183	217,807	43,561 40
1889			226,352	1,124	12,036	25,931	265,443	53,188 60
1890	80		116,616	615	17,280	22,781	202,372	38,222 30
1891			185,190	1,382	17,374	20,698	224,644	44,928 20
1892			183,244	651	12,391	15,330	211,616	42,284 13
1893			204,704	2,123	8,325	17,944	233,096	46,619 20
1894			187,794	727	1,269	13,947	203,737	40,789 93
1895	4		148,887	603	1,565	7,807	158,866	31,773 05
1896	20	210	206,093	1,255	4,127	11,740	223,445	44,668 20

NOTE.—Tolls on soft coal passed down the Welland Canal, during the season of 1890, were reduced from 20 to 10 cents a ton, per O.C. 11th May, 1890, for the season of 1890 only, the rate for 1891, 1892, 1893, 1894, 1895 and 1896 being 20 cents a ton for passage either eastward or westward.

T.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence Canals during the seasons from 1885 to 1896, inclusive.

Year.	Quantity passed up Free of Tolls.	Quantity passed down to Montreal.	Total Quantity passed up and down.	Amount of tolls on Quantity passed down to Montreal.
	Tons.	Tons.	Tons.	\$ cts.
1885	5,035	122,829	127,864	18,424 35
1886	3,301	118,802	122,103	17,820 70
1887	7,579	121,618	129,197	18,242 70
1888	8,341	123,050	131,391	18,423 90
1889	5,360	124,290	129,650	18,604 90
1890	6,538	135,168	141,706	20,275 20
1891	7,951	141,701	149,652	21,255 15
1892	7,543	157,134	164,677	23,570 10
1893	2,285	147,139	149,424	22,070 85
1894	16,213	169,552	185,765	25,432 80
1895		165,151	165,151	24,772 65
1896	689	161,551	162,240	24,232 65

NOTE.—Coal is allowed to pass free up the St. Lawrence Canals.

Department of Railways and Canals.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, showing the Quantity to Montreal, the Quantity to Canadian Ports between Port Dalhousie and Cornwall, and the Quantity to United States Ports, Oswego, Ogdensburg, &c., on the south side of Lake Ontario, for the years 1885 to 1896, inclusive.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1885.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	97		
Apples.....	513		
Agricultural products, not enumerated, vegetable.....	1		
do do animal.....	2		
Barley.....			228
Coal.....		31,350	4,974
Corn.....	44,401	9,906	63,229
Crockery and earthenware.....	1		
Flour.....	2,874		124
Furniture.....	5	11	
Horses.....	2	1	
Iron, pig.....		100	
do all other.....	7		
Iron ore.....			987
Lard and lard oil.....		2	
Meal, all kinds.....	16		
Oats.....			882
Oil, in barrels.....	7	568	
Pease.....	11		
Paint.....		68	
Pork.....	30		
Salt.....		407	
Stone for cutting.....		3,749	
do wrought.....		8	
Seeds, all kinds.....	42	10	
Spirits, beer, &c.....		25	
Tallow.....	2	4	
Wheat.....	52,157	2,003	53,235
All other merchandise, not enumerated.....	28	8	2
Barrels, empty.....	128	8	
Firewood, in vessels.....		540	
Lumber, sawn.....	19,945	6,774	49,561
Staves and headings.....	856	604	
Shingles.....			111
Timber, square.....	11,767	69,616	
Woodenware.....	76		
Total.....	132,968	125,762	173,333

A refund of 10 cents per ton was allowed on wheat, corn, oats, pease, barley and rye passed down to Montreal, per O.C. 17th June, 1885, and a refund of 18 cents per ton from 1st July, 1885, per O.C. 4th July, 1885.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1886.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	44	10	11
Apples.....	49		
Agricultural products, not enumerated, vegetable.....		1	1
Bricks.....			41
Cement and water lime.....			26
Coal.....		49,724	5,400
Corn.....	116,517	8,871	93,503
Flour.....	2,934		7,591
Furniture.....	6	15	21
Glass, all kinds.....			2
Horses.....	1		1
Hides and skins, &c.....			414
Iron, pig.....		617	43
do all other.....	15	12	1
Lard and lard oil.....	22	9	13
Meal, all kinds.....	125	18	13,201
Meats, other than pork.....	67	64	1
Marble.....		2	
Molasses.....	28	7	
Nails.....			4
Oats.....		41	4,790
Oil.....	6	28	6
Pease.....	608		
Pork.....	936	407	106
Paint.....	1	1	
Rags.....			13
Salt.....		29	1
Stone, for cutting.....		4,314	
do wrought.....		103	38
Seeds, all kinds.....	33	3	236
Sugar.....			3
Spirits, beer, &c.....	8	12	21
Tobacco, raw.....	25		
Tallow.....	1	2	1
Wheat.....	86,815	969	53,258
Wool.....			1,125
Merchandise, not enumerated.....	100	46	793
Barrels, empty.....	6	2	
Floats.....		20	
Lumber, sawn, in vessels.....	18,707	7,546	53,124
Masts, spars, &c.....		22	
Staves and headings, barrel.....		57	
do do pipe.....	332	339	
do do West India.....	287	444	
Shingles.....		12	463
Timber, square.....	16,740	44,335	
Woodenware.....	101	45	2
Total.....	244,514	118,127	234,254

A refund of 18 cents per ton was allowed on wheat, corn, oats, pease, barley and rye, passed down to Montreal, per O.C. 21st April, 1886.

Department of Railways and Canals

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall	Quantity passed down to United States Ports.
1887.	Tons.	Tons.	Tons.
Ashes, pot and pearl	113		
Apples	33		
Agricultural products, not enumerated, vegetable			2
Agricultural implements			9
Barley			1,709
Coal		25,968	1,163
Corn	24,609	6,898	83,431
Fish			2
Flour	6,140		11,780
Furniture	9	9	24
Horses	1	1	2
Hides, skins, &c.			170
Iron, pig		1,137	
do all other		7	
Lard, and lard oil		6	14
Meal, all kinds	87	42	10,726
Meats, other than pork	29	15	18
Nails	1		
Oats			12,050
Oil	14	190	8
Oil cake	17		
Pease	362		
Pork	418	86	108
Stone, for cutting		3,531	
do wrought	12	543	
Seeds		4	44
Sugar	15		1
Spirits		99	63
Wheat	160,063	4,940	37,678
Wool			86
All other merchandise not enumerated	72	123	468
Barrels, empty	88		24
Lumber, sawn	7,001	1,816	44,733
Staves and headings, barrel		27	
do pipe	184		
do West India	131	838	
Timber, square	14,390	21,351	
Woodenware and wood partly manufactured	45	1	2
Total	213,834	67,632	204,315

A refund of 18 cents per ton was allowed on wheat, corn, pease, barley and rye passed down to Montreal, per O.C. 21st March, 1887.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1888.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	85		
Apples.....		45	
Barley.....			2
Cement and water lime.....			4
Coal.....		27,183	878
Corn.....	66,443	25,469	102,974
Crockery and earthenware.....		4	1
Flour.....	3,865		8,563
Furniture.....	2	1	30
Glass, all kinds.....	3	2	
Hay, pressed.....		20	
Horses.....	2		
Hides and skins.....			39
Iron, pig.....		549	
do all other.....	418	490	
Lard and lard oil.....	54	12	18
Meal, all kinds.....	100		11,598
Meats, other than pork.....	39	6	14
Oats.....			26,510
Oil.....		3	
Pease.....		54	
Pork.....	265	61	19
Rags.....			14
Rye.....		632	179
Stone, for cutting.....		6,535	
do wrought.....		126	
Seeds, all kinds.....	12	1	48
Steel.....			3
Sugar.....		2	4
Spirits.....	3	2	151
Tallow.....			1
Wheat.....	93,915	14,365	39,999
Woo.....			18
All other goods and merchandise not enumerated.....	105	34	1,435
Barrels, empty.....	40		133
Lumber, sawn.....	5,174	4,515	45,818
Staves and headings, barrel.....	15	7	
do pipe.....	124		
do West Indies.....	1,623	13	
do salt barrel.....	1	1	
Shingles.....			6
Timber, square, in vessels.....	11,586	33,669	
Woodenware.....	25		8
Total.....	183,899	113,801	238,467

A refund of 18 cents per ton was allowed on wheat, corn, pease, barley and rye passed down to Montreal, per O.C. 20th April, 1888.

Department of Railways and Canals.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1889.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	107	5	1,124
Coal	195,350	25,931	147,045
Corn		11,200	1
Crockery and earthenware..		1	5
Fish		5	5,017
Flour	6,841		30
Furniture.....		4	1
Horses..	2		
Iron; pig.....		613	520
do all other.....			19
Lard and lard oil.....		5	17,224
Meal, all kinds	148		3
Meats, other than pork.....	32	2	88
Molasses			27,492
Oats	320		
Oil, in barrels.....	4	2	
Oil cake	798		1
Potatoes.....			21
Pork	1,220	114	
Rye	1,284	634	
Salt		316	
Stone, for cutting.....		6,784	
do wrought.....		11	2
do not suitable for cutting.....		375	1,681
Seeds, all kinds.....	3		151
Spirits, beer, &c.....	20	8	190
Tallow.....			13
Wheat	70,815	7,241	39,229
Wool			452
Merchandise	193	129	1,591
Barrels, empty.....			173
Lumber, sawn	6,118	4,669	71,055
Masts, spars, &c.....		220	
Railway ties.....		852	
Saw logs			158
Staves and headings, barrel.....		4	
do do pipe.....	202	304	
do do West India.....	68	559	
Shingles.....			51
Split posts, &c.....		17	
Timber, square.....	9,302	70,579	240
Woodenware, &c.....			2
Total.....	292,827	130,584	313,574

A refund of 18 cents per ton was allowed on wheat, corn, pease, barley and rye passed down to Montreal, per Order in Council 18th March, 1889.

U.—COMPARATIVE Statement of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1890.	Tons.	Tons.	Tons.
Ashes.....	70		
All other products, animal.....	14		
do vegetable.....	1		
Barley.....			6,519
Bricks.....			4
Coal.....		22,781	615
Corn.....	134,966	11,584	180,842
Fish.....	49		
Flour.....	3,065		9,204
Furniture.....	1	1	21
Glass, all kinds.....	1		
Horses.....	3		1
Iron, all other.....			1
Kryolite.....		1,280	1,620
Lard and lard oil.....		5	30
Meal.....	222		20,482
Meats.....			15
Oats.....	479	73	27,030
Oil, in barrels.....	6		
Oil cake.....	2		
Paint.....			3
Pease.....			14
Pork.....	221	19	88
Potatoes.....			1
Rye.....	1,120	1	
Salt.....		701	
Stone, for cutting.....		5,761	
do wrought.....		639	18
Seeds, all kinds.....	2		135
Spirits, &c.....	26		228
Tallow.....	54		
Wheat.....	75,515	5,241	31,527
White lead.....			1
Merchandise.....	142	32	1,822
Barrels, empty.....			7
Firewood, in vessels.....		1,398	
Lumber, sawn, in vessels.....	3,195	3,767	47,590
do rafts.....	384		
Staves and headings, pipe.....		187	
do do West Indies.....		36	
Shingles.....			14
Square timber, in vessels.....		73,112	
do rafts.....		17,683	
Woodenware.....	1		1
	219,539	144,301	327,833
Corn..... 16,033			
Oats..... 400			
	16,433		*16,433
Total.....	235,972	144,301	311,400

* This quantity of grain was transhipped at Ogdensburg and passed down the St. Lawrence canals to Montreal.

A refund of 18 cents Welland Canal tolls was allowed on wheat, Indian corn, pease, barley, rye (and oats for export), when shipped for Montreal or some port east of that point, per Orders in Council 26th February and 5th May, 1890.

Department of Railways and Canals

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—Continued.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1891.	Tons.	Tons.	Tons.
Ashes	40		
Agricultural products	2		42
Barley			8,113
Corn	52,539	5,144	127,494
Coal		20,698	1,382
Flour	3,324		6,802
Fish			1
Furniture	2	2	7
Glass	1		1
Horses	2		3
Hay		21	
Iron, pig	371	128	
do all other		1,036	10
Lard and lard oil	100	16	10
Meal, all kinds	67		26,096
Meats, other than pork		1	2
Molasses		20	18
Oats			52,823
Oil			1
Pease	390		
Pork	201		73
Rags			60
Rye	64,978	969	
Seeds, all kinds	2		256
Salt			494
Stone for cutting		1,861	
do wrought		6,602	
Tobacco	1	7	
Tallow		9	8
Wheat	159,785	692	32,097
Staves, pipe		8	
Whisky and all other liquors	105	57	167
Wool			1,237
Merchandise	278	6	1,779
Kryolite		1,098	1,773
Lumber, in vessels	2,991	1,300	56,456
do in rafts	917		
Timber, square, in rafts	5,680	14,638	
Barrels			4
Corn	291,776	54,315	317,209
Wheat	17,817		*17,817
Total	309,593	54,315	299,392

* This quantity of grain was transhipped at Ogdensburg and passed down the St. Lawrence Canals to Montreal.

A refund of 18 cents a ton Welland Canal tolls on wheat, Indian corn, pease, barley, rye and (for export) oats, originally shipped for Montreal or some port east of Montreal, per Order in Council, 25th March, 1891.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1892.	Tons.	Tons.	Tons.
Ashes, pot and pearl	17	2	
Apples	54		
Barley			6,433
Corn	53,689	7,637	131,222
Coal		14,839	651
Flour	2,874		11,018
Fish	9		
Furniture	1		7
Hides and skins	20		
Horses	2		
Iron, railway		100	
do all other		765	1
Meal, all kinds	16		31,724
Meats, other than pork	94		29
Oats			36,935
Oil		7	
Pease	524		
Potatoes			1
Pork			44
Rye	9,119	273	
Salt		865	
Seeds, all kinds	75		50
Steel			1
Stone for cutting		1,204	
Sugar			20
Wheat	194,281	5,373	26,950
Whisky, beer, spirits, &c	6	15	46
Wool			70
Merchandise not enumerated	36	13	1,304
Barrels, empty	1		29
Lumber, sawn, in vessels	1,678	150	83,403
Square timber	440	42,768	440
Staves and headings, pipe	8	80	
do West India	200	76	
Shingles			25
Total	263,144	74,227	330,403
*Wheat	+ 4,341	—4,341	
Total	267,485	69,886	330,403

* This quantity of wheat was taken from Kingston to Ogdensburg and stored in elevators, and subsequently transhipped to Montreal.

A refund of 18 cents a ton, Welland Canal tolls, was allowed on wheat, Indian corn, pease, barley, rye, oats, flax seed and buckwheat, which passed down the whole length of the Welland and St. Lawrence Canals, to Montreal, or any port east of Montreal, and such products exported out of the country, and in such cases only.

Department of Railways and Canals.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports
1893.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	23		
Barley.....	600	1,110	16,751
Bricks.....		1,251	
Corn.....	278,564	5,752	156,776
Coal.....		17,944	2,123
Flour.....	5,514		6,588
Fish.....			5
Furniture.....			6
Horses.....	1	1	2
Iron, pig.....			100
do all other.....			2
Meal, all kinds.....		1,025	36,352
Meats, other than pork.....			1
Oats.....	9,761	1,090	20,313
Pork.....			52
Rye.....	3,669	1	1
Salt.....		286	
Seeds, all kinds.....			16
Wheat.....	209,212	17,602	29,117
Whisky, beer, &c.....	1		83
Wool.....			80
Merchandise not enumerated.....	4	2	1,693
Barrels, empty.....			9
Firewood (in rafts).....		15	
Lumber, sawn, in vessels.....	667	1,981	123,665
Shingles.....			13
Square timber.....		45,605	
Staves and headings, barrel.....		12	
do pipe.....		7	
do West India.....		53	
Total.....	508,016	93,737	393,748

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1893.

The tolls were, however, reduced by Order in Council of 13th February, 1893, as follows:—"For the season of 1893, the canal toll for the passage of the following food products: wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton; and for passage eastward through the St. Lawrence Canals only, ten cents per ton, payment of the said toll of ten cents a ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals."

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports
1894.	Tons.	Tons.	Tons.
Apples.....	50		
Ashes.....	19		
Barley.....	258		28,095
Bricks.....		552	
Coal.....		13,818	727
Corn.....	60,661	3,243	105,329
Dye woods and dye stuffs.....		4	2
Fish.....			5
Flour.....	16,503	41	16,880
Furniture.....	2	3	
Horses.....	1	2	4
Iron, pig.....	195	2,170	
do all other.....	1	183	
Meals.....	4		60,390
Nails.....			57
Oats.....	175	107	27,621
Oil cake.....	29		
do in barrels.....		27	
Pork.....	717		56
Salt.....		133	
Spirits, beer, &c.....		3	
Sugar.....			52
Wheat.....	212,557	13,349	42,934
White lead.....	16		
Wool.....			1,484
Merchandise not enumerated.....	314		2,889
Barrels, empty.....		16	
Sawn lumber, in vessels.....	683		86,545
Square timber do.....		47,030	
Woodenware.....	6		
Total.....	292,191	80,631	373,070

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1894.

The tolls were, however, reduced by Order in Council of 16th April, 1894, as follows:—"For the season of 1894, the canal tolls for the passage of the following food products: wheat, Indian corn, pease, barley, rye, oats, flax seed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton; and for passage eastward through the St. Lawrence Canals only, ten cents per ton, payment of the said toll of ten cents a ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals."

Department of Railways and Canals.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1895.	Tons.	Tons.	Tons.
Apples.....	28		
Ashes.....	34	15	
Barley.....	959		7,730
Bricks.....		651	
Coal.....		7,809	603
Corn.....	70,235	2,912	91,743
Flour.....	30,916	1,824	10,265
Furniture.....		12	2
Glass.....		1	
Horses.....	1	1	
Hides, skins, &c.....			8
Iron, railway.....			181
" pig.....	79	1,994	
" all other.....	1,766	1,408	214
Lard and lard oil.....			6
Meal all kinds.....	65		46,316
Meats other than pork.....			30
Molasses.....	100		
Oats.....	1,654	123	16,442
Oil, in barrels.....	6	41	30
Pork.....			87
Paint.....	2		
Salt.....		36	
Stone for cutting.....		430	
Seeds, all kinds.....			14
Steel.....	394		462
Sugar.....			59
Spirits, beer, &c.....	101	84	15
Tobacco.....		16	
Wheat.....	158,643	29,061	17,908
Wool.....			1,536
Merchandise not enumerated.....	558	1,302	7,656
Barrels, empty.....	1		
Sawn lumber in vessels.....	1,117	492	43,286
Railway ties.....			1,942
Shingles.....		19	
Square timber in vessels.....		63,715	500
Total.....	266,659	111,946	247,035

*Of this amount 3,469 tons came down to Kingston in 1894—was stored there and taken to Montreal in 1895 and 245 tons came down to Ogdensburg in 1894, stored there and transhipped to Montreal in 1895.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1896.	Tons.	Tons.	Tons.
All other (vegetable).....	29		
Apples.....	†1,263		
Ashes.....	94		
Barley.....	240		11,128
Cement and water lime.....	12		
Coal.....		11,742	1,255
Corn.....	182,330	19,688	118,426
Crockery.....	5		
Fish.....		2	
Flour.....	11,964	13,846	16,224
Furniture.....		3	
Glass.....	9	3	
Hay, pressed.....		563	
Hides, skins, &c.....			41
Horses.....	1	1	3
Iron, railway.....		1,192	
" pig.....	5	1,559	
" all other.....	2,020	1,725	
Lard and lard oil.....			1,348
Meal, all kinds.....		500	46,456
Molasses.....	167		
Oats.....	12,373	1,454	14,351
Oil, in barrels.....	23		1,005
Pease.....	3,020	10	
Pork.....	1		390
Rags.....	4		
Rye.....	8,323	647	
Salt.....		80	
Seeds, all kinds.....	20		78
Steel.....	542	11,317	498
Sugar.....	1		165
Tobacco.....		1	
Wheat.....	*254,763	51,587	16,467
Wool.....		8	900
Merchandise, not enumerated.....	376	54	3,990
Barrels, empty.....			10
Firewood in vessels.....			165
Sawn lumber.....	657	1,286	78,397
Shingles.....		94	40
Square timber in vessels.....		55,588	
" rafts.....	1,200		
Woodenware.....			12
Total.....	479,442	172,950	311,349

†523 tons of this quantity of apples paid full tolls by sections on the Welland Canal, and consequently does not appear on the Welland Through Statement.

*Of this amount 5,290 tons came down to Kingston in 1895, was stored there, and transhipped to Montreal in 1896.

Department of Railways and Canals

U.—STATEMENT showing the quantity of Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1885.	Tons.	Tons.	Tons.
Barley.....			228
Corn.....	44,401	9,906	63,229
Oats.....			882
Pease.....	11		
Rye.....			
Wheat.....	52,157	2,063	53,235
Total grain.....	96,569	11,909	117,574
Other articles.....	36,399	113,863	55,759
Total.....	132,968	125,762	173,333
1886.			
Barley.....			
Corn.....	116,517	8,871	93,503
Oats.....		41	4,790
Pease.....	608		
Rye.....			
Wheat.....	86,815	969	53,258
Total grain.....	203,940	9,881	151,551
Other articles.....	40,574	108,246	82,703
Total.....	244,514	118,127	234,254
1887.			
Barley.....			1,709
Corn.....	24,609	6,898	83,431
* Oats.....			12,050
Pease.....	362		
Rye.....			
Wheat.....	160,063	4,940	37,678
Total grain.....	185,034	11,838	134,863
Other articles.....	28,800	55,794	69,447
Total.....	213,834	67,632	204,315
1888.			
Barley.....			2
Corn.....	66,443	25,469	102,974
† Oats.....			26,510
Pease.....		54	
Rye.....		632	179
Wheat.....	93,915	14,365	39,999
Total grain.....	160,358	140,520	169,664
Other articles.....	23,541	73,281	68,803
Total.....	183,899	113,801	238,467

* There was no rebate on oats for 1887.

† There was no rebate on oats for 1888.

‡ Owing to a break in the Cornwall Canal 14,921 tons of the above quantity of grain were transhipped to Montreal *via* Canadian Pacific and Grand Trunk Railways, and the refund of 18 cents per ton allowed.

U.—STATEMENT showing the Quantity of Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1889.	Tons.	Tons.	Tons.
Barley.....			
Corn.....	195,350	11,200	147,045
* Oats.....	320		27,492
Pease.....			
Rye.....	1,284	634	
Wheat.....	70,815	7,241	39,229
Total grain.....	267,769	19,075	213,766
Other articles.....	25,158	111,509	99,808
Total.....	292,927	130,584	313,574
1890.			
Barley.....			6,519
Corn.....	150,999	11,584	180,842
Oats.....	879	73	27,030
Pease.....			14
Rye.....	1,120	1	
Wheat.....	75,515	5,241	31,527
Total grain.....	228,513	16,899	+245,932
Other articles.....	7,459	127,402	81,901
Total.....	235,972	144,301	327,833
1891.			
Barley.....			8,113
Corn.....	52,539	5,144	127,494
Oats.....			52,823
Pease.....	390		
Rye.....	64,978	969	
Wheat.....	159,785	692	32,097
Total grain.....	277,692	6,805	220,527
Transhipped at Ogdensburg to Montreal.....	+ 17,817		- 17,817
Total.....	295,509		202,710
Other articles.....	14,084	47,510	96,682
Grand total.....	309,593	54,315	299,392
1892.			
Barley.....			6,433
Corn.....	53,689	7,637	131,222
Oats.....			36,935
Pease.....	524		
Rye.....	9,119	273	
Wheat.....	194,281	5,373	26,950
Total grain.....	257,613	13,283	201,540
Quantity taken to Ogdensburg and transhipped to Montreal.....	+ 4,341	4,341	
Total.....	261,954	8,942	201,540
Other articles.....	5,531	60,944	128,863
Total.....	267,485	69,886	330,403

* There was no rebate on oats for 1889.

† Of this quantity of grain, 16,433 tons were transhipped at Ogdensburg to Montreal.

‡ This quantity of wheat was taken from Kingston to Ogdensburg, stored in elevators and subsequently transhipped to Montreal.

Department of Railways and Canals.

U.—STATEMENT showing the Quantity of Freight passed down the Welland Canal to Canadian Ports, &c.—*Concluded.*

RECAPITULATION—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1893.	Tons.	Tons.	Tons.
Barley	600	1,110	16,751
Corn	278,564	5,752	156,776
Oats	9,761	1,090	20,313
Pease			
Rye	3,669	1	1
Wheat	209,212	17,602	29,117
Total grain	501,806	25,555	222,958
Other articles	6,210	68,182	170,790
Total	508,016	93,737	393,748
1894.			
Barley	258		28,095
Corn	60,661	3,243	105,329
Oats	175	107	27,621
Pease			
Rye			
Wheat	212,557	13,349	42,934
Total grain	273,651	16,699	203,979
Other articles	18,540	63,982	169,091
Total	292,191	80,681	373,070
1895.			
Barley	959		7,730
Corn	70,265	2,912	91,743
Oats	1,654	123	16,442
Pease			
Rye			
Wheat	*158,643	29,061	17,908
Total grain	231,491	32,096	133,823
Other articles	35,168	79,850	113,212
Total	266,659	111,946	247,035
1896.			
Barley	240		11,128
Corn	182,330	19,688	118,426
Oats	12,373	1,454	14,351
Pease	3,020	10	
Rye	8,323	647	
Wheat	254,763	51,587	16,467
Total grain	†461,049	73,386	160,372
Other articles	18,393	99,564	150,977
Total	479,442	172,950	311,349

* Of this amount, 3,469 tons came down to Kingston, in 1894 was stored there, and taken to Montreal in 1895, and 245 tons came down to Ogdensburg in 1894, was stored there and transhipped to Montreal in 1895.

† Of this amount, 5,290 tons came down to Kingston in 1895, was stored there, and transhipped to Montreal in 1896.

CANAL

COMPARATIVE STATEMENT for years

	January.	February.	March.	April.	May.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland Canal, 1895.....				6,983 48	28,483 66
do 1896.....	10 00			6,793 42	31,815 72
Increase.....	10 00				3,332 06
Decrease.....				190 06	
St. Lawrence Canals, 1895.....				588 15	11,497 90
do 1896.....	45 00			673 41	12,404 26
Increase.....	45 00			85 26	906 36
Decrease.....					
Chambly Canal, 1895.....				13 81	3,736 20
do 1896.....				3 71	3,867 66
Increase.....					131 46
Decrease.....				10 10	
Ottawa Canals, 1895.....				253 82	5,919 43
do 1896.....				214 53	5,594 19
Increase.....					
Decrease.....				39 29	325 24
Rideau Canal, 1895.....				76 80	663 81
do 1896.....					972 34
Increase.....					308 53
Decrease.....				76 80	
St. Peter's Canal, 1895.....	2 52				
do 1896.....	6 72		1 24	111 15	346 90
Increase.....	4 20		1 24	111 15	346 90
Trent Valley Canals, 1895.....				6 57	99 19
do 1896.....				37 39	129 87
Increase.....				30 82	30 68
Decrease.....					
Murray Canal, 1895.....				7 83	57 38
do 1896.....				10 76	65 33
Increase.....				2 93	7 95
Decrease.....					
Sault Ste. Marie Canal, 1895.....					
do 1896.....					
Increase.....					
Decrease.....					
Total increase.....	59 20		1 24		4,738 70
Total decrease.....				86 09	

Department of Railways and Canals

REVENUE.

ended 30th December, 1895 and 1896.

June.	July.	August.	September.	October.	November.	December.	Total.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
21,300 41	17,125 12	19,547 05	17,080 89	13,783 13	13,220 03	1,349 24	138,873 01
21,976 30	23,219 71	32,789 47	27,803 99	28,309 10	19,903 30	2,462 32	195,083 33
675 89	6,094 59	13,242 42	10,723 10	14,525 97	6,683 27	1,113 08	56,210 32
12,781 05	12,517 14	13,266 32	9,929 21	9,610 42	7,801 99	172 62	78,164 80
12,872 88	13,722 58	13,047 00	12,831 32	14,238 48	8,976 73	53 86	88,865 52
91 83	1,205 44	219 32	2,902 11	4,628 06	1,174 74	118 76	10,700 72
3,343 24	4,717 02	3,852 81	4,395 10	3,916 14	1,955 35		25,929 67
4,107 45	4,446 08	3,555 09	2,633 83	3,564 17	1,980 50	0 25	24,155 74
764 21	270 94	297 72	1,761 27	354 97	25 15	0 25	1,773 93
5,416 84	5,771 97	4,194 62	4,425 84	4,339 48	1,648 14		31,970 14
5,912 36	5,541 65	4,333 95	3,834 09	3,246 53	1,837 26		30,514 56
495 52	230 32	139 33	591 75	1,092 95	189 12		1,455 58
1,354 79	1,431 00	965 96	788 59	620 85	247 34		6,149 14
1,099 69	992 46	832 86	557 24	410 84	297 53		5,162 96
255 10	438 54	133 10	231 35	210 01	50 19		986 18
358 26	378 64	417 59	416 76	428 96	201 79	222 32	426 63
358 26	378 64	417 59	416 76	428 96	336 26	1,908 89	4,711 36
158 18	213 99	250 51	211 13	164 97	134 47	1,686 56	4,284 73
159 46	182 08	181 98	117 92	87 35	65 54		1,170 08
1 28	31 91	68 53	93 21	77 62	56 47		952 52
96 76	100 15	118 75	76 03	54 45	9 07		217 56
80 06	101 62	133 13	87 76	57 97	14 70	1 89	527 94
16 70	1 47	14 38	11 73	3 52	67 66	0 75	605 04
	10 00				52 96	1 14	77 10
	10 00						10 00
	10 00						10 00
2,115 19	6,718 43	13,095 05	11,376 12	17,850 96	8,300 83	2,679 99	66,849 62
Total for year 1895							283,211 41
Total for year 1896							350,061 03

RICHARD DEVLIN, *Compiler of Canal Statistics.*

COMPARATIVE STATEMENT showing the quantity of Vegetable Food and Lumber passed through the Canals during the years ended 31st December, 1895 and 1896.

	VEGETABLE FOOD.							LUMBER.	TOTAL.
	FLOUR.	WHEAT.	CORN.	BARLEY.	OATS.	RYE.	ALL OTHERS.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland Canal, 1895.....	44,041	205,088	164,894	8,689	18,236	1,007	46,463	45,760	532,181
do 1896.....	42,425	320,563	320,444	11,368	28,178	9,405	56,591	83,995	872,969
Increase.....		117,475	155,550	2,679	9,942	8,398	10,128	38,235	340,788
Decrease.....	1,619								
St. Lawrence Canals, 1895.....	35,375	164,310	78,593	2,084	2,305	456	20,353	43,192	346,668
do 1896.....	15,605	267,945	200,971	3,925	31,535	9,755	55,315	41,644	626,635
Increase.....		103,535	122,378	1,841	29,230	9,339	34,962		279,967
Decrease.....	19,770							1,548	
Chambly Canal, 1895.....	649			16	977		878	92,241	94,761
do 1896.....	571			59	1,621		1,682	76,411	80,344
Increase.....					644		804		
Decrease.....	78			43				15,830	14,417
Ottawa Canals, 1895.....	63		1	1	249	2	229	368,168	368,713
do 1896.....	10	275		36	630	2	387	362,170	363,510
Increase.....		275		35	381		158		
Decrease.....	53		1					5,998	5,203
Rideau Canal, 1895.....	385	767	16	62	45		213	37,238	38,726
do 1896.....	396	1,550	6		20	4	367	28,700	31,043
Increase.....									
Decrease.....	11	783	10	62	25	4	154	8,538	7,683

Department of Railways and Canals

St. Peter's Canal, 1895.	687									441	1,128
do	2,533									6,332	8,865
Increase.											
Decrease.	1,846									5,801	7,737
Trent Valley Canals, 1895.		201									
do		64								2,712	2,913
Increase.										2,427	2,491
Decrease.		137								285	422
Murray Canal, 1895.	4	261									
do			1							515	1,824
Increase.										1,934	3,377
Decrease.	4	261	1							619	1,553
Sault Ste. Marie Canal, 1895.	18,378	135,550									
do	199,792	579,427	6,175							19,618	182,180
Increase.										46,879	941,888
Decrease.	181,414	443,877	6,175							27,261	759,708
Total, increase.	161,747	665,547	284,093							39,807	1,362,028
Total, decrease.											
Total for Year 1895.											1,569,094
do 1896.											2,931,122

*The large increase for 1896, is owing to the fact that the canal was only open for three months in 1895, viz., from September 9th, to December 4th.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 16th, 1897.

RICHARD DEVLIN,
Compiler Canal Statistics.

APPENDIX A.

No. (A) 1.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, and the Amount of Revenue collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.		Amount of Tolls, Down.		Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$	cts.	\$	cts.	
Ashes, pot and pearl																
Apples	723	3,937									94					18 80
Agricultural products not enumerated, vegetables					1,784				2,559	4,045	6,504	288 01		308 80		596 81
Agricultural products not enumerated, animal	4								42	429	471	6 25		25 80		32 05
Agricultural implements.																
Bar-ley		240									11,368			1,136 80		1,136 80
Bricks	89								89		89	10 83				10 83
Bones																
Brimstone																
Buckwheat.	172								372	12	384	39 28		2 40		41 68
Cement and water lime	140				290				507		507	65 55				65 55
Clay, lime and sand	20	210			367				210,240	13,205	223,445	42,048 00		2,620 20		44,668 20
Coal					206,093						320,444			32,044 40		32,044 40
Corn		679			1,255											
Cattle					175,094											
Cotton (raw)									139	5	144	20 85		1 00		21 85
Crockery and earthenware	1				138											
Dye wood and dye stuffs.																
Fish		2			477				477	2	479	71 55		40		71 95
Flax and hemp					296				296		296	44 40				44 40
Flour	266								266	42,159	42,425	5 00		8,419 30		8,424 30
Furniture	2	1							21	4	25	3 15		62		3 77
Gypsum																
Glass (all kinds)	20	6			1				50	13	63	6 98		2 42		9 40
Hay (pressed)									563	563	563			112 60		112 60
Hogs																
Horses	16	7			5				25	12	37	2 06		1 19		3 25

Department of Railways and Canals.

Hides and skins, horns and hoofs	1			41		1	41	42	15	8 20	8 35
Ice											
Iron, railway	324				1,192		1,192	1,192		238 40	238 40
do pig	440	237			1,564	324	1,564	1,888	6 10	312 80	318 90
do all other			146		3,522	685	3,759	4,444	57 88	749 27	807 15
Iron ore		1,158				1,158		1,158	57 90		57 90
Kryolite chemical ore and other ore, except iron											
Lard and lard oil	12	1		1,348		13	1,349	1,362	77	269 62	270 39
Meal, all kinds	1			46,456	500	1	46,956	46,957	15	9,391 20	9,391 15
Meats, other than pork	1										
Marble	2					3			45		45
Manilla	5					512	167	679	76 67	33 40	110 07
Molasses	30		505		167	31		31	1 38		1 38
Nails							28,178	28,178		2,817 80	2,817 80
Oats		1,528		16,137	10,513	154	1,028	1,182	21 27	205 60	226 87
Oil (in barrels)	78		72	1,005	23						
Oil cake					3,030		3,030	3,030		303 00	303 00
Pease											
Potatoes											
Pork	9	2		390	1	15	393	408	2 25	78 24	80 49
Paint	3				3	3		3	32		32
Pitch and tar	20		29			65		65	9 7		9 75
Rags	24				4	24	4	28	45	80	1 25
Rye	439			490	8,480	439	8,970	9,409	65 85	897 00	962 85
Flax seed						2		2	30		30
Flax			2			2	80	82	04	16 00	16 04
Rosin		80									
Salt	2										
Stone intended for cutting do wrought			482			483		483	72 45		72 45
do not suitable for cut- ting, unwrought	225	1,087				225	1,087	1,312	13 14	51 35	67 49
Seeds, all kinds	13			78	20	14	98	112	40	19 60	20 00
Sheep											
Soda ash	13					13		13	25		25
Steel											
Supar	109	1		498	11,859	7,201	12,357	12,357	2,471 40		2,471 40
Spirits, beer, &c	22			165	1	163	167	7,368	1,070 07	33 22	1,073 29
Tobacco (raw)								163	23 67	26	23 67
Tallow											
Tin	201	96				118		118	17 70	2 40	17 70
Turpentine						248	96	344	10 83		13 23
Wheat	290	155,339		34,878	129,171	1,175	319,388	320,563	152 81	31,899 09	32,051 90
White lead	1					1			15		15
Whiting	5					5		5	10		10
Wool				900	8		908	908		181 60	181 60
All other goods and mer- chandise not enumerated Bark	2,678	1,542	49,450	3,990	261	52,386	5,793	58,181	7,580 22	919 44	8,499 66

Department of Railways and Canals.

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*Amount of damages not included in above, \$2,497.32.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 16th, 1897.

RICHARD DEVLIN,
Compiler Canal Statistics.

APPENDIX A.—Continued.

No. A (2).—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the Welland Canal and the Amount of Tolls collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Amount of Tolls, Up.		Amount of Tolls, Down.		Total Amount of Tolls.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			\$	cts.	\$	cts.	\$	cts.
Ashea, pot and pearl																		
Apples		14,632		11							94				18 80		18 80	
Agricultural products not enumerated, vegetables									1,795		740				269 25		148 00	417 25
Agricultural products not enumerated, animal	3			38					41		29				6 15		5 80	11 95
Agricultural implements																		
Barley		240				11,128					11,368						1,136 80	1,136 80
Bricks	44								44		44				6 60		6 60	
Bones																		
Brimstone																		
Buckwheat																		
Cement and water lime									200		12				30 00		2 40	32 40
Clay, lime and sand									367		367				55 05		55 05	
Coal	20				206,093	1,255	4,127	11,740	210,240		12,997				42,048 00		2,599 40	44,647 40
Corn		679				175,094		144,671			320,444						32,044 40	32,044 40
Cattle																		
Cotton (raw)	1				188			5	139		5				20 85		1 00	21 85
Crockery and earthenware																		
Dye wood and dye stuffs																		
Fish		2			477				477		2				71 55		0 40	71 95
Flax					296				296						44 40			44 40
Flax and hemp																	8,406 80	8,406 80
Flour						16,224					42,034				3 15		0 60	3 75
Furniture	2			19					21		3							
Gypsum																		
Glass (all kinds)	16	5		29	1				7		12				6 90		2 40	9 30
Hay (pressed)									563		563						112 60	112 60
Hogs																		
Horses	3			4	5	3		2	12		5				1 80		1 00	2 80

Department of Railways and Canals.

Hides and skins, horns and hoofs	1		41		1	41	42	0 15	8 20	8 35
Ice										
Iron, railway						1,192	1,192		238 40	238 40
do pig						1,564	1,564		312 80	312 80
do all other	98	223	146		343	3,745	4,088	51 45	749 00	800 45
Iron ore					1,158		1,158	57 90		57 90
Kryolite chemical ore and other ore, except iron										
Lard and lard oil	3				4	1,348	1,352	0 60	269 60	270 20
Meat, all kinds	1				1	46,956	46,957	0 15	9,391 20	9,391 35
Meats, other than pork	1				1			0 15		0 15
Marble	2				3					
Manilla	4				511	167	678	0 45		0 45
Molasses	5				6			76 65	33 40	110 05
Nails								0 90		0 90
Oats										
Oil (in barrels)	64	1,528	72	16,137	140	28,178	28,178	21 00	2,817 80	2,817 80
Oil cake				1,005		1,028	1,168		205 60	226 60
Pease										
Potatoes						3,030	3,030		303 00	303 00
Pork	9			390	15	391	406	2 25	78 20	80 45
Paint	2				2			0 30		0 30
Pitch and tar	20		23		65		65	9 75		9 75
Rags									0 80	0 80
CaBye	439			490	439	8,970	9,409	65 85	897 00	962 85
Flax seed										
Rosin					2			0 30		0 30
Salt		80				80	80		16 00	16 00
Stone, intended for cutting										
do wrought			482		483			72 45		72 45
do not suitable for cutting, unwrought										
Seeds, all kinds										
Sheep					1	98	99	0 15	19 60	19 75
Soda ash										
Steel				498		12,357	12,357		2,471 40	2,471 40
Sugar	32					166	7,230	1,068 60	33 20	1,101 80
Sprits, beer, &c	16		7,073	165	7,124		157	23 55	0 20	23 55
Tobacco (raw)			114		157					0 20
Tallow										
Tin					118		118	17 70		17 70
Turpentine					47		47	7 05		7 05
Wheat		153,478		34,878	885	317,527	318,412	132 75	31,752 70	31,885 45
White lead	1				1			0 15		0 15
Whiting										
Wool				900		908	908		181 60	181 60
All other goods and merchandise not enumerated	559	169	49,450	3,990	50,269	4,420	54,689	7,540 35	884 00	8,424 35
Bark										

No. (A) 2.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the Welland Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Barrels, empty	15								44	10	54	8 68	1 90	10 58
Boat knees			29											
Floats														
Firewood, in vessels.										165	165		11 00	11 00
do rafts														
Hoops														
Hop-poles														
Lumber, sawn, in vessels			2,882		75,515		1,943			80,340	80,340		14,454 24	14,454 24
do do rafts														
Masts, spars and telegraph poles, in vessels.														
Masts, spars and telegraph poles, in rafts.														
Railway ties, in vessels.														
do rafts														
Saw logs														
Staves and headings, barrel do pipe.														
do do West India														
Staves, salt barrel.				40				66		134	134		94 92	94 92
Shingles.		28												
Split posts and fence rails, in vessels														
Split posts and fence rails, in rafts														
Timber, square, in vessels		9,502						47,286		56,788	56,788		8,514 31	8,514 31
do do rafts														
Traverses.														
Woodenware and wood partly manufactured.									119	12	131	47 60	4 80	52 40
Total freight paying tolls.	1,361	166,582	2,611	2,922	267,518	385,782	4,127	402,642	275,617	957,928	1,233,545	51,770 58	118,225 27	169,996 85

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler of Canal Statistics.

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APPENDIX A.—Continued.

No. (A) 3.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the Welland Canal, and the Amount of Tolls collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up. \$ cts.	Amount of Tolls, Down. \$ cts.	Total Amount of Tolls. cts.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Ashes, pot and pearl														
Apples	723	3,305	41						764	3,305	4,069	18 76	160 80	179 56
Agricultural products not enumerated, Vegetables.	1			400					1	400	401	10	20 00	20 10
Agricultural products not enumerated, Animal														
Agricultural implements														
Barley														
Bricks	45								45		45	4 23		4 23
Bones														
Brimstone														
Buckwheat														
Cement and water lime	172								172		172	9 28		9 28
Clay, lime and sand	140								140		140	10 50		10 50
Coal		208								208	208		20 80	20 80
Corn														
Cattle														
Cotton (raw)														
Crockery and earthenware														
Dye wood and dye stuffs														
Fish														
Flax and hemp														
Flour	266	125							266	125	391	5 00	12 50	17 50
Furniture		1								1	1		02	02
Gypsum														
Glass (all kinds)	4	1							4	1	5	08	02	10
Hay (pressed)														
Hogs														
Horses	13	7							13	7	20	26	19	45

Department of Railways and Canals

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Department of Railways and Canals.

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DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A.—Continued.

No. (A) 4.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, and the Amount of Revenue collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Ashes, pot and pearl.....	13	37					16	37	37			
Apples.....		7,705	3					7,738	7,754	1 51	7 40	7 40
Agricultural products not enumerated, vegetables.....	367	548					367	548	915	49 66	80 01	1,137 99
Agricultural products not enumerated, animal.....	314	2,095		902			314	2,997	3,311	15 04	356 96	129 67
Agricultural implements.....	59	6					59	6	65	8 08	50	372 00
Barley.....	52	3,633	52				52	3,633	3,685	1 30	293 27	8 58
Bricks.....	8,747	61			365		9,112	61	9,173	375 98	2 53	294 57
Bones.....		291		513				804	804		79 21	378 51
Brimstone.....	653						653		653	63 83		79 21
Buckwheat.....		4,118						4,118	4,118		129 93	63 83
Cement and water lime.....	4,105	103		1,054	144		5,303	103	5,406	653 06	3 98	129 93
Clay, lime and sand.....	13,590	11,928			1,549		15,139	11,928	27,067	594 51	509 18	657 04
Coal.....		37,297	4		330		4	178,942	178,946	15 15	25,250 25	1,103 69
Corn.....	9	14,846					9	18,632	18,641	69 1,366 02	1,366 71	25,250 40
Cattle.....	57	262					57	262	319	3 24	18 66	1,366 71
Cotton (raw).....												21 90
Crockery and earthenware.....	76	6	83				159	6	165	28 81	1 15	29 96
Dye wood and dye stuffs.....	140				9		149		149	19 05		29 96
Fish.....	146	46	11				157	46	203	19 16	2 06	19 05
Flax and hemp.....		25						25	25		3 75	21 22
Flour.....	926	2,715					926	2,715	3,641	58 30	150 06	3 75
Furniture.....	276	886					276	886	1,162	49 04	131 20	208 36
Gypsum.....	1,304	10					1,304	10	1,314	18 17	38	180 24
Glasses (all kinds).....	879	134	530				1,409	134	1,543	280 03	11 70	18 55
Hay (pressed).....	188	826					188	826	1,014	7 49	40 37	291 73
Hogs.....		18						18	18		2 12	47 86
Horses.....	220	420					220	420	640	12 86	26 79	2 12
												39 65

Department of Railways and Canals.

Hides and skins, horns and hoofs	45	45	45	45	6 19	6 19
Ice	1,981	15	1,996	281 02	1 77	282 79
Iron (railway)	105	1,395	1,628	18 72	192 84	211 56
do (pig)	12,553	2,777	17,776	1,116 90	142 42	1,259 32
do (all other)						
do ore						
Kryolite chemical ore and other ore, except iron	46	249	295	4 64	20 41	25 05
Lard and lard oil	178	715	893	9 93	30 57	40 50
Meal, all kinds	21	3	34	2 61	0 45	3 06
Meats, other than pork	19	19	19	3 61		3 61
Marble						
Manilla	346	210	954	73 35	10 60	83 95
Molasses	885	689	1,033	199 63	36 20	235 83
Nails	134	18,768	19,028	3 42	542 59	546 01
Oats	638	454	1,133	112 12	66 25	178 37
Oil (in barrels)	3	10	13	0 23	0 78	1 01
Oil cake	50	38,186	38,236	1 52	1,650 61	1,652 13
Pease	31	31	31	2 66	2 66	2 66
Potatoes	245	245	490	24 13	20 40	44 53
Pork	316	320	330	67 46	25 95	93 41
Paint	164	60	60	43 08	3 00	46 08
Pitch and tar	133	171	190	34 1	20 12	34 05
Rags	261	1,211	1,211	19 58	82 11	101 69
Ree	1	1	1	15	15	15
Flax seed	26	56	56	2 131	117 11	119 91
Rosin	2,934	94	94	3,801	440 39	443 98
Salt	106	1,050	1,050	4 82	39 40	44 22
Stone intended for cutting	336	6,884	6,884	19 85	649 95	669 80
do wrought						
do not suitable for cutting, unwrought	150	4,174	4,324	3 00	113 40	116 40
Seeds, all kinds	5,267	149	5,369	245 13	10 34	255 47
Sheep	184	1	184	0 08	13 93	14 01
Soda ash	1,193	52	1,270	246 11	2 85	248 96
Steel	1,288	22	1,322	1,310	176 54	1 37
Sugar	3,072	157	3,229	10,078	1,156 50	1,164 45
Spirits, beer, &c	350	195	570	62 41	27 80	90 21
Tobacco (raw)	12	12	12	1 20	1 20	1 20
Tallow	23	8	31	3 45	98	4 43
Tin	1,880	28	2,063	2,091	409 76	412 21
Turpentine	2	49	132	6 79	2 60	9 39
Wheat	560	10,555	12,087	21 00	1,048 76	1,069 76
White lead	3	3	3	148	28 60	28 75
Whiting	558	9	637	646	126 11	126 65
Wool	2	12	12	15	1 80	1 95
All other goods and merchandise not enumerated.	5,984	4,925	7,785	1,161 43	743 87	1,905 30
Bark						

No. (A) 4.—STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, etc.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$ cts.	\$ cts.	\$ cts.
Barrels, empty.	228	46	2						280	46	276	26 96	3 12	30 08
Boat knees.														
Floats.	60	3,024							60	3,024	3,084	1 05	52 64	53 69
Firewood, in vessels.	6,747	6,784							6,747	6,784	13,531	112 46	121 22	233 67
do rafts.		90								90	90		1 88	1 88
Hoops.														
Hop poles.	14,901	23,165							14,901	25,359	40,280	346 43	1,876 76	2,223 19
Lumber, sawn, in vessels.		727		1,186				998		727	727		32 66	32 66
do rafts.														
Masts, spars, and telegraph poles, in vessels.														
do rafts.														
Masts, spars, and telegraph poles, in rafts.														
Railway ties, in vessels.	746	20,440							746	20,440	20,440		508 00	508 00
do rafts.		235								235	235	29 83	5 38	35 21
Saw logs.		63								63	63		2 50	2 50
Staves and headings, barrel do do W. India.	18	14,940							18	14,940	14,940	0 35	341 10	341 10
Staves, salt barrel.														
Shingles.														
Split posts and fence rails, in vessels.	2								2		2	0 20		0 20
Split posts and fence rails, in rafts.														
Timber, square, in vessels.	20	750							20	750	770	0 50	9 75	10 25
do do	432	5,798							432	5,798	6,230	13 50	146 70	160 20
Traverses.		3,060								3,060	3,060		18 85	18 85
Woodenware and wood partly manufactured.	55	14							55	14	69	17 60	4 80	22 40
Total freight paying tolls	97,268	261,267	6,213	2,742	257	684	12,668	147,948	116,426	412,641	529,067	9,041 46	38,273 71	47,315 19
Free articles having paid full tolls on the Welland Canal:														
Apples.		1,155						108						1,263

Department of Railways and Canals.

	41	53	94
Ashes	240	240	240
Barley	12	12	12
Cement, &c.	182,330	182,330	182,330
Corn	5	5	5
Crockery, &c.	11,964	11,964	11,964
Flour	9	9	9
Glass	1	1	1
Horses	5	5	5
Iron, pig	2,020	2,020	2,020
do all other	376	376	376
Merchandise	167	167	167
Molasses	12,373	12,373	12,373
Oats	23	23	23
Oils	3,020	3,020	3,020
Peanut	1	1	1
Pork	4	4	4
Rags	8,323	8,323	8,323
Rye	20	20	20
Seeds, all kinds	542	542	542
Steel	1	1	1
Sugar	29	29	29
Vegetables, all other	255,198	255,198	255,198
Wheat	657	657	657
Lumber, sawn, in vessels	1,200	1,200	1,200
Timber, square, in rafts	100,735	100,735	100,735
Coal, free, per Order in Council	30,751	100,735	100,735
Free articles for canal construction, O.C., 1884 : Stone, for cutting	200	200	200
do wrought	1,754	1,754	1,754
Merchandise	6	6	6
Coal	2,051	2,051	2,051
Grand total, freight	167,278	239,815	217,167
Total tolls on vessels	896,523	896,523	896,523
do passengers			
do free goods	\$54,614.70		
Total tolls			
Fines			
* Damages			
Wharfage and storage			
Other receipts			
Total revenue, exclusive of hydraulic rents			

* Amount of damages not included in above, \$324.95.

* Amount of damages not included in above, \$324.95.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler of Canal Statistics.

Department of Railways and Canals.

[illegible]

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the St. Lawrence Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$ cts.	\$ cts.	\$ cts.
Barrels, empty.....														
Boat knees.....														
Floats.....														
Firewood, in vessels.....														
do rafts.....														
Hoops.....														
Hop poles.....														
Lumber, sawn in vessels.....														
do rafts.....	73		2						75		75	14 08		14 08
Masts, spars and telegraph poles, in vessels.....														
Masts, spars and telegraph poles, in rafts.....		17,199						998		18,197	18,197		1,640 10	1,640 10
Railway ties, in vessels.....														
do rafts.....														
Saw-logs.....														
Staves and headings, barrel do pipe.....														
do do West India.....														
Staves, salt barrel.....														
Shingles.....														
Split posts and fence rails, in vessels.....														
Split posts and fence rails, in rafts.....														
Timber, square, in vessels.....														
do rafts.....														
Traverses.....														
Woodenware, and wood partly manufactured.....	37	11							37	11	48	14 80	4 40	19 20
Total freight paying tolls.....	22,436	97,825	6,207				2	132,565	28,645	230,392	259,037	5,067 03	31,920 15	36,977 18

*Free articles having paid
full tolls on the Welland
Canal:—*

Free articles having paid full tolls on the Welland Canal:—									
Apples.....	1,155				108		1,263		
Ashes.....	41				53		94		
Barley.....	240						240		
Cement, &c.....	12						12		
Corn.....	125,946				56,384		182,330		
Crockery, &c.....					5		5		
Flour.....	2,923				9,041		11,964		
Glass.....	9						9		
Horses.....					1		1		
Iron, pig.....	5						5		
do all other.....	1,571				449		2,020		
Merchandise.....	288				138		376		
Molasses.....	50				108		167		
Oats.....	10,870				1,503		12,373		
Oils.....					23		23		
Peas.....	2,625				395		3,020		
Pork.....					1		1		
Rags.....	2				2		4		
Rye.....	6,866				1,457		8,323		
Seeds, all kinds.....					20		20		
Steel.....	190				412		542		
Sugar.....	1						1		
Vegetables, all other.....					29		29		
Wheat.....	235,076				19,087		254,763		
Lumber, sawn, in vessels.....	657						657		
Timber, square, in rafts.....	1,200						1,200		
Coal, free per Order in Council.....	689						689		
Grand total freight.....	23,125		2	2	222,381		709,834		
Total through tolls on vessels.....									
do passengers.....									
Total through free goods.....									
Total through tolls.....									

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

APPENDIX A.—Continued.

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, and the Amount of Tolls collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.		Amount of Tolls Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$	cts.	\$	cts.
Ashes, pot and pearl	13	232							13	232	245	1 06		10 58	11 64
Apples	70	30							70	30	100	5 11		2 31	7 42
Agricultural products not enumerated, vegetables	314	877		902					314	1,779	2,093	15 04		174 26	189 30
Agricultural products not enumerated, animals	59	6							59	6	65	8 08		0 50	8 58
Agricultural implements	52	984							52	984	986	1 30		23 37	24 67
Barley	8,537	59					365		8,902	59	8,961	344 48		2 23	346 71
Bricks		260		513						773	773			74 56	74 56
Bones	650								650		650	63 38		63 38	63 38
Brintone		3,759								3,759	3,759			91 03	94 03
Buckwheat	1,881	103			144				2,025	103	2,128	101 36		3 98	165 34
Cement and water lime	13,511	11,574			1,549				15,060	11,574	26,634	582 66		456 08	1,038 74
Clay, lime and sand		2,364							4	17,391	17,395	0 15		1,017 60	1,017 75
Coal	9	6,891			330				9	7,577	7,586	0 69		260 52	261 21
Corn	55	246							55	246	301	2 94		16 26	19 20
Cattle															
Cotton (raw)	47	1							47	1	48	6 41		0 15	6 56
Crockery and earthenware	94								103		103	9 85			9 85
Dye wood and dye stuffs	60	46			9				60	46	106	4 61		2 06	6 67
Fish															
Flax and hemp															
Flour	926	2,302							926	2,302	3,228	58 30		88 11	146 41
Furniture		335							110	335	445	15 84		21 00	36 84
Gypsum	1,304	10							1,304	10	1,314	18 17		0 38	18 55
Glass (all kinds)	55	106							55	106	161	9 23		6 10	15 33
Hay (pressed)	188	826							188	826	1,014	7 49		40 37	47 86
Hogs		8								8	8			0 62	0 62
Horses	207	376							207	376	583	10 91		20 19	31 10

Department of Railways and Canals.

Hides and skins, horns and hoofs.	45	45	45	45	6 19	6 19
Ice	162	5	167	8 17	0 27	8 44
Iron, railway	24	146	170	2 37	5 49	7 86
do pig	8,716	2,459	12,895	432 45	94 72	527 17
do all other						
do ore						
Kryolite chemical ore and other ore, except iron						
Lard and lard oil	38	153	191	3 44	6 01	9 45
Meal, all kinds	178	715	893	9 93	30 57	40 50
Meats, other than pork	18	28	28	2 16		2 16
Marble	19	19	19	3 61		3 61
Manilla						
Molasses	329	210	936	69 75	10 60	80 35
Nails	218	678	896	36 63	34 00	70 63
Oats	134	18,213	18,347	3 42	461 09	464 51
Oil (in barrels)	330	165	510	45 32	8 43	53 77
Oil cake	3	10	13	0 23	0 78	1 01
Peanut	50	28,910	28,960	1 52	723 01	724 53
Potatoes		26	26	1 91	1 91	1 91
Pork	245	147	392	24 13	5 70	29 83
Paint	69	267	336	11 66	13 85	25 01
Pitch and tar	28	199	259	12 88	3 00	15 88
Rags	84	102	140	10 32	3 65	13 97
Rye	261	261	781	19 58	13 01	32 59
Flax seed						
Rosin	7	56	2,112	113 31	2 80	116 11
Salt	2,138	94	2,252	208 64	3 59	211 63
Stone intended for cutting	106	1,050	1,156	4 22	39 40	43 62
do wrought	324	6,883	7,207	16 45	649 75	666 20
do not suitable for cutting, unwrought	150	4,174	4,324	3 00	113 40	116 40
Seeds, all kinds	4,970	108	5,078	186 78	4 19	190 97
Sheep	184	1	185	0 08	13 93	14 01
Soda ash	60	51	138	9 51	2 65	12 16
Steel	169	18	187	8 69	0 77	9 46
Sugar	978	157	6,440	428 90	7 95	436 85
Spirits, beer, &c	233	77	310	34 01	4 20	38 21
Tobacco (raw)	12	12	12	1 20		1 20
Tallow	3	3	3	0 23		0 23
Tin	77	21	98	12 56	1 05	13 61
Turpentine	2	48	180	6 79	2 40	9 19
Wheat	560	2,133	2,693	21 00	53 36	74 36
White lead	22	3	25	4 00	15 00	4 15
Whiting	57	9	66	10 11	0 55	10 66
Wool	2	2	2	0 15		0 15
All other goods and merchandise not enumerated	2,838	2,399	6,651	371 03	235 27	606 30

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Barrels, empty	155	46					155	46	201	12 88	3 12	16 00
Boat knees												
Floats	60	3,024					60	3,024	3,084	1 05	52 64	53 69
Firewood, in vessels	6,747	6,784					6,747	6,784	13,531	112 45	121 22	233 67
do in rafts		90						90	90		1 88	1 88
Hoops												
Hop poles												
Lumber, sawn, in vessels	14,901	5,966				1,196	14,901	7,162	22,063	346 48	236 66	583 09
do in rafts		727						727	727		32 66	32 66
Masts, spars, and telegraph poles, in vessels												
Masts, spars, and telegraph poles, in rafts												
Railway ties, in vessels	746	20,440					746	20,440	20,440	29 83	508 00	508 00
do in rafts		63						63	63		5 38	35 21
Saw logs		14,940						14,940	14,940	0 35	2 50	341 10
Staves and headings, barrel do do pipe	18						18		18			0 35
do do W. India												
Staves, salt barrel												
Shingles												
Split posts and fence rails, in vessels												
Split posts and fence rails, in rafts	2						2		2	0 20		0 20
Timber, square, in vessels	20	750					20	750	770	0 50	9 75	10 25
do in rafts	432	5,798					432	5,798	6,230	13 50	146 70	160 20
Traverses		3,060						3,060	3,060		18 85	18 85

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	18	3							18	3	21	2 80	0 40	3 20
Woodenware and wood partly manufactured ...	74,852	163,442	6	2,742	257	682	12,656	15,383	87,781	182,249	270,030	3,984 45	6,353 56	10,338 01
Total freight paying tolls														
Free articles having paid full tolls on the Welland Canal:														
Wheat.....		435								435	435			
Coal, free, per Order in Council	69,295						30,751		100,046		100,046			
Free articles for canal construction, O.C., 1884:														
Stone, for cutting.....		200								200	200			
do wrought.....		1,754								1,754	1,754			
Merchandise.....	6								6		6			
Coal								2,051		2,051	2,051			
Grand total, freight...	144,153	165,831	6	2,742	257	682	43,417	17,434	187,833	186,689	374,522			
Total way tolls on vessels.....														
do passengers.....														
do free goods.....														
Total way tolls.....														
												3,653 04	1,437 10	5,090 14
												382 97	661 07	1,044 04
												8,020 46	8,451 73	16,472 19

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS.
 OTTAWA, 16th October, 1897.

Department of Railways and Canals.

do pig	5	5	5	0 46
do all other.				
Iron ore.....				
Kyrolite chemical ore and other ore, except iron.				
Lard and lard oil.	15	15	15	1 48
Meal, all kinds.	10	10	10	0 98
Meats, other than pork.	2	2	2	0 20
Marble.....				
Manilla.....				
Molasses.....				
Nails.....	630	630	630	55 58
Oats.....	5	5	5	0 95
Oil (in barrels).	1	1	1	0 10
Oil cake.	180	180	180	14 90
Pease.....	152	152	152	9 90
Potatoes.....	22	22	22	1 23
Pork.....	1	1	1	0 19
Paint.....				
Pitch and tar.				
Rags.....	68	68	68	11 92
Rye.....	2	2	2	0 20
Flax seed.				
Rosin.....				
Salt.....				
Stone intended for cutting.				
do wrought.				
do not suitable for cutting, unwrought				
Seeds, all kinds.	7	7	7	0 57
Sheep.....	309	309	309	26 27
Soda ash.	3	3	3	0 39
Steel.....				
Sugar.....				
Spirits, beer, &c.	14	14	14	2 34
Tobacco (raw).				
Tallow.....	12	12	12	1 17
Tin.....				
Turpentine.....				
Wheat.....	270	270	275	16 49
White lead.				
Whiting.....				
Wool.....				
All other goods and merchandise not enumerated.	13	13	421	69 30
Bark.....				
Barrels, empty.	59	59	59	7 45
Boat knees.				
Floats.....	43,240	43,240	43,240	361 16
Fire wood, in vessels.	21,432	21,432	21,432	748 41
do rafts.				
Hoops.....	27	27	27	2 54
Hop poles.				

No. (A) 7.—GENERAL STATEMENT showing the Quantity of each Article transported on the Ottawa Canals, and the Amount of Revenue collected, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Lumber, sawn, in vessels.....	81	319,730		41,648					81	361,378	361,459	\$ 25,111 85
do rafts.....												
Masts, spars, and telegraph poles, in vessels.....												
do do rafts.....				546						587	587	124 95
Railway ties, in vessels.....										5,408	5,408	288 35
do rafts.....		41								5,396	5,396	130 88
Saw logs.....		5,408										
Staves and headings, barrel.....		5,396										
do do.....												
do do pipe.....												
Staves, salt barrel.....												
Shingles.....		25		38						63	63	41 10
Split posts and fence rails, in vessels.....												
do do rafts.....												
Timber, square, in vessels.....		60								60	60	2 07
do rafts.....		9,300								9,300	9,300	97 65
Traverses.....		340								340	340	85
Woodenware and wood partly manufactured.....		9								9	9	2 25
Total freight paying tolls.....	381	416,263		42,232					381	458,495	458,576	27,570 88
<i>Free articles for canal construction per Order in Council, 1884.</i>												
Floats.....												
Lumber, sawn, in rafts.....		120								120	120	
Masts and spars, in rafts.....		143								143	143	
Square timber in vessels.....		250								250	250	
do rafts.....		200								200	200	
do do.....		1,000								1,000	1,000	

Free per Order in Council, 27th June, 1890.

* Amount of damages not included in above \$27.35.

RICHARD DEVLIN,
Compiler Canal Statistics.

APPENDIX A—Continued.

No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the Chambly Canal and the Amount of Revenue collected during the season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, pot and pearl.....		1,421				39		1,460	1,460	\$ cts. 132 64
Apples.....										
Agricultural products, not enumerated, vegetables do do animal			24				24	7	24	2 40
Agricultural implements		7						589	7	0 70
Barley		59						777	59	1 37
Bricks.....	212					777	212	777	989	96 90
Bones.....			293				293		293	29 30
Brimstone.....										
Buckwheat.....										
Cement and water lime	827					109	827	109	936	66 05
Clay, lime and sand						3,643		3,643	3,643	452 81
Coal.....						87,245		87,245	87,245	8,598 15
Corn.....	16	113					16	113	129	5 13
Cattle.....										
Cotton (raw)										
Grocery and earthenware		12						12	12	1 20
Dye wood and dye stuffs						26		26	26	2 60
Fish.....										
Flax and kemp										
Flour.....	544	27					544	27	571	18 96
Furniture										
Gypsum.....										
Glass (all kinds)						1		1	1	0 10
Hay (pressed)		2,204	5,474	60			5,474	2,204	7,734	470 18
Hogs.....										
Horses		69					16	69	85	3 18
Hides and skins, horns and hoofs										
Ice.....										
Iron, railway										
do pig.....										
do all other.....	77					558	77	558	635	60 94

Department of Railways and Canals.

Iron ore.....	136	138	138	138	138	138
Kryolite chemical ore and other ore, except iron.....						
Lard and lard oil.....						
Meal, all kinds.....	7	4	7	4	11	38
Meats, other than pork.....						
Marble.....						
Manilla.....						
Molasses.....				387	387	38 70
Nails.....						
Oats.....	1,621				1,621	54 10
Oil (in barrels).....	3				34	3 30
Oil cake.....						
Pease.....						
Potatoes.....						
Pork.....	8	203	211		211	21 10
Paint.....	2				2	0 08
Pitch and tar.....	1				4	0 37
Rags.....					189	18 90
Rye.....					19	1 90
Flax seed.....						
Rosin.....						
Salt.....	238		2,576	2,576	2,576	257 60
Stone intended for cutting.....			671	671	909	77 72
do wrought.....						
do not suitable for cutting, unwrought.....						
Seeds all kinds.....						
Sheep.....	2	112	3	3	3	0 30
Soda ash.....						4 03
Steel.....						
Sugar.....						
Spirits, beer, &c.....						
Tobacco (raw).....				5,308	5,308	530 80
Tallow.....						
Tin.....						
Turpentine.....				140	140	14 00
Wheat.....						
White lead.....						
Whiting.....						
Wool.....						
All other goods and merchandise not enumerated.....	1,128	251	2,159	2,410	7,542	652 07
Bark.....						
Barrels, empty.....	19	2	19	2	21	2 06
Boat knees.....						
Floats.....	6					0 40
Firewood, in vessels.....	1,437	3,714	139,711	3,714	143,425	4,748 87
do rafts.....						
Hoops.....						
Hop poles.....						
Lumber, sawn, in vessels.....	5,090	152	6	158	76,411	4,424 85
do rafts.....						

No. (A) 8.—GENERAL STATEMENT showing the quantity of each Article transported on the Chambly Canal and the amount of Revenue collected, &c.—*Concluded.*

Articles.	From Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Amount of Tolls.
	Up.*	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Masts, spars, and telegraph poles, in vessels.											\$ cts.
do do rafts.		1								1	0 10
Railway ties, in vessels.			1,953						1,953		156 00
do do rafts											
Saw logs.											
Staves and headings, barrel											
do do pipe											
do do West India.											
Staves, salt barrel	53	4							53	4	3 28
Shingles.											
Split posts and fence rails, in vessels.											
do do rafts											
Timber, square, in vessels											
do do rafts											
Traverses											
Woodenware and wood partly manufactured.											
Total freight paying tolls	9,680	9,779	221,526	60			103,890		231,206	113,729	20,377 92
Total tolls on vessels											3,112 86
do passengers.											59 96
Fines.											5 00
Total revenue exclusive of hydraulic rents.											24,155 74

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS.
 OTTAWA, 16th October, 1897.

Department of Railways and Canals

APPENDIX A—Continued.
No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal, and the Amount of Revenue collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, pot and pearl		10								10	10	\$ 1 69
Apples	4	336							4	336	340	8 06
Agricultural products not enumerated, vegetables.	13	10							13	10	23	0 55
do animal	13	185							13	185	198	6 59
Agricultural implements.	9	60							9	60	69	6 27
Barley.												
Bricks	127	199							127	199	326	12 30
Bones.	2								2		2	0 05
Brimstone.												
Buckwheat		101								101	101	4 72
Cement and water lime.	610	295							610	295	905	28 50
Clay, lime and sand	1,546	54							1,546	54	1,600	37 42
Coal.		1,262					12,247			13,509	13,509	639 51
Corn.	6	6								6	6	0 18
Cattle.	11	1							11	1	12	0 33
Cotton (raw).												
Crockery and earthenware.	14	35							14	35	49	4 40
Dye wood and dye stuffs												
Fish.	21								21		21	0 53
Flax and hemp.												
Flour.	111	285							111	285	396	10 63
Furniture.	27	11							27	11	38	3 48
Gypsum.	5								5		5	0 12
Glass (all kinds).	36	3							36	3	39	3 58
Hay (pressed)	362								362		362	13 85
Hogs.												
Horses.	2	5							2	5	7	0 21
Hides and skins, horns and hoofs.		1								1	1	0 03
Ice.												
Iron, railway	4								4		4	0 11
do pig	44								44		44	1 37

No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Iron, all other..	478	15							478	15	493	\$ cts. 14 59
Iron ore..												
Kryolite, chemical ore and other ore, except iron		490								490	490	24 50
Lard and lard oil.	14	15							14	15	29	0 71
Meal, all kinds	16	1							16	1	17	0 66
Meats, other than pork	13								13		13	0 49
Marble..		2								2	2	1 14
Manilla..	107								107		107	0 18
Molasses..	110								110		110	9 45
Nails..												
Oats..	11	9							11	9	20	10 79
Oil (in barrels)...	179	91							179	91	270	0 50
Oil cake..												25 07
Pease..	9								9		9	0 21
Potatoes..												
Pork..	129	126							129	126	255	6 81
Paint..	34	1							34	1	35	3 33
Pitch and tar..	4								4		4	0 36
Rags..		28								28	28	3 30
Rye..		4								4	4	0 10
Flax seed..												
Rosin..												
Salt..	1,698	334							1,698	334	2,032	52 52
Stone intended for cutting..		195								195	195	30 09
do wrought		2								2	2	0 18
do not suitable for cutting, unwrought..		527								527	527	17 41
Seeds, all kinds.												
Sheep..	2								2		2	0 06
Soda ash..	7	1							7	1	8	0 71
Steel..	49								49		49	1 21
Sugar..	699	58							699	58	757	68 34
Spirits, beer, etc..	68	35							68	35	103	9 69
Tobacco (raw)...	14								14		14	0 43
Tallow..												
Tin..	14	4							14	4	18	1 70

Department of Railways and Canals.

Turpentine	1	1,550						1	0 09
Wheat	28							1,550	36 18
White lead	40							28	3 22
Whiting	40							40	3 49
Wool	613	438	4					617	98 16
All other goods and merchandise not enumerated	6							6	0 49
Bark	24	9						24	2 17
Barrels, empty									
Boat knees	1,540							1,540	26 95
Foats	12,537	618	456					12,993	246 19
Firewood, in vessels									
do rafts									
Hoops	22							22	3 00
Hop poles	7,219	2,897	15,354	3,290				22,573	1,903 24
Lumber, sawn, in vessels									
do do rafts									
Masts, spars and telegraph poles, in vessels									
do do rafts									
Railway ties, in vessels	704		208					912	75 07
do rafts	82							82	8 67
Saw logs	118	11						118	2 93
Staves and headings, barrel									
do pipe									
do West India									
Staves, salt barrel	75	78						75	29 78
Shingles	7							7	0 55
Split posts and fence rails, in vessels									
do do rafts									
Timber, square, in vessels	120	20						120	2 66
do rafts	800							800	5 07
Traverses									
Woodenware and wood, partly manufactured									
Total freight paying tolls	30,914	10,375	16,022	3,290				46,936	3,516 92
Coal, free, per Order in Council	456							456	
Grand total freight	31,370	10,375	16,022	3,290				47,392	
Total tolls on vessels									
do passengers									1,421 31
do free coal									72 87
Wharfage and storage									\$12. 12
Other receipts									51 36
* Total revenue, exclusive of hydraulic rents									100 50
									5,162 96

* Amount of damages not included in above, \$32.00.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A—Continued.

No. (A) 10.—GENERAL STATEMENT showing the quantity of each Article transported on the St. Peter's Canal and the amount of Revenue collected during the season of Navigation, 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Clay, lime and sand		10,804								10,804	108 04	
Fish	81	1,530							81	1,530	16 11	
Flour	1,307	10					1,216		2,523	10	25 33	
Gypsum				4,100						4,100	41 00	
—All other vegetables	5,371	135							5,371	135	55 06	
—Merchandise	2,975	191					211		3,186	191	33 77	
Lumber sawn, in vessels	5,722	610							6,722	610	63 32	
Coal		31,245								31,245	312 45	
Total freight paying tolls	15,456	44,625		4,100			1,427		16,883	48,625	655 08	
Total tolls on vessels											4,056 28	
Total revenue											4,711 39	

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler Canal Statistics.

Department of Railways and Canals

APPENDIX A.—Continued.

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported on the Trent Valley Canals and the Amount of Revenue collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, pot and pearl												
Apples												
Agricultural products not enumerated, vegetables.												
do do animal												
—Agricultural implements												
Barley												
Bricks	130	36							130	36	166	2 31
Bones												
Brimstone												
Buckwheat												
Cement and water lime.												
Clay, lime and sand												
Coal												
Corn	3	1							3	1	4	0 04
Cattle												
Cotton (raw)												
Crockery and earthenware												
Dye wood and dye stuffs												
Fish												
Flax and hemp												
Flour												
Furniture	4								4		4	0 12
Gypsum												
Glass (all kinds)												
Hay (pressed)												
Hogs	86								86		86	0 86
Horses												
Hides and skins, horns and hoofs												
Ice												
Iron, railway	5								5		5	0 05

Ashes, pot and pearl
Apples
Agricultural products not enumerated, vegetables.
do do animal
—Agricultural implements
Barley
Bricks
Bones
Brimstone
Buckwheat
Cement and water lime.
Clay, lime and sand
Coal
Corn
Cattle
Cotton (raw)
Crockery and earthenware
Dye wood and dye stuffs
Fish
Flax and hemp
Flour
Furniture
Gypsum
Glass (all kinds)
Hay (pressed)
Hogs
Horses
Hides and skins, horns and hoofs
Ice
Iron, railway

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported, on the Trent Valley Canals, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Iron, pig												
do all other												
Iron ore												
Kryolite, chemical ore and other ore, except iron												
Lard and lard oil												
Meal, all kinds												
Meats, other than pork												
Marble												
Manilla												
Molasses												
Nails												
Oats												
Oil (in barrels)												
Oil cake												
Pease												
Potatoes												
Pork												
Paint												
Pitch and tar												
Rags												
Rye												
Flax seed												
Rosin												
Salt												
Stone, intended for cutting												
do wrought												
do not suitable for cutting, unwrought	38								38		38	0 18
Seeds, all kinds												
Sheep	3								3		3	0 03
Soda ash												
Steel												
Sugar												
Spirits, beer, &c.												
Tobacco (raw)												

\$ cts.

Department of Railways and Canals.

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RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

APPENDIX A.—Continued.

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported on the Murray Canal and the Amount of Revenue collected during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, pot and pearl												\$ cts.
Apples	150	368							150	368	518	10 01
Agricultural products not enumerated, vegetables	13								13		13	0 25
do animal	4	7							4	7	11	0 22
Agricultural implements											1	0 13
Barley		180								180	180	3 88
Bricks	42	70							42	70	112	2 11
Bones												
Brimsone												
Buckwheat	4	228							4	228	232	4 36
Cement and water lime	197								197		197	3 72
Clay, lime and sand	2								2		2	0 04
Coal												
Corn	1								1		1	0 02
Cattle	1								1		1	0 02
Cotton (raw)												
Crockery and earthenware												
Dye wood and dye stuffs	43								43		43	1 08
Fish	7								8		8	0 16
Flax and hemp												
Flour												
Furniture	174	78							181	79	260	6 91
Gypsum												
Glass (all kinds)	43								43		43	1 10
Hay (pressed)												
Hogs												
Horses	7	2							11	3	14	0 29
Hides and skins, horns and hoofs									5		5	0 10
Ice												
Iron, railway	10								10		10	0 19

Department of Railways and Canals

do pig	311	7	7	311	7	318	6 03
do ore							
Kryolite chemical ore and other ore, except iron.							
Lard and lard oil		5			5		0 10
Meal, all kinds							
Meats, other than pork							
Marble							
Manilla							
Molasses	34			34		34	0 85
Nails							
Oats	38	106		38	106	144	3 61
Oil (in barrels)							
Oil cake	3	1,127	54	57	1,127	1,184	22 28
Pease							
Potatoes							
Pork	34			34		34	0 89
Paint							
Pitch and tar							
Rags		10	3	3	10	13	0 33
Rye	238	28		238	28	266	5 00
Flax seed							
Rosin							
Salt	40	62		40	226	266	5 10
Stone, intended for cutting				164			
do wrought							
do not suitable for cutting, unwrought	1,558			1,558		1,558	15 58
Seeds, all kinds	15			15		15	0 29
Sheep							
Soda ash	60	4		60	4	64	1 62
Steel							
Sugar	226			226		226	5 71
Spirits, beer, &c.							
Tobacco (raw)							
Tallow	34			34		34	0 69
Tin	77			77		77	1 93
Turpentine							
Wheat	245	125		245	125	370	6 97
White lead	10			10		10	0 25
Whiting	54			54		54	1 36
Wool	5	4		5	7	12	0 26
All other goods and merchandise not enumerated	2,163	2,059	1	2,164	2,008	4,232	106 27
Bark							
Barrels, empty							
Boat knees							
Floats							
Firewood, in vessels							
do rafts							
Hop poles							

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported on the Murray Canal, and the Amount of Revenue collected during the Season of Navigation in 1896—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls. \$ cts.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Lumber, sawn, in vessels.....	324	12	660						984	12	996	11 47
do rafts.....												
Masts, spars and telegraph poles, in vessels.....												
do do rafts.....												
Railway ties, in vessels.....												
do do rafts.....												
Saw logs.....												
Staves and headings, barrel.....												
do do pipe.....												
do do West India.....												
Staves, salt barrel.....												
Shingles.....	3	6	4						7	6	13	96
Split posts and fence rails, in vessels.....												
do do rafts.....												
Timber, square, in vessels.....												
do do rafts.....		1,480								1,480	1,480	18 00
Traverses.....												
Woodenware and wood partly manufactured.....												
Total freight paying tolls.....	6,170	5,968	739						6,909	6,147	13,056	249 55
Total tolls on vessels.....												217 40
do passengers.....												138 09
Total revenue exclusive of hydraulic rents.....												605 04

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

Department of Railways and Canada

APPENDIX A.—Continued.

No. (A) 13.—GENERAL STATEMENT showing the Quantity of each Article transported on the (Canadian) Sault Ste. Marie Canal, during the Season of Navigation in 1896.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Ashes, pot and pearl.	220				1,202				1,670		1,670
Apples.	15								15		15
Agricultural products not enumerated, vegetables.											
do do animal.	1	719							1		1
Agricultural implements.						38,350					
Barley.	10				1,849				1,859		39,093
Bricks.											1,859
Bones.											
Brunstone.											
Buckwheat.	41		116		479				636		636
Cement and water lime.			32	450					32	1,705	1,737
Clay, lime and sand.	2,972	1,255	5		749,288		59,715		811,980		811,980
Coal (soft).	10				146,510		6,849		153,369		153,369
do (hard).	1					6,174			1	6,174	6,175
Corn.	1								3	1	4
Cattle.	1	1	2						105		105
Cotton (raw).											
Crockery and earthenware.	105										
Dye wood and dye stuffs.											
Fish.		106		511				43		660	660
Flax and hemp.											
Flour.		35,653				128,651		35,498		199,792	199,792
Furniture.			24					7			31
Gypsum.											
Glass (all kinds).	53		40						93		93
Hay (pressed)	57		20			16	10		87	16	103
Hogs.											
Horses.											
Hides and skins, horns and hoofs.	10	1	2		1			1	13	2	15
Ice.		40								40	40
Iron, railway.	905				4,549		1,303		6,757		6,763
do pig.						19,735		6		19,735	19,735

Department of Railways and Canals.

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RICHARD DEVLIN,

Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th November, 1897.

APPENDIX

No. (A) 14.—STATEMENT of Traffic on the undermentioned Canals, and

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 1.</i>		\$ cts.		\$ cts.		\$ cts.
Canadian vessels, steam.....	399,329	4,377 86	692,807	4,327 84	65,617	202 63
United States vessels, steam.....	667,313	10,012 90	23,096	161 33	596	7 11
Canadian vessels, sail.....	194,012	3,993 74	1,225,146	14,514 46	33,789	380 21
United States vessels, sail.....	192,793	4,355 93	103,204	1,036 98	200,725	2,522 91
Total, class No. 1.....	1,453,447	22,740 43	2,044,253	20,040 61	300,727	3,112 86
<i>Class No. 2.</i>	No.		No.		No.	
Passengers.....	34,594	491 47	63,160	2,648 44	4,009	59 96
<i>Class No. 3.</i>	Tons.		Tons.		Tons.	
Bricks.....	89	10 83	9,173	378 51	989	96 90
Brimstone.....			653	63 83		
Cement and water lime.....	384	41 68	5,406	657 04	936	66 05
Clay, lime and sand.....	507	65 55	27,067	1,103 69	3,643	452 81
Fish.....	479	71 95	203	21 22		
Gypsum.....			1,314	18 55		
Iron, railway.....	1,192	238 40	1,996	282 79		
do pig.....	1,888	518 90	1,528	211 56		
do all other.....	4,444	807 15	17,776	1,259 32	635	60 94
Salt.....	82	16 04	3,801	443 98	909	77 72
Steel.....	12,357	2,471 40	1,310	177 91		
Stone, for cutting.....			1,160	44 22		
Apples.....	6,604	596 81	7,754	1,137 99	1,460	132 64
Barley.....	11,368	1,136 80	3,685	294 57	59	1 97
Buckwheat.....			4,118	129 93		
Corn.....	320,444	32,044 40	18,641	1,366 71		
Cotton, raw.....						
Flax and hemp.....	296	44 40	25	3 75		
Flour.....	42,425	8,424 30	3,641	208 36	571	18 96
Hay, pressed.....	563	112 60	1,014	47 86	7,738	470 18
Meals, all kinds.....	46,957	9,391 35	893	40 50	11	0 38
Oil cake.....			13	1 01		
Oats.....	28,178	2,817 80	19,162	546 01	1,621	54 10
Pease.....	3,030	303 00	38,236	1,652 13		
Potatoes.....			31	2 66	211	21 10
Rye.....	9,409	962 85	1,472	101 69		
Flax Seed.....			1	15		
Seeds, all kinds.....	112	20 00	5,508	255 47	3	0 30
Tobacco, raw.....	1	0 20	12	1 20		
Wheat.....	320,563	32,051 90	12,647	1,069 76		
All other agricultural products, vegetable	471	32 05	915	129 67		
Bones.....			804	79 21	293	29 30
Cattle.....			319	21 90	129	5 13
Hogs.....			18	2 12		
Hides and skins, horns and hoofs.....	42	8 35	45	6 19		
Horses.....	37	3 25	640	39 65	85	3 18
Lard and lard oil.....	1,362	270 39	295	25 05		
Meats, other than pork.....	1	0 15	34	3 06		
Pork.....	408	80 49	490	44 53	2	0 08
Sheep.....			185	14 01	114	4 03
Tallow.....	118	17 70	31	4 43		
Wool.....	908	181 60	14	1 95		
All other agricultural products, animal.			3,311	372 00	24	2 40
Total, class No. 3.....	814,719	92,542 29	195,341	12,266 14	19,433	1,498 17

Department of Railways and Canals

A—Continued.

the Amount of Tolls collected during the Season of Navigation in 1896.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
169,183	182 43	138,227	599 42	104,408	695 68	114,707	2,393 82	36,745	322 93
111	1 00			1,827	19 20	6,080	121 60		
6,240	32 97	128,052	1,715 13	38,813	594 82	70,043	1,401 16	32,588	126 40
66	1 00	19,842	456 52	5,482	111 61	6,985	139 70		
175,600	217 40	286,121	2,771 07	150,530	1,421 31	197,815	4,056 28	69,333	449 33
No.		No.		No.		No.		No.	
12,316	138 09	13,838	165 11	3,239	72 87			20,186	126 03
Tons.		Tons.		Tons.		Tons.		Tons.	
112	2 11			326	12 30			166	2 31
197	3 72	1	0 10	905	28 50				
2	0 04	6,070	151 22	1,600	37 42	10,804	108 04		
8	0 16			21	0 53	1,611	16 11		
				5	0 12	4,100	41 00		
10	0 19	1	0 10	4	0 11			5	0 05
				44	1 37				
318	6 03	5	0 46	493	14 59				
266	5 10			2,032	52 52				
				49	1 21				
518	10 01	40	2 56	195	30 09				
180	3 38	36	3 51	340	8 06				
232	4 36	3	0 30	101	4 72				
1	0 02			6	0 18				
		10	0 99	396	10 63	2,533	25 33		
		1,296	124 24	362	13 85				
		10	0 98	18	0 66				
		1	0 10						
		630	55 58	20	0 50				
1,184	22 28	180	14 90	9	0 21				
		152	9 99						
266	5 00	2	0 20	4	0 10				
15	0 29	7	0 57						
				14	0 43				
370	6 97	275	16 49	1,550	36 18			64	0 64
13	0 26	17	1 02	23	0 55	5,506	55 06		
		5	0 49	2	0 05				
1	0 02	412	30 81	12	0 33			4	0 04
		31	2 28					86	0 86
5	0 10	19	1 86	1	0 03				
14	0 29	148	7 49	7	0 21				
5	0 10	15	1 48	29	0 71				
		2	0 20	17	0 49				
		22	1 23	255	6 81				
		369	26 27	2	0 06			3	0 03
34	0 69	12	1 17						
12	0 26								
11	0 22	1,231	104 06	198	6 59				
3,774	71 60	10,942	560 65	9,040	270 11	24,554	245 54	328	3 93

No. (A) 14.—STATEMENT of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
<i>Class No. 4.</i>						
Ashes, pot and pearl.....	98	18 80	37	7 40		
Agricultural implements.....			65	8 58	7	0 70
Crockery and earthenware.....	144	21 85	165	29 96	12	1 20
Dye woods and dye stuffs.....			149	19 05	26	2 60
Furniture.....	25	3 77	1,162	180 24		
Glass, all kinds.....	63	9 40	1,543	291 73	1	0 10
Marble.....			19	3 61		
Manilla.....	3	0 45				
Molasses.....	679	110 07	954	83 95	387	38 70
Nails.....	31	1 38	1,722	235 83		
Oil, in barrels.....	1,182	226 87	1,133	178 37	34	3 30
Paint.....	3	0 32	678	93 41	4	0 37
Pitch and tar.....	65	9 75	410	46 08	189	18 90
Rags.....	28	1 25	341	54 17	19	1 90
Rosin.....	2	0 30	2,131	119 91	2,576	257 60
Soda ash.....	13	0 25	1,322	248 96		
Sugar.....	7,368	1,103 29	10,078	1,164 45	5,308	530 80
Stone, wrought.....	483	72 45	7,225	669 80		
Tin.....	344	13 23	2,091	412 21		
Turpentine.....			181	9 39	140	14 00
White lead.....	1	0 15	148	28 75		
Whiting.....	5	0 10	646	126 66		
Whiskey and all other spirits.....	163	23 67	570	90 21		
Merchandise, not enumerated.....	58,181	8,499 66	13,145	1,905 30	7,542	662 07
Total, class No. 4.....	68,877	10,117 01	45,915	6,008 02	16,245	1,532 24
<i>Class No. 5.</i>						
Bark.....						
Barrels, empty.....	63	10 81	276	30 08	21	2 06
Boat knees.....						
Floats.....			3,084	53 69	6	0 40
Firewood, in vessels.....	17,007	672 10	13,531	233 67	143,425	4,748 87
do rafts.....			90	1 88		
Lumber sawn, in vessels.....	83,995	14,822 45	40,260	2,223 19	76,411	4,424 85
do do rafts.....			727	32 66		
Hoops.....						
Railway ties, in vessels.....			981	35 21	1,953	156 00
do do rafts.....			63	2 50		
Masts, spars and telegraph poles, in vessels.....					1	0 10
Masts, spars and telegraph poles, in rafts.....			20,440	508 00		
Square timber, in vessels.....	56,788	8,514 31	770	10 25		
do do in rafts.....			6,230	160 20		
Woodenware and wood partly manufactured.....	131	52 40	69	22 40		
Shingles.....	159	105 47			57	3 28
Split posts and fence rails, in vessels.....	3	1 00	2	0 20		
do do in rafts.....						
Saw-logs.....	2,280	106 00	14,940	341 10		
Staves and headings, barrel.....			18	0 35		
do do pipe.....						
do do West India.....						
do do salt barrel.....						
Traverses.....			3,060	18 85		
Hop poles.....						
Total, class No. 5.....	160,426	24,284 54	104,541	3,674 23	221,874	9,335 56

Department of Railways and Canals.

Canals, and the Amount of Tolls collected, &c.—*Continued.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
1	0 03	8	1 34	10	1 69				
		4	0 58	69	6 27			3	0 09
43	1 08	1	0 19	49	4 40				
260	6 91	21	2 71	38	3 48			4	0 12
43	1 10	1	0 19	39	3 58				
				13	1 14				
				2	0 18				
				107	9 45				
34	0 85			110	10 79				
144	3 61	5	0 95	270	25 07				
34	0 89	1	0 19	35	3 33				
				4	0 36				
13	0 33	68	11 92	28	3 30				
64	1 62	3	0 39	8	0 71				
226	5 71			757	68 34				
				2	0 18				
77	1 93			18	1 70				
				1	0 09				
10	0 25			28	3 22				
54	1 36			40	3 49				
		14	2 34	103	9 69				
4,232	106 27	421	69 30	1,058	98 16	3,377	33 77	119	3 57
5,235	131 94	547	90 10	2,789	258 62	3,377	33 77	1 26	3 78
		59	7 45	33	2 17			94	3 62
		43,240	361 16	1,540	26 95			3,037	18 42
		21,432	748 41	13,611	246 19			9,198	102 33
996	11 47	361,459	25,111 85	28,700	1,903 24	6,332	63 32	2,427	48 45
		27	2 54						
		587	124 95	912	75 07			7	0 13
		5,408	288 35	82	8 67			305	12 00
		60	2 07						
1,480	18 00	9,300	97 65	140	2 66				
13	0 96	9	2 25						
		63	41 10	153	29 78			107	8 97
				7	0 55				
		5,396	130 83	129	2 93			5,475	46 42
		340	0 85	800	5 07				
				22	3 00				
2,489	30 43	447,380	26,919 51	46,135	2,306 77	6,332	63 32	20,650	240 34

No. (A) 14.—STATEMENT of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Special Class.</i>		\$ cts.		\$ cts.		\$ cts.
Coal	223,445	44,668 20	178,946	25,250 40	87,245	8,598 15
Kryolite or chemical ore	1,158	57 90			138	13 80
Iron ore						
Stone, unwrought, not suitable for cutting	1,312	67 49	4,324	116 40		
Total special class	225,915	44,793 59	183,270	25,366 80	87,383	8,611 95
Total freight and tolls	1,269,937	194,969 33	529,067	70,004 24	344,935	24,150 74
Timber and other wood, free			1,857	179 51		
Wheat, corn, flour, iron, salt, coal, etc., free	10,050	1,507 50	582,766	54,435 19		
^{W I N} Grand totals, passengers and tonnage of vessels not included	1,279,987	196,476 83	1,113,690	124,618 94	344,935	24,150 74

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 18th November, 1897.

Department of Railways and Canals.

Canals and the Amount of Tolls collected, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
		7	0 12	13,509	639 51	31,245	312 45	3	0 03
				490	24 50				
1,558	15 58			888	17 41			38	0 18
1,558	15 58	7	0 12	14,887	681 42	31,245	312 45	41	0 21
13,056	605 04	458,876	30,506 56	72,851	5,011 10	65,508	4,711 36	21,145	823 62
		43,170	875 00						
				456	12 12				
13,056	605 04	502,046	31,381 56	73,307	5,023 22	65,508	4,711 36	21,145	823 62

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned Canals during of each description of property passed through,

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
Vessels of all kinds.....	453,447	22,740 43	2,044,253	20,040 61	300,727	3,112 86
Passengers.....	No. 34,594	491 47	No. 63,160	2,648 44	No. 4,009	59 96
<i>Forest, Produce of Wood.</i>						
	Tons.		Tons.		Tons.	
Bark.....						
Boat knees.....						
Floats.....			3,084	53 69	6	0 40
do.....Free						
Firewood.....	17,007	672 10	13,621	235 55	143,425	4,748 87
Hoops and hop poles.....						
Lumber, sawed.....	83,995	14,822 45	40,987	2,255 85	76,411	4,424 85
do.....Free			657			
Masts, spars, &c.....			20,440	508 00	1	0 10
do.....Free						
Railway ties.....			1,044	37 71	1,953	156 00
do.....Free						
Saw logs.....	2,280	106 00	14,940	341 10		
do.....Free						
Staves, all kinds.....			18	0 35		
Shingles.....	159	105 47			57	3 28
Split posts and rails.....	3	1 00	2	0 20		
do.....Free						
Timber, square.....	56,788	8,514 31	7,000	170 45		
do.....			1,200			
Traverses.....			3,060	18 85		
Total.....	160,232	24,221 33	106,053	3,621 75	221,853	9,333 50
<i>Farm Stock.</i>						
Cattle.....			319	21 90	129	5 13
Hogs.....			18	2 12		
Horses.....	37	3 25	640	39 65	85	3 18
do.....Free	1		1			
Sheep.....			185	14 01	114	4 03
Total.....	38	3 25	1,163	77 68	328	12 34
<i>Produce of Animals.</i>						
Bones.....			804	79 21	293	29 30
Horns and hoofs, hides and skins, raw..	42	8 35	45	6 19		
Lard and lard oil.....	1,362	270 39	295	25 05		
Meats other than pork.....	1	0 15	34	3 06		
Pork.....	408	80 49	490	44 53	2	0 08
do.....Free			1			
Tallow.....	118	17 70	31	4 43		
Wool.....	908	181 60	14	1 95		
Agricultural products not enumerated, animal.....			3,311	372 00	24	2 40
Total.....	2,839	558 68	5,025	536 42	319	31 78

Department of Railways and Canals

A—Continued.

the Season of Navigation ended 31st December, 1896, showing the Total Quantity and the Amount of Tolls collected thereon.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
175,600	217 40	286,121	2,771 07	150,530	1,421 31	197,815	4,056 28	69,333	449 33
No. 12,316	138 09	No. 13,838	165 11	No. 3,239	72 87	No.		No. 20,186	126 03
Tons.		Tons.		Tons.		Tons.		Tons.	
				6	0 49			94	3 62
		43,240	361 16	1,540	22 95			3,037	18 42
		21,660							
		21,432	748 41	13,611	246 19			9,198	102 33
		27	2 54	22	3 00				
996	11 47	361,459	25,111 85	28,700	1,903 24	6,332	63 32	2,427	48 45
		711							
		282							
		5,995	413 30	994	83 74			312	12 13
		5,426							
		5,396	130 88	129	2 93			5,475	46 42
		8,570							
13	0 96	63	41 10	153	29 78			107	8 97
				7	0 55				
1,480	18 00	1,000		140	2 66				
		9,360	99 72						
		5,521		800	5 07				
		340	0 85						
2,480	30 43	490,482	26,909 81	46,102	2,304 60	6,332	63 32	20,650	240 34
1	0 02	412	30 81	12	0 33			4	0 04
		31	2 28					86	0 86
14	0 29	148	7 49	7	0 21				
		309	26 27	2	0 06			3	0 03
15	0 31	900	66 85	21	0 60			93	0 93
		5	0 49	2	0 05				
5	0 10	19	1 86	1	0 03				
5	0 10	15	1 48	29	0 71				
		2	0 20	17	0 49				
		22	1 23	255	6 81				
34	0 69	12	1 17						
12	0 26								
11	0 22	1,231	104 06	198	6 59				
67	1 37	1,306	110 49	502	14 68				

APPENDIX

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canal.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Agricultural Products.</i>		\$ cts.		\$ cts.	\$ cts.	
Agricultural products not enumerated, vegetable. Free	471	32 05	915	129 67		
do do			29			
Apples.....Free	6,604	596 81	7,754	1,137 99	1,460	132 64
do			1,263			
Barley.....Free	11,368	1,136 80	3,685	294 57	59	1 97
do			240			
Buckwheat.....			4,118	129 93		
Corn.....Free	320,444	32,044 40	18,641	1,366 71		
do			182,330			
Flax and hemp.....	296	44 40	25	3 75		
Flaxseed.....			1	0 15		
Flour.....Free	42,425	8,424 30	3,641	208 36	571	18 96
do			11,964			
Hay, pressed.....	563	112 60	1,014	47 86	7,738	407 18
Meals, all kinds	46,957	9,391 35	893	40 50	11	0 38
Manilla.....	3	0 45				
Oats.....Free	28,178	2,817 80	19,162	546 01	1,621	54 10
do			12,373			
Pease.....Free	3,030	303 00	38,236	1,652 13		
do			3,020			
Potatoes.....			31	2 66	211	21 10
Rye.....Free	9,409	962 85	1,472	101 69		
do			8,323			
Seeds, all kinds.....	112	20 00	5,508	255 47	3	0 30
do	99		20			
Tobacco, raw.....	1	0 20	12	1 20		
Wheat.....Free	320,563	32,051 90	12,647	1,069 76		
do			255,198			
Total	790,523	87,938 91	592,515	6,988 41	11,674	699 63
<i>Manufactures.</i>						
Ashes, pot and pearl.....	94	18 80	37	7 40		
do			94			
Agricultural implements.....			65	8 58	7	0 70
Barrels, empty.....	63	10 81	276	30 08	21	2 06
Bricks.....Free	89	10 83	9,173	378 51	989	96 90
do	15					
Cement and water lime.....	384	41 68	5,406	657 04	936	66 05
do			12			
Crockery and earthenware.....	144	21 85	165	29 96	12	1 20
do			5			
Furniture.....	25	3 77	1,162	180 24		
Glass, all kinds.....	63	9 40	1,543	291 73	1	0 10
do	612		9			
Iron, railway.....	1,192	238 40	1,996	282 79		
do	1,687					
Iron, pig.....Free	1,888	318 90	1,528	211 56		
do	28		5			
do all other.....	4,444	807 15	17,776	1,259 32	635	60 94
do do.....Free	727		2,020			
Molasses.....	679	110 07	94	83 95	387	38 70
do	1		167			
Nails.....	31	1 38	1,722	235 83		
do	409					
Oil.....Free	1,182	226 87	1,133	178 37	34	3 30
do	33		23			
Oil cake.....			13	1 01		

Department of Railways and Canals.

A—Continued.

Canals, and the Amount of Tolls collected, &c.—Continued.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
13	0 26	17	1 02	23	0 55	5,506	55 06		
518	10 01	40	2 56	340	8 06				
180	3 38	36	3 51						
232	4 36	3	0 30	101	4 72				
1	0 02			6	0 18				
		10	0 99	396	10 63	2,533	25 33		
		1,296	124 24	362	13 85				
		10	0 98	18	0 66				
		630	55 58	20	0 50				
1,184	22 28	180	14 90	9	0 21				
		152	9 99						
266	5 00	2	0 20	4	0 10				
15	0 29	7	0 57						
				14	0 43				
370	6 97	275	16 49	1,550	36 18			64	0 64
2,779	52 57	2,658	231 33	2,845	76 25	8,039	80 39	64	0 64
		8	1 34	10	1 69				
1	0 03	4	0 58	69	6 27			3	0 09
		59	7 45	33	2 17				
112	2 11			326	12 30			166	2 31
197	3 72	1	0 10	905	28 50				
		1	0 19	49	4 40				
260	6 91	21	2 71	38	3 48			4	0 12
43	1 10	1	0 19	39	3 58				
10	0 19	1	0 10	4	0 11			5	0 05
				44	1 37				
318	6 03	5	0 46	493	14 59				
				107	9 45				
34	0 85			110	10 79				
144	3 61	5	0 95	270	25 07				
		1	0 10						

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned Canals

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Manufactures—Concluded.</i>		\$ cts.		\$ cts.		\$ cts.
Paint	3	0 32	678	93 41	4	37
do	49					
Pitch and tar	65	9 75	410	46 08	189	18 90
do	60					
Rosin	2	0 30	2,131	119 91	2,576	257 60
Soda ash	13	0 25	1,322	248 96		
do	74					
Spirits, whiskey, &c	163	23 67	570	90 21		
do	51					
Steel	12,357	2,471 40	1,310	177 91		
do			542			
Sugar	7,368	1,103 29	10,078	1,164 45	5,308	530 80
do	1,873		1			
Tin	344	13 23	2,091	412 21		
do	395					
Turpentine			181	9 39	140	14 00
White lead	1	0 15	148	28 75		
do	10					
Whiting	5	0 10	646	126 66		
do	56					
Woodenware	131	52 40	69	22 40		
Total	38,579	5,494 77	65,461	6,376 71	11,239	1,091 62
<i>Merchandise.</i>						
Brimstone (crude)			653	63 83		
Clay, lime and sand	507	65 55	27,067	1,103 69	3,643	452 81
Coal	223,445	44,668 20	178,946	25,250 40	87,245	8,598 15
do			102,786			
Dye wood and dye stuffs			149	19 05	26	2 60
Fish	479	71 95	203	21 22		
do	11					
Gypsum			1,314	18 55		
Ores, (all kinds)	1,158	57 90			138	13 80
Marble			19	3 61		
Rags	28	1 25	341	54 17	19	1 90
do			4			
Salt	82	16 04	3,801	443 98	909	77 72
do	822					
Stone, (all kinds)	1,795	139 94	12,709	830 42		
do	21		1,954			
All other goods and merchandise, (not enumerated)	58,181	8,499 66	13,145	1,905 30	7,542	662 07
do	1,247		382			
Total	287,776	53,520 49	343,473	29,714 22	99,522	9,809 05
Grand totals (passengers and tonnage of vessels not included)	1,279,987	194,969 33	1,113,690	70,004 24	344,935	24,150 74

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

Department of Railways and Canals.

and the amount of Tolls collected, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
34	0 89	1	0 91	35	3 33				
				4	0 36				
64	1 62	3	0 39	8	0 71				
		14	2 34	103	9 69				
				49	1 21				
226	5 71			757	68 34				
77	1 93			18	1 70				
				1	0 09				
10	0 25			28	3 22				
54	1 36			40	3 49				
		9	2 25						
1,584	36 31	134	19 34	3,540	215 91			178	2 57
2	0 04	6,070	151 22	1,600	37 42	10,804	108 04		
		7	0 12	13,509	639 51	31,245	312 45	3	0 03
43	1 08			456					
8	0 16			21	0 53	1,611	16 11		
				5	0 12	4,100	41 00		
				490	24 50				
				13	1 14				
13	0 33	68	11 92	28	3 30				
266	5 10			2,032	52 52				
1,558	15 68			1,085	47 68			38	0 18
4,232	106 27	421	69 30	1,058	98 16	3,377	33 77	119	3 57
6,122	128 56	6,566	232 56	20,297	904 88	51,137	511 37	160	3 78
13,056	605 04	502,046	30,506 56	73,307	5,011 10	65,508	4,711 36	21,145	823 62

RICHARD DEVLIN,
Compiler Canal Statistics.

APPENDIX A—Continued.

No. (A) 16.—STATEMENT showing the amount of Tolls accrued each month during the Season of Navigation ended 31st December, 1896.

Canals and Offices.	January	March.	April.	May.	June.	July.	August.	September	October.	November	December.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
WELLAND CANAL.												
Chippawa.....					14 42	12 06	10 88	20 27	15 19	4 53		77 30
Colborne.....			4,152 28	16,717 70	15,952 28	17,778 61	22,505 19	20,694 11	17,791 95	12,564 39	2,305 90	130,552 44
Dalhousie.....			2,597 76	14,910 55	5,820 22	5,222 04	10,064 88	6,960 79	10,330 71	7,262 02	49 22	63,218 19
Dunnville.....				30 18	25	72 29	61 39	18 57	78 37	1 91		262 96
Maliland.....					9 10	17 30	0 25		3 00	50		30 15
St. Catharines.....			43 38	157 29	130 03	93 38	136 93	100 25	79 88	69 95	17 20	828 29
Total Welland Canal.....			6,793 42	31,815 72	21,926 30	23,195 71	32,779 47	27,793 99	28,299 10	19,903 30	2,462 32	194,969 33
ST. LAWRENCE CANALS.												
Beauharnois.....				69 40	92 90	113 63	200 48	223 48	238 74	88 02		1,026 05
Cardinal.....				193 39	41 12	136 23	85 56	80 89	111 74	151 97	23 92	824 82
Cornwall.....				4,614 94	4,588 52	4,394 01	4,484 30	4,112 35	4,686 49	3,379 29	11 73	30,271 63
Kingston.....			673 41	1,040 40	1,074 86	637 75	1,435 55	1,452 77	2,594 04	1,140 35		10,049 13
Lachine.....				238 61	342 14	345 62	493 84	494 20	278 88	231 13		2,424 42
Montreal.....				3,610 67	3,827 82	4,471 72	3,953 03	3,440 43	3,468 92	2,627 39	8 21	25,408 19
Total St. Lawrence Canals.....			673 41	9,767 41	9,967 36	10,098 36	10,652 76	9,804 12	11,378 81	7,618 15	43 86	70,004 24
CHAMBLY CANAL.												
Chamby.....				1,095 99	1,855 28	1,993 32	2,010 28	1,400 49	1,916 61	1,197 29	0 25	11,469 51
St. John.....				2,717 94	2,171 15	2,373 30	1,468 46	1,153 74	1,525 21	689 54		12,099 34
St. Ours.....			3 71	53 73	81 02	79 46	76 35	79 60	114 35	93 67		581 89
Total Chamby Canal.....			3 71	3,867 66	4,107 45	4,446 08	3,555 09	2,633 83	3,556 17	1,980 50	0 25	24,150 74

Department of Railways and Canals

OTTAWA CANALS.

Ottawa.	1 13	3,860 20	3,768 86	3,345 09	2,554 31	2,714 56	2,209 25	1,315 42	19,768 82
Carleton.	1 45	2 32	3 85	4 01	34 51	7 08	10 98	4 87	69 02
Grenville.	199 12	1,644 88	1,952 36	1,938 88	1,551 04	946 99	918 66	480 47	9,632 40
Ste. Anne's.	4 83	86 79	187 29	253 67	194 09	165 46	107 69	36 50	1,036 32
Total Ottawa Canals.	206 53	5,594 19	5,912 36	5,541 65	4,333 95	3,834 09	3,246 53	1,887 26	30,566 56

RIDEAU CANAL.

Kingston Mills.									
Ottawa.		175 19	271 23	283 77	245 80	180 88	72 76	34 37	1,263 80
Smith's Falls.		676 27	721 20	568 17	485 32	295 03	262 17	282 17	3,240 33
		57 52	75 36	104 72	100 64	65 53	73 21	29 90	506 97
Total Rideau Canal.		908 98	1,067 79	956 66	831 76	541 24	408 14	286 53	5,011 10

ST. PETER'S CANAL.

St. Peter's.	6 72	1 24				416 76	428 96	336 26	1,908 88
									4,711 36

TRENT VALLEY CANALS.

Bobcaygeon.	3 14	29 10	76 52	61 83	73 89	58 39	43 28	11 75	367 90
Backhorn.		13 00	6 60	20 20	8 72	3 10	2 90	0 50	54 42
Burleigh.		4 38	7 47	10 78	16 53	7 80	2 26	1 25	50 47
Fenelon Falls.		11 55	12 07	11 13	10 87	4 49	1 75		51 86
Hastings.	2 00	1 75	5 50	7 25	3 95	1 50	1 50		23 45
Peterborough.	2 25	27 09	45 15	66 14	65 22	35 04	29 66	14 97	285 52
Total Trent Valley Canals.	7 39	86 87	152 71	177 33	179 18	110 32	81 35	28 47	823 62

MURRAY CANAL.

Brighton.	10 76	65 33	80 06	101 62	133 13	87 76	57 97	67 66	605 04
Grand total.	7,896 37	52,453 06	43,572 29	44,886 05	52,882 93	45,222 11	47,457 03	32,068 13	330,781 99

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

APPENDIX A—Continued.

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals during the Season of Navigation ended the 31st December, 1896, and the amount of Tolls collected thereon.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
WELLAND CANAL.													
Canadian vessels, steam	1,098	122,921	129,176										
do sail	578	60,770	58,766			157		1,705	70,348	198,563	200,766	399,329	4,377 86
					1,603			2,148	37,506	96,138	97,874	194,012	3,993 74
Total Canadian	1,676	183,691	187,942										
				107,000	2,845	157		3,853	107,853	294,701	298,640	593,341	8,371 60
United States vessels, steam	758	171		44,277	641	283,732	232,647	509	105,336	328,689	338,624	667,313	10,012 90
do sail	332			20,118	248	66,673	52,425		44,329	95,791	97,002	192,793	4,355 93
Total United States	1,090	171		73,395	889	350,405	285,072	509	149,665	424,480	435,626	860,106	14,368 83
Grand Total, Welland Canal.	2,766	183,862	187,942	180,395	3,734	350,562	285,072	4,362	257,518	719,181	734,266	1,453,447	22,740 43
ST. LAWRENCE CANALS.													
Canadian vessels, steam	4,231	354,710	294,807										
do sail	5,769	624,632	443,030										
				44,739	316			262	112,167	669,633	555,513	1,225,146	4,327 84
Total Canadian	10,000	979,342	737,837										
				65,445	316			262	134,751	1,045,049	872,904	1,917,953	18,842 30
United States vessels, steam	405	240	386										
do sail	690	632	15,477										
				29,161	1,417	6,011	6,244	547	5,590	10,792	12,304	23,096	161 33
Total United States	1,095	872	15,863										
				33,155	1,501	6,699	7,124	32,900	28,186	73,626	52,674	126,300	1,036 98
Grand Total, St. Lawrence Canals.	11,095	980,214	753,700										
				98,600	1,817	6,699	7,124	33,162	162,937	1,118,675	925,578	2,044,253	20,040 61
CHAMBLEY CANAL.													
Canadian vessels, steam	411	31,952	33,391										
do sail	512	9,172	9,586										
				6,052									
Total Canadian	923	41,124	42,977										
				6,045									

Department of Railways and Canals

United States vessels, steam.	20	5	271	96	18	302	276	320	586	7 11
do sail	2,042	1,639	86,844	96	145	110,394	88,483	112,242	200,726	2,622 91
Total United States	2,062	1,644	87,115	96	163	110,696	88,759	112,562	201,321	2,630 02
Grand Total, Chambly Canal	2,985	42,768	93,160	96	163	119,956	135,928	164,799	300,727	3,112 86
OTTAWA CANALS.										
Canadian vessels, steam.	839	39,823	98,223	181			39,823	98,404	138,227	599 42
do sail	1,032	4,079	122,180	1,793			4,079	123,973	128,052	1,715 13
Total Canadian	1,871	43,902	220,403	1,974			43,902	222,377	266,279	2,314 55
United States vessels, steam.										
do sail	202	3,354	453	15,634	94	307	3,755	16,087	19,842	456 52
Total United States	202	3,354	453	15,634	94	307	3,755	16,087	19,842	456 52
Grand Total, Ottawa Canals.	2,073	47,266	220,856	17,608	94	307	47,657	238,464	286,121	2,771 07
RIDEAU CANAL.										
Canadian vessels, steam.	1,318	51,576	51,971			612	51,825	52,583	104,408	695 68
do sail	670	12,795	13,579	99		6,170	18,965	19,848	38,813	594 82
Total Canadian	1,988	64,371	65,550	99		6,782	70,790	72,431	143,221	1,290 50
United States vessels, steam.	64	400	164			868	795	1,032	1,827	19 20
do sail	94	1,292	894	1,284		872	2,432	3,050	5,482	111 61
Total United States	158	1,692	1,058	1,284		1,740	3,227	4,082	7,309	130 81
Grand Total, Rideau Canal.	2,146	66,063	66,608	1,383		8,522	74,017	76,513	150,530	1,421 31
St. Peter's CANAL.										
Canadian vessels, steam.	870	58,546	56,161				58,546	56,161	114,707	2,393 82
do sail	1,334	36,360	33,683				36,360	33,683	70,043	1,491 16
Total Canadian	2,204	94,906	89,844				94,906	89,844	184,750	3,794 98
United States vessels, steam.	20	3,718	98	118						
do sail	15			2,431						
Total United States	35	3,718	98	2,549						
Grand Total, St. Peter's Canal.	2,239	98,624	89,942	2,549			105,824	92,491	197,815	4,056 28

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—Continued.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From United States to United States Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
TRENT VALLEY CANALS.															
Canadian vessels, steam.....	1,183	18,471	18,274									18,471	18,274	36,745	\$ cts.
do sail.....	527	16,065	16,523									16,065	16,523	32,588	322 93
Total Canadian.....	1,710	34,536	34,797									34,536	34,797	69,333	136 40
United States vessels, steam.....															449 33
do sail.....															
Total United States.....															
Grand Total, Trent Valley Canal.....	1,710	34,536	34,797									34,536	34,797	69,333	449 33
MURRAY CANAL.															
Canadian vessels, steam.....	452	103,461	38,418			14,413				12,891		117,874	51,309	169,183	182 43
do sail.....	148	2,424	2,574			970				272		3,394	2,846	6,240	32 97
Total Canadian.....	600	105,885	40,992			15,383				13,163		121,268	54,155	175,423	215 40
United States vessels, steam.....	4	14	14							83		14	97	111	1 00
do sail.....	4	31				28						66		66	1 00
Total United States.....	8	45	14			28				83		80	97	177	2 00
Grand Total, Murray Canal.....	608	105,930	41,006			15,411				13,246		121,348	54,252	175,600	217 40

No (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—*Continued.*

RECAPITULATION.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
CANADIAN VESSELS. (Steam and Sail.)													
Welland	1,676	183,691	187,942	107,000	2,845	157		3,853	107,853	294,701	298,640	593,341	8,371 60
St. Lawrence	10,000	979,342	737,837	65,445	316			262	134,751	1,045,049	872,904	1,917,953	18,842 30
Chambly	923	41,124	42,977	6,045					9,260	47,169	52,237	99,406	582 84
Ottawa	1,871	43,902	220,403		1,974					43,902	222,377	266,279	2,314 55
Rideau	1,988	64,371	65,550	6,419	99				6,782	70,790	72,431	143,221	1,290 50
St. Peter's	2,204	94,906	89,844							94,906	89,844	184,750	3,794 98
Trent Valley	1,710	34,536	34,797							34,536	34,797	69,333	449 38
Murray	600	105,885	40,992	15,383					13,163	121,268	54,155	175,423	215 40
Total Canadian	20,972	1,547,757	1,420,342	200,292	5,234	157		4,115	271,809	1,752,321	1,697,395	3,449,706	35,861 50
UNITED STATES VESSELS. (Steam and Sail.)													
Welland	1,090	171		73,395	889	350,405	285,072	509	149,665	424,480	435,626	860,106	14,368 83
St. Lawrence	1,086	872	15,963	33,155	1,501	6,699	7,124	32,900	28,186	73,626	52,674	126,300	1,198 31
Chambly	2,062	1,644	1,607	87,115	96		163		110,696	88,759	112,562	201,321	2,530 02
Ottawa	202	3,354	453		15,634	94		307		3,755	16,087	19,842	456 52
Rideau	158	1,692	1,068	1,536	1,284				1,740	3,227	4,682	7,369	130 81
St. Peter's	35	3,718	98		2,549			6,700		10,418	2,647	13,065	261 30
Trent Valley													
Murray	8	45	14	28		7			88	80	97	177	2 00
Total United States	4,650	11,496	19,093	195,228	21,983	357,206	292,359	40,416	290,370	604,345	623,775	1,228,120	18,947 79
(Grand total, Canadian and United States	25,622	1,559,253	1,439,435	395,520	27,187	397,362	292,359	44,531	562,179	2,356,666	2,321,160	4,677,826	54,809 29

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler of Canal Statistics.

APPENDIX A.—Continued.

No. (A) 18.—COMPARATIVE STATEMENT of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation of 1895 and 1896, and the Amount of Tolls collected on the same, including Tolls on Vessels and Passengers.

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.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1895.												
Welland.....	5,328	97,048	12,470	4,126	214,520	263,163	1,565	271,375	233,883	635,712	869,595	138,713 64
St. Lawrence.....	174,771	417,747	12,569	1,102	279	922	43,838	177,000	231,457	596,771	828,228	61,143 66
Chambly	5,942	6,935	236,594	.....	.....	.....	.....	109,556	242,536	116,491	359,027	25,920 67
Ottawa	173	477,242	.....	63,805	.....	.....	.....	.....	173	541,047	541,220	31,959 29
Rideau.....	38,882	12,819	18,193	2,959	.....	.....	1	15,899	57,076	31,677	88,753	5,670 26
St. Peter's.....	3,139	6,410	.....	.....	.....	.....	279	.....	3,418	6,410	9,828	426 63
Trent Valley	21,917	10,349	.....	.....	.....	.....	.....	.....	21,917	10,349	32,266	1,042 08
Murray	4,253	5,926	561	.....	.....	.....	258	326	5,072	6,252	11,324	527 94
Sault Ste. Marie.....	10,419	35,570	5,804	19,185	147,838	344,693	16,344	15,981	180,405	415,432	595,837	.....
Grand total	264,824	1,070,046	286,191	91,177	362,637	608,778	62,285	590,140	975,937	2,360,141	3,336,078	265,413 17
1896.												
Welland.....	10,833	194,279	8,536	6,015	267,773	385,695	4,127	402,729	291,269	988,718	1,279,987	194,969 33
St. Lawrence.....	167,278	653,282	6,213	2,742	257	684	43,419	239,815	217,167	896,523	1,113,690	70,004 24
Chambly	9,680	9,779	221,526	60	.....	.....	.....	103,890	231,206	113,729	344,935	24,130 74
Ottawa	381	459,433	.....	42,232	.....	.....	.....	.....	381	501,665	502,046	30,506 56
Rideau.....	31,370	10,375	16,022	3,290	.....	.....	.....	12,250	47,392	25,915	73,307	5,011 10
St. Peter's.....	15,456	44,525	.....	4,100	.....	.....	1,427	.....	16,883	48,625	65,508	655 08
Trent Valley	16,487	4,658	.....	.....	.....	.....	.....	.....	16,487	4,658	21,145	823 62
Murray	6,170	5,968	739	.....	.....	.....	.....	179	6,909	6,147	13,056	605 04
Sault Ste. Marie	35,698	237,369	6,623	42,080	929,215	3,149,675	68,562	108,177	1,040,098	3,637,301	4,577,399	.....
Grand total	293,353	1,619,668	259,659	100,519	1,197,245	3,536,054	117,535	867,040	1,867,792	6,123,281	7,991,073	326,725 71

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

RICHARD DEVLIN,
Compiler of Canal Statistics.

Department of Railways and Canals

APPENDIX A—Continued.

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1896.

WELLAND CANAL.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	7	56	16	128	5	40	7	56
10	1	10	6	60	2	20		
15	2	30	1	15	5	75		
20	1	20	3	60	4	80		
25	1	25					2	50
30	5	150			1	30		
35	6	210	1	35			3	120
40			2	80				
45			2	90			1	50
50	2	100	1	50				
55					1	55		
60	1	60			1	60	1	60
65	2	130	1	65			1	65
70					1	70		
75	1	75					2	150
80								
85	1	85						
90	1	90	1	90				
95	1	95						
100	1	100	1	100				
110			1	110				
120					2	250	2	240
125								
135	1	135						
140			1	140				
145			1	145			1	145
150			2	300			1	150
160	2	320						
165	1	165						
175					1	175		
180			2	360				
190			2	380				
200	2	400	3	600			1	200
210	1	210			1	210		
220	3	660						
225					1	225		
230			2	460			1	230
245	1	245	1	245				
260	1	260						
265							1	265
270			1	270				
275			2	550			1	275
280			2	560	1	280	1	280
285			2	570			1	285
290							1	290
295	1	295	1	295			1	295
300					1	300	1	300
305	2	610	1	305			1	305
310					1	310	1	310
315	1	315	1	315			3	945
320			2	640	2	640	2	640
325			4	1,300			1	325
330			3	990				
335			4	1,340				
360	1	360			1	360	1	360

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels,
&c.—*Continued.*WELLAND CANAL—*Continued.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
365					1	365		
375							1	375
390							1	390
400							1	400
405	2	810						
415	1	415						
425					1	425		
430					1	430		
435							1	435
440	2	880						
450							1	450
455	1	455	2	910	1	455		
460			1	460				
465	1	465						
470					1	470	1	470
480	1	480	1	480				
485	1	485					1	485
490					1	490		
495					1	495		
500	2	1,000					2	1,000
505							1	505
510	1	510						
515							1	515
520			3	1,560			1	520
525					1	525	1	525
530	1	530						
540					2	1,080	2	1,080
545			1	545				
555							1	555
560	1	560						
570					1	570		
575	1	575						
580							1	580
585			1	585	1	585	1	585
590			1	590	1	590	4	1,770
595							1	595
600	1	600					2	1,200
605					1	605		
615					1	615		
620					1	620		
625					1	625	1	625
635							1	635
640			1	640			1	640
645					1	645		
655					1	655		
660					1	660		
665							1	665
680					1	680	1	680
685			1	685			2	1,370
695							1	695
700					1	700	1	700
707							1	707
710							1	710
719			1	719				
722	1	722						

Department of Railways and Canals.

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels,
&c.—*Continued.*

WELLAND CANAL—*Continued.*

CANADIAN.					United States.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
725								
730							1	730
740			1	740			2	1,480
760					1	760		
769	1	769						
771	1	771						
775								
780							1	780
784					1	784		
787							1	787
790					1	790		
796					1	796		
797					1	797		
800							1	800
802			1	802			1	802
837					2	1,674		
838							1	838
859					1		1	859
870					1		2	1,740
873							1	873
880								
882					1	882		
891							1	891
892	1	892			1	892		
898							1	898
904								
908			1	908				
911					2	1,822		
915					1	915	1	915
917							1	917
918								
928					1	928		
929	1	929			1	929		
940					1	940		
944					1	944		
950					1	950		
960							1	960
962								
968								
977	1	977						
978					1	978		
985								
989	1	989						
994							2	1,988
997					1	997		
1,013					1	1,013		
1,014							1	1,014
1,022					1	1,022		
1,029					1	1,029		
1,030					1	1,030		
1,035	1	1,035						
1,038								
1,040					1	1,040		
1,041			1	1,041				

No. (A) 19.—STATEMENT of the Number and Tonnage of all kinds of Vessels,
&c.—*Concluded.*

WELLAND CANAL—*Concluded.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
1,053					1	1,053	1	1,053
1,054					1	1,054		
1,068					1	1,068		
1,072					1	1,072		
1,075					1	1,075		
1,083					1	1,083		
1,085							1	1,085
1,086								
1,103					1	1,103		
1,111					3	3,333		
1,118					1	1,118		
1,123					1	1,123		
1,168							1	1,168
1,170					1	1,172		
1,172	1	1,172						
1,180							1	1,180
1,182					1	1,182		
1,185								
1,189					1	1,189		
1,203					1	1,203		
1,206					1	1,206		
1,425					1	1,425		
1,441					1	1,441		
1,547					1	1,547		
1,548					1	1,548		
1,550					1	1,550		
1,553					2	3,106		
1,565					1	1,565		
Total ..	75	21,232	90	21,313	102	68,591	98	48,011

Department of Railways and Canals.

APPENDIX A—Continued.

No. (A) 20.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1896.

ST. LAWRENCE CANALS.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	26	208	31	248	5	40		
10	12	120	15	150	2	20		
15	13	195	1	15	5	75		
20	6	120	8	160	1	20		
25	10	250	6	150			1	25
30	11	330	7	210	1	30		
35	3	105	2	70	1	35		
40	10	400	7	280	1	40	1	40
45	3	135	2	90				
50	6	300	13	650	1	50		
55	3	165	7	385			1	55
60	6	360	42	2,520	1	60		
65	1	65	1	65	1	65		
70	1	70	8	560			2	140
75	3	225	3	225			2	150
80	2	160	7	560	1	80		
85	3	255	6	510			5	425
90	1	90	3	270			9	810
95	1	95	12	1,140			47	4,465
100	3	300	27	2,700			87	8,700
105			9	945			14	1,470
110			9	990	1	110	9	990
115			9	1,035	1	115	12	1,380
120	1	120	7	840			6	720
125	1	125	4	500			1	125
130	2	260	4	520				
135			8	1,080				
140	1	140	7	980				
145	3	435	10	1,450				
150			17	2,550				
155	1	155	29	4,495				
160			15	2,400			2	320
165	2	330	13	2,148				
170	1	170	5	850				
175			4	700				
180			6	1,080				
185			3	555				
190	2	380	4	760				
195			2	390				
200	1	200	2	400				
205			1	205			1	205
210							1	210
220			1	220				
230	1	230	5	1,150				
255			1	255				
260	1	260	3	780				
265	1	265	2	530				
270			1	270				
275					1	275		
285							1	285
290	1	290	1	290			1	290
300			4	1,200				
305			6	1,830				
310			3	930				
315			2	630				

No. (A) 20.—STATEMENT of the Number and Tonnage of all kinds of Vessels, &c.—
*Concluded.*ST. LAWRENCE CANALS—*Concluded.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
320			3	960				
325	1	325	5	1,625				
330			2	660				
335	1	335	3	1,005				
340			3	1,020				
345	1	345	2	690			1	345
350			2	700				
360			2	720	1	360		
365			3	1,095				
370			3	1,110				
375			2	750				
390			1	390				
395			3	1,185				
411	1	411						
415			2	830				
433							1	433
436	1	436						
439							1	439
440			2	880				
442			1	442				
450			1	450				
454	1	454						
471	1	471						
473							1	473
475			1	475				
487			1	487				
500	1	500	1	500				
508	1	508						
509	1	509						
516			2	1,032				
518			1	518				
520			1	520				
539			1	539				
541	1	541	1	541				
543			1	543				
575	1	575						
586	1	586	2	1,172				
590			1	590				
593	1	593						
599	1	599						
628			1	628				
639							1	639
678	1	678						
681			1	681				
690	1	690						
715	1	715						
771			1	771				
803			1	803				
912					1	912		
989	1	989						
1,167							1	1,167
Total...	162	17,568	462	68,228	25	2,287	209	24,601

Department of Railways and Canals.

APPENDIX A—Continued.

No. (A) 21.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1896.

RIDEAU, OTTAWA AND CHAMBLY CANALS.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	50	400	164	1,312	5	40	34	272
10	7	70	17	170	5	50		
15	11	165	7	105	7	105		
20	3	60	8	160				
25	10	250	4	100			1	25
30	5	150						
40	6	240	5	200	1	40	1	40
45			2	90				
50	4	200	8	400			2	100
55	3	165	1	55			1	55
60	3	180	5	300				
65							2	130
70			1	70	2	140	3	210
75	1	75	3	225			2	150
80	1	80	5	400			2	160
85	2	170	2	170	1	85	10	850
90			5	450			20	1,800
95	1	95	4	380	1	95	106	10,070
100	2	200	10	1,000			168	16,800
105	1	105	3	315			42	4,410
110			5	550			29	3,190
115			2	230			21	2,415
120	1	120	5	600			9	1,080
125	2	250	4	500				
130			5	650			1	130
135			1	135				
140	1	140	7	980				
145	2	290	12	1,740				
150			17	2,550			1	150
155	1	155	23	3,565				
160			14	2,240				
165	1	165	12	1,980				
170			5	850			1	170
175			2	350				
180			2	360				
185			1	185				
190			1	190				
195			1	195				
200	1	200	1	200				
228	1	228						
245			1	245				
256			1	256				
262	1	262						
324	1	324						
332	1	332						
397	1	397						
691	1	691						
Total . . .	125	6,159	376	24,453	22	555	456	42,207

APPENDIX A.—*Concluded.*

No. (A) 22.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1896.

WELLAND CANAL.

CANADIAN.						UNITED STATES.					
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.
1	250 to 1,172 tons...	31	17,861	1	250 to 1,041 tons...	40	17,800	1	240 to 1,565 tons...	77	67,301
2	200 " 249 " "...	7	1,515	2	200 " 249 " "...	6	1,305	2	200 " 249 " "...	2	435
3	150 " 199 " "...	3	485	3	150 " 199 " "...	6	1,040	3	150 " 199 " "...	1	430
4	100 " 149 " "...	2	235	4	100 " 149 " "...	4	495	4	100 " 149 " "...	1	150
5	50 " 99 " "...	9	635	5	50 " 99 " "...	3	265	5	50 " 99 " "...	3	385
6	Under 50 " "...	23	501	6	Under 50 " "...	31	468	6	Under 50 " "...	5	325
	Total.....	75	21,232		Total.....	90	21,313		Total.....	12	226
										98	48,011

ST. LAWRENCE CANALS.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.
1	250 to 989 tons...	22	11,075	1	250 to 803 tons...	80	31,027	1	250 to 912 tons...	3	1,547
2	200 " 249 " "...	2	430	2	200 " 249 " "...	9	1,975	2	200 " 249 " "...	2	415
3	150 " 199 " "...	6	1,035	3	150 " 199 " "...	98	15,928	3	150 " 199 " "...	2	320
4	100 " 149 " "...	11	1,380	4	100 " 149 " "...	94	11,040	4	100 " 149 " "...	129	13,385
5	50 " 99 " "...	27	1,785	5	50 " 99 " "...	102	6,885	5	50 " 99 " "...	66	6,045
6	Under 50 " "...	94	1,863	6	Under 50 " "...	79	1,373	6	Under 50 " "...	2	65
	Total.....	162	17,568		Total.....	462	68,228		Total.....	209	24,301

[illegible]

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 16th October, 1897.

CANALS

CONSOLIDATED

Sec. 1.

No. 22.—RATES OF TOLLS ON THE CANALS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS.

(O.C., April 18, 1873.)

The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals, and St. Ann's Lock, each way.	Ottawa to St. Johns, each way.	Murray Canal, each way.
<i>Class No. 1.</i>	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Vessel, steam.....per ton.	0 01 $\frac{1}{2}$	0 01 $\frac{1}{2}$	0 02 $\frac{1}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 01 $\frac{1}{2}$	0 00 $\frac{5}{8}$	0 01 $\frac{1}{2}$	0 0 $\frac{3}{4}$
do sail and other	0 02 $\frac{1}{2}$	0 02 $\frac{1}{2}$	0 3 $\frac{1}{2}$	0 01 $\frac{1}{2}$	0 01 $\frac{1}{2}$	0 02 $\frac{1}{2}$	0 01	0 02 $\frac{1}{2}$	0 1 $\frac{1}{2}$
<i>Class No. 2.</i>									
Passengers, 21 years of age and upwards....	0 10	0 10	0 20	0 10	0 05	0 08	0 02 $\frac{1}{2}$	0 09 $\frac{3}{4}$	0 1 $\frac{1}{2}$
Passengers, under 21 years each.....	0 05	0 05	0 10	0 05	0 02	0 04	0 01 $\frac{1}{2}$	0 04 $\frac{1}{2}$	0 0 $\frac{3}{4}$
<i>Class No. 3.</i>									
Bricks, cement and water lime.....	15	0 20	0 20	0 15	0 10	0 07	0 06	0 19 $\frac{3}{4}$	0 1 $\frac{1}{2}$
Clay, lime and sand.....									
Brimstone.....									
Corn.....									
Flour.....									
Iron, railway.....									
do pig.....									
do all other, including steel (O.C., Feb. 1, 1888.).....									
Plaster, gypsum.....									
Salt.....									
Salt meats or fish, in barrels or otherwise....									
Agricultural products, vegetable, not enu- merated.....									
Agricultural products, animal, not enumer- ated.....									
Stone, for cutting.....									
Wheat.....									
<i>Class No. 4.</i>									
All other articles, not enumerated....	0 15	0 20	0 20	0 20	0 10	0 26	0 14	0 29	0 2 $\frac{1}{2}$

Department of Railways and Canals

REVENUE

TARIFF OF TOLLS

OF THE DOMINION OF CANADA, 1896.

TRENT VALLEY CANALS.

(O.C., July 25, 1888.)

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Bobcaygeon.	Tolls Charge- able at Buckhorn.	Tolls Charge- able at Burleigh.	Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Peterborough and Hastings.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
0 00 $\frac{3}{4}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{4}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{4}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{4}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{4}$ 0 01	0 00 $\frac{3}{4}$ 0 00 $\frac{1}{4}$
0 01 0 00 $\frac{1}{2}$	0 01 0 00 $\frac{1}{2}$	0 01 0 00 $\frac{1}{2}$	0 01 0 00 $\frac{1}{2}$	0 04 0 02	0 01 0 00 $\frac{1}{2}$
0 01	0 01	0 01	0 01	04	0 01
0 03	0 03	0 03	0 03	0 12	0 03

RATES OF TOLLS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS.

	Welland Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chamby Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals and St. Ann's Lock, each way.	Ottawa to St. Johns, each way.	Murray Canal, each way.
The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.									
<i>Class No. 5.</i>									
Bark.....	0 20	0 20	0 20	0 15	0 13	0 07	0 06	0 19 $\frac{1}{2}$	0 01 $\frac{1}{2}$
Barrels, empty, each.....	0 02	0 02	0 02	0 02	0 02	0 02	0 01	0 03 $\frac{1}{2}$	0 00 $\frac{1}{2}$
Boat knees, each.....	0 05	0 05	0 05	0 02	0 02	0 02	0 01	0 03 $\frac{1}{2}$	0 00 $\frac{1}{2}$
Floats, per 1,000 lineal feet.....	1 40	1 40	1 40	1 40	1 20	1 05	0 50	2 05	0 17 $\frac{1}{2}$
Firewood, per cord, in vessels.....	0 20	0 20	0 20	0 20	0 10	0 15	0 08	0 23	0 02 $\frac{1}{2}$
do do rafts.....	0 25	0 25	0 25	0 25	0 15	0 19	0 09	0 30 $\frac{1}{2}$	0 03 $\frac{1}{2}$
Hoops.....	0 25	0 25	0 25	0 20	0 15	0 15	0 10	0 30	0 02 $\frac{1}{2}$
Masts and spars, telegraph poles, per ton of 40 cubic feet, in vessels.....	0 15	0 15	0 15	0 05	0 05	0 08	0 07	0 13 $\frac{1}{2}$	0 00 $\frac{1}{2}$
Masts and spars, telegraph poles, per ton of 40 cubic feet, in rafts.....	0 20	0 20	0 20	0 10	0 10	0 15	0 10	0 22 $\frac{1}{2}$	0 01 $\frac{1}{2}$
Railway ties, in vessels, each.....	0 01	0 01	0 01	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 01 $\frac{1}{2}$	0 0 $\frac{1}{2}$
do do rafts, each.....	0 02	0 02	0 02	0 01	0 01	0 02	0 01	0 02 $\frac{1}{2}$	0 00 $\frac{1}{2}$
Sawed stuff, boards, plank, scantling and sawed timber, per M. feet, board measure, in vessels.....	0 30	0 30	0 30	0 15	0 10	0 11 $\frac{1}{2}$	0 06 $\frac{1}{2}$	0 20	0 01 $\frac{1}{2}$
Sawed stuff, boards, plank, scantling and sawed timber, per M. feet, board measure, in rafts.....	0 60	0 60	0 60	0 30	0 20	0 19	0 09	0 36 $\frac{1}{2}$	0 03 $\frac{1}{2}$
Square timber, per M. cubic feet, in vessels.....	3 00	3 00	3 00	1 00	1 00	0 56	0 44	1 69	0 12 $\frac{1}{2}$
do do rafts.....	4 50	4 50	4 50	2 00	2 00	1 12	0 63	3 13	0 25
Wagon stuff, woodware and wood, partly manufactured, per ton of forty cubic feet.....	0 40	0 40	0 40	0 40	0 25	0 30	0 20	0 55	0 05
Shingles, per M.....	0 06	0 06	0 06	0 06	0 04	0 04 $\frac{1}{2}$	0 02 $\frac{1}{2}$	0 08	0 00 $\frac{1}{2}$
Split posts and fence rails, per M., in vessels.....	0 40	0 40	0 40	0 40	0 20	0 23	0 12	0 42	0 05
do do do rafts.....	0 80	0 80	0 80	0 80	0 40	0 38	0 17	0 77	0 10
Saw-logs, each, standard log.....	0 08	0 08	0 08	0 08	0 05	0 06	0 06	0 13	0 01
Staves and headings, barrel, per M.....	0 40	0 40	0 40	0 20	0 15	0 15	0 10	0 30	0 02 $\frac{1}{2}$
do do pipe do.....	1 50	1 50	1 50	1 00	1 00	0 75	0 50	1 75	0 12 $\frac{1}{2}$
do do W. India do.....	0 75	0 75	0 75	0 60	0 25	0 45	0 25	0 65	0 07 $\frac{1}{2}$
do do salt barrel, sawn or cut, per M.....	0 08	0 08	0 08	0 04	0 03	0 03	0 02	0 06	0 00 $\frac{1}{2}$
Traverses, per 100 pieces.....	0 50	0 50	0 50	0 50	0 40	0 38	0 15	0 67 $\frac{1}{2}$	0 06 $\frac{1}{2}$
Hop poles, per 1,000 pieces.....	2 00	2 00	2 00	2 00	1 50	1 50	0 65	2 65	0 25
<i>Special Class.</i>									
Gypsum, crude (per O.C., 28th Oct., 1892)...	0 15	0 05	.....	0 05	West ward.	.....	.....	.....	.....
Coal.....	0 20	0 20	0 20	0 15	0 10	0 08	0 05	0 17 $\frac{1}{2}$	0 01 $\frac{1}{2}$
Stone, unwrought, corded, and not suitable for cutting, per cord.....	0 75	0 75	0 75	0 60	0 37 $\frac{1}{2}$	0 28	0 24	0 77 $\frac{1}{2}$	0 07 $\frac{1}{2}$
Kryolite, iron ore or chemical ore.....	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05
Ice.....	0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 11	0 05

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ON THE CANALS—Continued.

. TRENT VALLEY CANALS.

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH	
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	Peterborough to Hastings, each way.
Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Bobcaygeon.	Tolls Charge- able at Buckhorn.	Tolls Charge- able at Burleigh.	Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Peterborough and Hastings.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	c.
0 01	0 01	0 01	0 01	0 04	0 01
0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 01	0 00 $\frac{1}{4}$
0 00 $\frac{1}{2}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 01	0 00 $\frac{1}{4}$
0 13	0 13	0 13	0 13	0 52	0 13
0 03	0 03	0 03	0 03	0 10	0 03
0 04	0 04	0 04	0 04	0 14	0 04
0 02	0 02	0 02	0 02	0 08	0 02
0 02	0 02	0 02	0 02	0 08	0 02
0 01	0 01	0 01	0 01	0 04	0 01
0 00 $\frac{1}{2}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$
0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 00 $\frac{1}{4}$	0 01	0 00 $\frac{1}{4}$
0 03	0 03	0 03	0 03	0 10	0 03
0 04	0 04	0 04	0 04	0 14	0 04
0 07	0 07	0 07	0 07	0 28	0 07
0 14	0 14	0 14	0 14	0 56	0 14
0 04	0 04	0 04	0 04	0 16	0 04
0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 03	0 00 $\frac{3}{4}$
0 03	0 03	0 03	0 03	0 12	0 03
0 05	35	0 05	0 05	0 20	0 05
0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 03	0 00 $\frac{3}{4}$
0 02	0 02	0 02	0 02	0 08	0 02
0 10	0 10	0 10	0 10	0 40	0 10
0 05 $\frac{1}{2}$	0 05 $\frac{1}{2}$	0 05 $\frac{1}{2}$	0 05 $\frac{1}{2}$	0 22	0 05 $\frac{1}{2}$
0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 02	0 00 $\frac{1}{2}$
0 05	0 05	0 05	0 05	0 20	0 05
0 20	0 20	0 20	0 20	0 80	0 20
Free.	Free.	Free.	Free.	Free.	Free.
0 01	0 01	0 01	0 01	0 04	0 01
0 03 $\frac{1}{4}$	0 03 $\frac{1}{4}$	0 03 $\frac{1}{4}$	0 03 $\frac{1}{4}$	0 14	0 03 $\frac{1}{4}$
0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 03	0 00 $\frac{3}{4}$
Free.	Free.	Free.	Free.	Free.	Free.

St. Peter's Canal.

Sec. 2. On each and every vessel passing through the said canal, two cents per ton on the vessel and one cent per ton on the freight, each way. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 109.

SPECIAL REGULATIONS RELATING TO TOLLS ON SOME OF THE CANALS.

Sec. 3. Coal may pass up all canals, except the Welland Canal, free of toll. O. C. June 6, 1869. Con. O. C. Oct. 26, 1889, sec. 83.

Sec. 4. Logs, lumber or other produce may pass free of toll down the Chippawa Creek, between the Aqueduct and Port Robinson. O. C. May 18, 1863. Con. O. C. Oct. 26, 1889, sec. 84.

Sec. 5. (a.) In view of the dam constructed across the Ottawa River at Carillon whereby the passage of the rapids at that point through the river is rendered difficult and at times impracticable, it appears necessary, owing to the continued difficulty attending passage through the slide built in the dam, that the canal should be used by rafts, and until otherwise ordered, free passage be given to rafts through the Carillon Canal, subject to such regulations as the Department of Railways and Canals may find necessary in the interest of the traffic of the canal to adopt. O. C. July 6, 1888.

Sec. 5. (b.) "Save in cases for which special permission may be given the Grenville Canal is closed to the passage of rafts, or any portion of a raft, or any kind whatever." O. C. June 27, 1890.

Sault Ste. Marie Canal.

Sec. 6. All vessels and freight shall be permitted to pass through the Sault Ste. Marie Canal free of toll upon such vessels and freight, until otherwise ordered.

Sec. 7. (a.) All goods having paid full toll through the whole line of the St. Lawrence Canals, or through the Lachine Canal, Ste. Anne's Lock, or Ottawa and Rideau Canals, shall be allowed to pass free through the Welland Canal; and if tolls have been paid at the Chambly Canal such tolls shall be refunded at Montreal or Kingston Mills; and having paid full tolls through the Welland Canal, they shall be allowed to pass free through the St. Lawrence Canals, or through the Ottawa and Rideau Canals, Ste. Anne's Lock, the Lachine Canal and the Chambly Canal; provided always:—That the articles to be entitled to the above exemptions shall go downwards through the whole length of the canal to Montreal or pass upward from Montreal through the whole length of the St. Lawrence Canals, or the Ottawa and Rideau Canal, to Lake Ontario.

(b.) All articles, goods or merchandise, not enumerated above, shall be charged to class No. 4. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, Sec. 86.

Sec. 8. Goods shipped to any port west of the St. Lawrence Canals, tolls upon which have already been paid for passage through such canals, may be re-shipped from such ports and be passed through the Welland Canal free of tolls, in the same way as if they had been shipped through direct in the first instance; and goods going eastward, having paid Welland Canal tolls, may be transhipped at any port on Lake Ontario, and thereafter pass free through the St. Lawrence Canals, as if they had been shipped through direct in the first instance. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 87.

Sec. 9. Iron ore, kryolite or chemical ore, may pass through one section, or through all the canal sections aforesaid, for 5 cents per ton.

Sec. 10. No let-passes shall be issued to steam tugs or other small vessels for less than 25 cents, as a minimum charge; but such vessels, not carrying freight or passengers, can obtain, on payment of \$30, a season "Let-Pass," which will pass them up and down the canals as often as desired. O. C. April 18, 1873. Con. O. C. Oct. 29, 1889, sec. 86.

Sec. 11. All vessels owned or chartered by persons having contracts for the enlargement or repair of any of the canals, and employed by them in removing earth or carrying materials necessary for the prosecution of such works, shall be entitled to pass through such canals free of toll upon such vessel and cargo. O. C. April 22, 1884. Con. O. C. Oct. 26, 1889, sec. 35.

Sec. 12. Government dredges and scows shall be permitted to pass through the canals free of tolls, but that such dredges and scows shall not be so passed as to interfere with the passage of other vessels of any kind whatever. O. C. May 18, 1891.

HARBOUR DUES.

Sec. 13. Vessels receiving or discharging freight at the premises of the Welland Railway, at Ports Colborne or Dalhousie, are to be free from harbour dues; but all other vessels discharging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of freight so received or discharged, two cents. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889.

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WAY RATES.

Sec. 14. The following way rates are to be levied on vessels and property passing the several subdivisions of the canals :—

Welland Canal.

	Rate.
1. From Port Maitland, Dunnville and Port Colborne to Port Robinson or Allanburg, not passing the lock, each way	1
2. From Chippawa Cut, or any part thereof, to Dunnville, Port Maitland or Port Colborne...	1
3. From Dunnville to Port Colborne	1
4. From Thorold to St. Catharines or Port Dalhousie	1
5. From Maitland, Dunnville, Colborne or Port Robinson to Marshville and intermediate places	1
6. From Marshville or intermediate places to Port Maitland, Dunnville, Port Colborne and Port Robinson	1
7. From Port Robinson to Allanburg or Thorold	1
8. From Port Robinson to St. Catharines or Port Dalhousie	1
9. From St. Catharines to Port Dalhousie	1
10. From Dunnville to Maitland	1
11. From Port Robinson through the Lock and Chippawa Cut	1
12. From Port Colborne to Port Maitland	1
13. From Chippawa Cut through Lock to Port Robinson	1
14. From Colborne, Dunnville, Maitland and Marshville to Thorold	1
15. From Colborne, Dunnville, Maitland and Marshville to St. Catharines	1
16. Through the Chippawa Cut only	1
17. Through the Port Robinson Lock only	1

St. Lawrence Canals.

Sec. 15. The navigation is divided into four sections, viz., Cardinal, Cornwall, Beauharnois and Lachine. Tolls are to be levied on all vessels and property in proportion to the number of sections passed through.

Chambly Canal.

	Rate.
Sec. 16. Vessels and property passing from Sorel to Chambly, to pay	1
Vessels and property passing from Chambly to St. Johns, to pay	1

Ottawa Canals.

Sec. 17. The navigation is divided into three sections, viz., Grenville, Carillon and Ste. Anne's. Tolls are to be levied on all vessels and property in proportion to the number of sections passed through.

Rideau Canal.

Sec. 18. The navigation of this canal is divided into three sections, viz., Ottawa, Smith's Falls and Kingston Mills. Vessels and freight passing one section are to be charged one-third; two sections, two-thirds. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, secs. 77, 78, 79, 80 and 81.

Tay Canal to be part of the Rideau Canal and the following rates of tolls to be levied upon the said Tay Branch of the Rideau Canal system, viz. :—

Perth to Smith's Falls, 1 section, or one-third of Rideau Canal rates, each way.

Perth to Kingston, 2 sections, or two-thirds Rideau Canal rates, each way.

Perth to Ottawa Basin, 2 sections, or two-thirds Rideau Canal rates, each way.

Perth to River Ottawa, 3 sections, full Rideau Canal rates, each way. O. C. Sept. 27, 1890.

General.

Sec. 19. (a.) Any fraction of a ton freight is to be charged one ton, and portions of sections are to be charged as a whole section on all the above canals.

(b.) The passing of saw-logs or other lumber through any of the canals, or sections thereof, shall be at all times governed by the regulations for their management. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 82.

Sec. 20.—STANDARD FOR ESTIMATING WEIGHTS, FOR CANAL TOLLS.

	Tons.		Tons.
2,000 lbs. avoirdupois	1	Stone, 12 cubic feet	1
Per M. is per thousand feet		Stone, 1 cord	7½
Per Mille is per thousand pieces		Whisky, 4 barrels or 215 gallons	1
Green fruit, 9 barrels are	1	Empty barrels, 10	1
Ashes, 3 barrels are	1	Barrel hoops, 10 mille	1
Bark, 4 cords	1	Board and other sawed lumber, 600 feet	
Beef, 7 barrels	1	board measure	1
Biscuits and crackers, 9 barrels	1	Boat knees, 4	1
Bricks, common, 1,000	2	Firewood, 1 cord	3
Butter, 22 kegs or 7 barrels	1	Hop poles, 60 or cubic feet	1
Cattle, 3	1	Shingles, 12 M. or bundles	1
Cement and water lime, 7 barrels	1	Split posts and fence rails, 1 mille	1
Fire-bricks, 1,000	3	Staves and headings, pipe, 1 mille	8
Fish, 7 barrels	1	do do W. India, 1 mille	4
Flour, 9 barrels	1	do do barrel, 1 mille	2½
Gypsum and manganese, 6 barrels	1	do do salt barrel, 1 mille	0½
Horses, 2	1	Saw-logs, standard 1	0½
Lard and tallow, 7 barrels or 22 kegs	1	Square timber, 50 cubic feet	1
Liquors and spirits, 215 gallons	1	Telegraph poles, 10, or 40 cubic feet	1
Liquors, all others, 215 gallons	1	Masts and spars, 40 cubic feet	1
Nuts, 9 barrels	1	Railroad ties, 16, or 50 cubic feet	1
Oysters, 6 barrels	1	All other woodenware, or partly manufac-	
Pork, 7 barrels	1	tured wood, 40 cubic feet as per tariff	1
Salt, 7 barrels	1	Traverses, 40 cubic feet, or 5 pieces	1
Seeds, 9 barrels	1	Floats, 50 lineal feet	1
Sheep, 20	1		

NOTE.—By the Weights and Measures Act, chapter 104 of the Revised Statutes of Canada, section 14, all the following named articles are to be estimated by the cental of 100 lbs.

The weight equivalent to a bushel being as follows:—Wheat, 60 lbs.; Indian corn, 56 lbs.; rye, 56 lbs.; pease, 60 lbs.; barley, 48 lbs.; oats, 34 lbs.; beans, 60 lbs.; clover seed, 60 lbs.; timothy seed, 48 lbs.; buckwheat, 48 lbs.; flax seed, 50 lbs.; blue grass seed, 14 lbs.; hempseed, 44 lbs.; malt, 36 lbs.; castor beans, 40 lbs.; potatoes, turnips, carrots, parsnips, beets and onions, 60 lbs.; bituminous coal, 70 lbs.

TOLLS AT SHEDS AT LACHINE CANAL BASIN.

Sec. 21. The following tolls shall be levied upon property stored at the sheds at the Lachine Canal Basin:—

	Cents.
Wheat and other grain, per week, per bushel	1
Meal do per barrel	4
Pork, beef, butter and lard do	5
Muscovado sugar do per hhd., 10 cents; per bri.	5
Liquors do per pipe, 15 cents; per pun	12
do do per hhd., 10 cents; per qr. cask	7
Iron (bars) do per ton	24
Iron, pig do	12
Salt, except at the St. Ga-	
briel sheds do per 100 minots	26
Salt at the St. Gabriel	
sheds, Montreal, after	
the first 48 hours do per bag	½
Bales, crates, cases, &c. do per ton weight or measurement	24
Coals do per chaldron	12

Sec 22. (a.) No charge shall be made for property stored in the sheds of the Lachine Canal Basin for the first forty-eight hours, after which period, except in the case of flour, the foregoing rate of storage for the use of the sheds are to be raised, levied and collected.

(b.) Articles unenumerated are to be charged according to the above rates as nearly as the same can be computed.

(c.) All property stored in the sheds remaining after the first forty-eight hours will be liable to one week's storage, although it should only have been stored for a portion of the same, and so on for each succeeding week.

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(d.) The labour of receiving property into the sheds and delivering the same shall be at the expense of and be furnished by the owners of the property or their agents.

(e.) All property stored in these sheds shall be at the risk of the proprietor from damage by fire or otherwise.

(f.) All dues for storage shall be paid before the removal of the property. O. C. August 21, 1846, October 28, 1846. Con. O. C. Oct. 26, 1889, secs. 90 and 91.

Flour.

Sec. 23. (a.) Flour shall be allowed to remain in the sheds for two whole days free of charge.

(b.) If kept there beyond two days or 48 hours, such flour shall be liable to a charge of one cent per day per barrel for the first four days after the expiration of the 48 hours of the exemption.

(c.) Should the flour be kept in the sheds beyond four days at one cent per day per barrel, it shall be liable to pay two cents per day per barrel for every day subsequent to the expiration of such four days.

(d.) Any part of a day shall be considered as one day. O. C. May 31, 1856. Con. O. C. Oct. 26, 1889, sec. 92.

WHARFAGE DUES ON COAL FOR LOCAL CONSUMPTION IN MONTREAL.

Sec. 24. Coal for local consumption in Montreal, landed on canal property between Montreal Harbour and Côte St. Paul, from vessels other than sea-going, and entering the Lachine Canal from Montreal Harbour, shall be charged wharfage dues at the rate of five cents a ton.

Coal screenings shall be charged 3 cents a ton. Con. O. C. Oct. 26, 1889, sec. 93. O. C. May 18, 1892.

CHARGES FOR WHARFAGE ON FIREWOOD ON WHARFS AND BANKS OF LACHINE CANAL.

Sec. 25. The following rates of tolls shall be collected as herein mentioned, that is to say:—

(a.) Firewood landed on wharfs or banks of the Lachine Canal, or in boats, barges or other craft occupying any of the basins between Wellington Street Bridge and Lock No. 3, four cents per cord, and for every day the wood is allowed to remain in either the canal or basin, or on the wharfs or banks after the first five days, an additional charge of four cents per cord. O. C. August 7, 1860. Con. O. C. Oct. 26, 1889, sec. 94.

(b.) The clause next preceding shall not only apply to the rates of toll to be collected on firewood on wharves at Lachine and the Lachine Canal and basin, but are also extended and made applicable to the banks and grounds at Côte St. Paul and at Lachine. O. C. Jan. 27, 1862. Con. O. C. 1889, sec. 94.

CANAL BASINS IN MONTREAL PART OF MONTREAL HARBOUR.

Sec. 26. Whereas under existing regulations for the collection of canal tolls, eastern bound vessels having paid the charges one way in full through the Welland Canal are chargeable One Section Canal Toll if re-entering the Lachine Canal;

And whereas vessels loaded with grain destined for the Montreal Harbour frequently unload only part of their cargoes on board sea-going vessels in the harbour, and re-enter the Lachine Canal for the purpose of unloading the balance of their cargoes either in elevators or mills located along the canal basins;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, in so far only as regards the collection of tolls on the class of vessels above referred to, which re-enter that portion of the canal for the purpose of unloading the balance of their cargoes, but that the same shall not apply any further, as in the event of vessels returning to the harbour to take cargo, in which case the usual toll shall be charged against them on passing out of the canal a second time into the harbour. O. C. Aug. 8, 1878. Con. O. C. Oct. 26, 1889, sec. 95.

PHOSPHATES.

Sec. 27. Whereas vessels laden with grain for delivery in Montreal Harbour frequently carry also deck loads of phosphates, and being compelled to proceed at once to the harbour for the discharge of the grain, they pay tolls through to that point, subsequently re-entering the Lachine Canal for the storage of the phosphates, and in accordance with the existing regulations, paying canal dues a second time for such re-entry;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, for the purpose of the unloading of phosphates carried by vessels in addition to their grain cargoes as described in this section; it being, however, provided that in the event of their returning to the harbour to take cargo, the usual tolls shall be charged against such vessels on their passing out of the canal a second time. O. C. July 12, 1881. Con. O. C. Oct. 26, 1889, sec. 96.

WHARFAGE DUES IN ALL BASINS OF THE LACHINE CANAL ON SEA-GOING VESSELS.

Sec. 28. The Montreal Harbour Commissioners shall be allowed to retain the right of levying dues in respect of the old lower basin of the Lachine Canal, but the Government shall retain full control of the new works and basin of said canal and of the revenue that may be derived from their use.

All property delivered or received by sea-going vessels in the Lachine Canal basins at Montreal (except the old lower basin) shall be charged wharfage dues as follows:—

All goods, wares and merchandise not elsewhere specified.....	25 cents per ton.
Hay, straw, pig and scrap iron, pot and pearl ashes.....	20 do
Apples, crates and their contents, flour and meal, fish, meats, pitch, potatoes, tar, horses, neat cattle, sheep and swine.....	15 do
Ballast, clay, fire-bricks, gypsum, lime, marble, phosphate, sand, salt..	10 do
Coal and coke, grain and seeds of all kinds.....	7½ do
Special—Bricks, 10 cents per 1,000; cordwood, 5 cents per cord; lumber, 10 cents per 1,000 feet, board measure.	
Bullion specie	Free.
Coal screenings.....	3 do

Each entry shall pay not less than 5 cents.

All property landed on the canal wharfs for re-shipment, or transhipped in canal waters, shall pay one wharfage only.

Lumber upon which tolls have been paid for passage down the Lachine Canal, and which is re-shipped from the wharfs or vessels into sea-going vessels, shall pay wharfage dues equal to one section of canal tolls, viz., 3½ cents per 1,000 feet board measure. O.C. Jan. 26, 1883. Con. O.C. Oct. 26, 1889, secs. 98, 99, 100 and 101. O.C. May 18, 1892.

Sec. 29.—Standard for Estimating Weights.

Ashes, pot or pearl.....	3 brls. to 1 ton.
Apples, flour, meal, potatoes.....	9 do
Fish, meat, pitch, tar.....	7 do
Horses.....	2 do
Neat cattle.....	3 do
Sheep.....	15 do
Swine.....	10 do

O.C. April 1, 1881. Con. Oct. 26, 1889, sec. 102.

TOLLS ON FLOATED TIMBER, ETC., ENTERING THE BASIN AT LACHINE.

Sec. 30. The following rates of tolls shall be collected on floated timber, lumber and firewood entering the basin at Lachine and Lachine Canal:—

Kinds of Timber.	For receiving Timber, &c., to include use of Basin and Wharf for one Month.	For each succeeding month during the Season of Navigation.	For Wintering in Basin or on Wharf.
	Cents.	Cents.	Cents.
Timber, square or round, of all kinds, above 12 x 12, per M cubic feet.....	25	20	35
Timber, round or flatted, of all kinds, under 12 x 12, per M lineal feet.....	20	15	30
Planks and boards to include all kinds of sawed lumber in rafts, per M feet, board measure	3	2	3
Saw-logs, 12 feet long, if longer in same proportion per log.....	1		2
Floats, per 100.....	10	5	10
Traverses, per 100.....	10	5	10
Fence posts and rails, per M.....	10	5	10
Staves, barrel, per M.....	8	4	8
do pipe per M.....	8	4	8
do West India, per M.....	8	4	8
Firewood on bank of canal between Lock No. 3 and Lock No. 5, and also on wharfs in canal basin at Lachine.....	3	3	3

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Note.

- Sec. 31. (a.) No allowance shall be made for fractional parts of a month or winter season.
 (b.) The firewood shall be corded across the bank while being delivered from the boat in such manner and at such points as the superintending engineer may direct.
 (c.) The rates on timber to take effect upon the completion of the booms in Lachine Canal. O.C. June 8, 1860. Con. O.C. Oct. 26, 1889, secs. 103 104.

CHARGES ON VESSELS WINTERING IN LACHINE CANAL.

Sec. 32. The following rates per ton shall be charged for wintering vessels in the Lachine Canal, viz.: For each boat, barge, scow or other vessels of ten tons measurement or under, seventy cents per vessel for the entire winter, and every ten tons above the first ten, an additional rate of eight cents. O.C. Aug. 22, 1879. Con. O.C. Oct. 26, 1889, sec. 97.

CHARGES FOR WINTERING VESSELS IN RIDEAU CANAL.

Sec. 33. The winterage dues for vessels wintering in the canal basin, at Ottawa, or other points along the line of the Rideau Canal, shall be as follows:—

In canal basin, Ottawa, steamers per season	\$ 8 00
do do barges do	4 00
Inside locks do steamers do	50 00
do other stations do do	15 00

If the Minister of Railways and Canals deems it advisable, he is authorized to take security from parties wintering their vessels in locks against damage to Government property by fire. O.C. March, 19, 1887. Con. O.C. Oct. 26, 1889, sec. 105.

CHARGES FOR WINTERING VESSELS IN THE OTTAWA RIVER CANALS AND LOCKS.

Sec. 34. The charge for vessels wintering in the Ottawa River canals and locks, and the same is hereby prescribed accordingly, namely:—

In Carillon Canal, steamers per season	\$ 8 00
barges do	4 00
Grenville Canal, steamers do	8 00
barges do	4 00
Inside Locks, Ste. Anne, Carillon and Grenville Canals, steamers per season	25 00
Inside Locks, Culbute Canal, per season	15 00

Such security against damage by fire to be taken by way of bond as, in the opinion of the Minister of Railways and Canals, may seem desirable. O.C. Oct 14, 1892.

Sec. 35. No charges to be made for vessels wintering outside the locks of any government canal. O.C. Dec. 12, 1889.

CHARGES FOR REPAIRING VESSELS ON THE BANKS OF CANALS.

Sec. 36. (a.) Persons using the banks of the Lachine Canal as a site for the repair of their vessels shall be subject to a charge of four dollars, payable in advance, for each vessel; the period during which such site may be occupied under any one payment being limited to six months, and permission for repairing being first obtained from the proper officer, in conformity with the existing canal regulations.

(b.) In the event of failure to remove vessels so occupying the banks at the expiration of the period named, no fresh permits having been obtained, such vessels may be sold under the 16th section of the canal regulations. O.C. March 5, 1880. Con. O.C. Oct. 26, 1889, sec. 106.

Sec. 37. Rules with respect to the repairing of vessels on the banks of the Lachine Canal, the Beauharnois and the Chambly:—

(a.) Repairs shall only be executed at such points as may be indicated and approved by the superintending engineer.

(b.) For each vessel hauled up or beached for repairs, a charge of one dollar, over and above all other charges, shall be made, carrying the privilege of remaining one month, a further sum of one dollar being charged for each additional month, or fraction of a month, the vessel may remain.

(c.) In cases, however, where a vessel hauled up for repairs upon the canal bank remains there throughout the winter, a charge of four dollars only shall be made (in addition to the ordinary winterage dues), the period covered being from the 1st of November to the 1st of June, inclusive.

(d.) Any vessel remaining on the canal bank after having wintered thereon shall be charged at the rate of one dollar a month or fraction of a month of her subsequent stay.

(e.) Any vessel remaining more than one year on the bank of the canal shall for such time as she may remain in excess of that period pay at the rate of two dollars a month or fraction of a month throughout the whole year.

(f.) All charges shall be payable at the collector's office in advance on the first day of each month.

(g.) These rules shall be understood as applying to all cases where the canal bank is used in any manner for the repairs of vessels, whether such vessels are actually hauled up or not. O. C. August 6, 1881. Con. O. C. Oct. 26, 1889, sec. 107.

DRY DOCK CHARGES.

Trent Valley Canal.

Sec. 38. The following tolls and dues shall be charged for the use of the dry dock at Bobcaygeon, and of any of the locks on the Trent Valley Canal, during the winter or other shorter period:—

For Vessels.	Wintering.	Per day.	Per week.
Over 15 tons	\$30 00	\$4 00	\$12 00
Fifteen tons and under	20 00	3 00	10 00

(O. C. Oct. 31, 1890.)

Rideau Canal.

Sec. 39. The following tariff of tolls and regulations shall be, and the same are hereby established for the use of the dry dock on the Rideau Canal at Ottawa:—

(1) Steamers entering dock	\$ 8 00
Each day or portion of a day after day of entrance	2 50
(2) Barges entering dock	5 00
Each day or portion of a day after day of entrance	2 50
(3) Steam yachts or launches	5 00
Each day or portion of a day after day of entrance	2 50
(4) Boats wintering in the dry dock from the close to the opening of navigation	50 00
For every day such boat remains in the dock after the opening of navigation	8 00
(5) No vessel of any class shall be in the dock over six days after notice is given in writing by the lockmaster that the dock is required for another vessel unless a satisfactory agreement between all parties interested is arrived at.	

(6) All entrance and discharge of vessels are covered by entrance fee.

(7) All drying off of vessels of all classes in the locks at Ottawa or Hartwell's during the season of navigation is prohibited unless for special reasons.

The owners of vessels of all classes to render the required assistance to open and close the gate under the supervision of the superintending engineer.

Vessel owners to supply all blocks, &c., to shove their boats up to make the necessary repairs, and all refuse to be properly cleared out to the entire satisfaction of the lockmaster before leaving the dock.

(O. C. Dec. 28, 1893.)

Sec. 40. The use of horses for towage purposes between the lower entrance of the Cornwall Canal and lock No. 20, be prohibited during the works of enlargement of that portion of the Cornwall Canal.

(O. C. Aug. 20, 1890.)

Sec. 41. As the prohibition of the use of horses for towing purposes, between the lower entrance of the Cornwall Canal and Lock No. 20 during the progress of the works of canal enlargement, has entailed the use of tugs and consequently expenses to the parties concerned, that all tugs, used solely for the purposes of towing on the section in question, be permitted to pass free of toll, up and down the canal between the lower entrance of the canal and lock No. 20, until the completion of the enlargement of the works on that section. (O. C. Sept. 27, 1890.)

SPECIAL RATES FOR SEASON OF 1896 ONLY.

Sec. 42. For season of 1896 the canal tolls for the passage of the following food products:—Wheat, indian corn, barley, pease, rye, oats, flax seed and buckwheat, for passage eastward through the Welland Canal be ten cents per ton; and for passage eastward through the St. Lawrence Canals only ten cents per ton; payment of the said tolls of ten cents per ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals. O. C. April 23rd, 1896.

Sec. 43. That for the current season of navigation of 1896, only in the case of steamers specially chartered for the conveyance of excursion parties going and returning the same day, a reduction amounting to one-half of the usual passenger tolls, be allowed for passage through the government canals. O. C. April 23rd, 1896.

Department of Railways and Canals.

PART VI

RAILWAY STATISTICS

Department of Railways and Canals.

RAILWAY STATISTICS

OF THE

DOMINION OF CANADA

For the year ended 30th June, 1897

Compiled by Mr. Thomas Ridout, C.E., from sworn Returns furnished by the several Railway Companies.

COLLINGWOOD SCHREIBER,

Deputy Minister and Chief Engineer of Railways and Canals.

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

Year.	Miles in Operation.	Year.	Miles in Operation.
1835.....	0	1867.....	2,278
1836.....	16	1868.....	2,278
1837.....	16	1869.....	2,524
1838.....	16	1870.....	2,617
1839.....	16	1871.....	2,695
1840.....	16	1872.....	2,899
1841.....	16	1873.....	3,613
1842.....	16	1874.....	3,832
1843.....	16	1875.....	4,331
1844.....	16	1876.....	4,804
1845.....	16	1877.....	5,218
1846.....	16	1878.....	5,782
1847.....	54	1879.....	6,126
1848.....	54	1880.....	6,858
1849.....	54	1881.....	7,194
1850.....	66	1882.....	7,331
1851.....	159	1883.....	8,697
1852.....	205	1884.....	9,577
1853.....	506	1885.....	10,273
1854.....	764	1886.....	10,773
1855.....	877	1887.....	11,793
1856.....	1,414	1888.....	12,184
1857.....	1,444	1889.....	12,585
1858.....	1,863	1890.....	13,151
1859.....	1,994	1891.....	13,838
1860.....	2,065	1892.....	14,564
1861.....	2,146	1893.....	15,005
1862.....	2,189	1894.....	15,627
1863.....	2,189	1895.....	15,977
1864.....	2,189	1896.....	16,270
1865.....	2,240	1897.....	16,530
1866.....	2,278		

Summary Statement for the Year ended 30th June, 1897 :—

Miles of railway completed (track laid).....	16,687
do sidings	2,218
do iron rails on main line	210
do steel do	16,477
do steel double track.....	550
Capital paid including the four following items	\$ 921,858,232
Government (Dominion and Provincial) bonuses paid	\$ 159,241,584
do do loans paid.....	\$ 21,569,149
do (Provincial only) subscription to shares paid.....	\$ 300,000
Municipal aid paid	\$ 15,610,868
Miles in operation.....	16,550
Earnings	\$ 52,333,276
Working expenses	\$ 35,168,665
Net earnings.....	\$ 17,184,611
Passengers carried.....	16,171,338
Freight carried (tons).....	25,300,331
Train mileage	45,780,851
Passengers killed	7
Number of elevators.....	93
do guarded level crossings—public roads.....	167
do unguarded do do	11,239
do overhead bridges.....	421
do level crossings of other railways.....	230
do junctions with other railways.....	327
do do branch lines	219
do engines owned.....	2,006
do do hired	90
do sleeper and parlour cars owned.....	189
do do hired.....	37
do first class cars owned.....	1,047
do do hired	38
do second class and immigrant cars owned	684
do do do hired	4
do baggage and express cars owned.....	663
do do hired.....	11
do cattle and box freight cars owned.....	*34,939
do do hired	2,532
do platform cars owned.....	15,149
do do hired.....	203
do coal and dump cars owned.....	4,931
do do hired.....	0

* Comprising 33,585 box cars, 300 refrigerator cars, 942 conductors vans and 112 tool cars.

Department of Railways and Canals.

NOMINAL Capital Paid, up to 30th June, 1897.

	Miles constructed.	Amount.	Per Mile.	Remarks
		\$ cts.	\$ cts.	
Ordinary Share Capital	16,687	260,376,516 63	15,603 55	Equal to an aver- age of \$336.51 per mile on the
Preference do	16,687	107,234,531 06	6,426 23	
Bonded debt.....	16,687	348,834,085 68	20,904 54	
Aid from Dominion-Government	16,687	149,939,386 24	8,985 40	
do Ontario do	6,626	7,119,065 63	1,074 41	
do Quebec do	3,293	15,409,440 01	4,679 45	
do New Brunswick Government	1,408	4,462,670 71	3,169 51	
do Nova Scotia do	929	1,517,108 53	1,633 05	
do Prince Edward Island Government.....	210	.....	.....
do Manitoba do	1,570	2,625,561 77	1,672 33	
do British Columbia do	879	37,500 00	42 66	
do North-west Territories do	1,772	.....	.....
do Municipalities in Ontario.....	6,626	11,890,364 37	1,794 50	
do do Quebec	3,293	2,569,218 62	780 20	
do do New Brunswick	1,408	336,500 00	238 99	
do do Nova Scotia.....	929	181,685 00	195 57	
do do Prince Edward Island	210	.....	.....
do do Manitoba	1,570	595,600 00	379 36	
do do British Columbia	879	37,500 00	42 66	
do do North-west Territories	1,772	.....	.....
Capital from other sources.....	16,687	8,691,497 74	520 85	
Total paid Capital	16,687	921,858,231 99	55,244 10	

GOVERNMENT and Municipal Loans, Bonuses, &c., promised to Railways completed and under constru
up to 30th June, 1897 :—

Dominion Government.....	\$ 155,627,345 74
Ontario do	7,357,116 63
Quebec do	16,672,870 38
New Brunswick Government	4,500,590 71
Nova Scotia do	2,280,116 53
Manitoba do	2,626,611 77
British Columbia do	37,500 00
Municipalities in Ontario.....	12,420,753 78
do Quebec.....	4,359,074 00
do New Brunswick.....	356,500 00
do Nova Scotia.....	261,685 00
do Manitoba	595,600 00
do British Columbia	37,500 00
do North-west Territories.....	.....
Total.....	\$ 207,133,264 54

FATAL ACCIDENTS for Year ended 30th June, 1897.

	Passengers killed.	Employees killed.	Others killed.	Total killed.
Falling from cars or engines.....	3	24	12	39
Getting on or off trains in motion.....	3	3	13	19
At work making up trains.....		3		3
Putting heads and arms out of windows.....				
Coupling cars.....		6		6
Collisions and derailments.....	1	11		12
Striking bridges.....				
Walking or lying on track.....		12	82	94
Explosions.....		17	23	40
Other causes.....				
Total killed.....	7	76	130	213

LAND GRANTS made by Governments to Railways completed and under construction up to 30th June, 1897.

Name of Railway.	Government.	Acres granted.	Acres sold.	Amount realized.
Alberta Railway and Coal Co.—				\$ cts.
Dunmore to Lethbridge.....	Dominion.....	700,800	834,048	1,101,733
Lethbridge to International Boundary..	do.....	413,568		
Calgary and Edmonton.....	do.....	2,176,000	1,481,046	*
Canadian Pacific.....	do.....	26,611,520	3,658,366	11,918,196
do.....	do.....		†6,793,014	10,189,521
do.....	do.....	Town sites (other than landgrants) net proceeds		1,396,265
Great North-west Central.....	do.....	320,000	644,927	735,703
Manitoba and North-western.....	do.....	2,918,000		
Saskatchewan and Western.....	do.....	99,008		
Manitoba and South-western Colonization...	do.....	1,396,800		
Manitoba and Southeastern.....	do.....	627,200	259,719	1,174,607
Qu'Appelle Long Lake and Saskatchewan..	do.....	1,625,344	128,000 998,230	121,600 *
Winnipeg Great Northern.....	do.....	8,480,000		
Lake Manitoba Railway and Canal Co.....	do.....	800,000		
Yarmouth and Annapolis.....	Nova Scotia.....	150,000		
Columbia and Kootenay.....	British Columbia...	200,000	Town sites..	95,697
Esquimalt and Nanaimo.....	do.....	1,900,000	258,820	810,011
Nelson and Fort Sheppard.....	do.....	614,400		
Kaslo and Slocan.....	do.....	198,240	161	2,339

† Sold to the Dominion Government at \$1.50 per acre.

* Again after efforts to obtain a statement of the amounts realized from the sale of these lands, the companies have failed to give the information—the return therefore in this respect is incomplete.

Department of Railways and Canals.

TABLE showing Location of the Railways of the Dominion of Canada, 30th June, 1897.

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Alberta Railway and Coal Co ...	From Lethbridge in District of Alberta, N.W.T., to Coutts, on International boundary, 3' gauge.		64·62
	The portion from Dumnore to Lethbridge 109½ miles was changed to 4'-8½" gauge and leased to Can. Pac. Ry., 29th Nov., 1893.		
Albert Southern	Harvey Branch Junction to Alma, N.B.		16·00
Baie des Chaleurs	Metapedia Station on C.P.R. to Caplin.		80·00
Bay of Quinté Railway and Navigation Co.	Deseronto, on Bay of Quinté, Lake Ontario to Deseronto Junction, Grand Trunk Railway		4·00
Berlin and Waterloo (electric) ...	Berlin to Waterloo		3·00
Buctouche and Moncton	Moncton, on Intercolonial Railway, to Buctouche, N.B.		32·00
Brockville, Westport and Sault Ste. Marie	Brockville to Westport, Ont		45·00
Calgary and Edmonton	Calgary to Edmonton.	190·97	
	do McLeod, District of Alberta	104·10	295·07
Canada Atlantic	City of Ottawa to Junction with Grand Trunk at Lacolle. Crosses the St. Lawrence at Coteau by bridge. Connects with Grand Trunk Railway at Coteau and Lacolle.		138·00
Central Counties	From Glen Robertson, on Canada Atlantic, to Hawkesbury, Ont.	21·00	
	South India, on Canada Atlantic, to Rockland.	17·00	38·00
Canada Southern	Main Line—Windsor, Ont., to Suspension Bridge.	226·18	
	Amherstburg Branch—Essex Centre to Amherstburg.	16·83	
	St. Clair Branch—St. Clair Junction to Courtright.	62·63	
	Fort Erie Branch—Fort Erie to Welland Junction.	17·50	
	Erie and Niagara Branch—Old Fort Erie to Niagara.	30·60	
	Oil Springs Branch—Oil Springs to Oil City.	5·50	
Leased	Sarnia, Chatham and Erie—Oil City to Petrolia.	7·00	
do	Leamington and St. Clair—Comber to Leamington ..	15·95	382·19
Canada Eastern.	Late Northern and Western of New Brunswick—Gibson, opposite City of Fredericton to Chatham Junction, I.C.R.	107·00	
	Chatham Junction to Chatham and Logieville via Nelson	20·00	
	Blackville to Indiantown	9·00	136·00
Canadian Pacific:			
Owned	Main Line—Callander to Vancouver.	2,560·90	
(Canada Central)	do Ottawa to Callander	223·60	
(Que., Mont., Ottawa & Occid.) ..	do Montreal to Ottawa	120·30	
(do North Shore)	do Quebec to St. Martin's Junction.	159·80	
	Branches—Piles Junction to Grand Piles	26·90	
	do Berthier Junction to Berthier	2·00	
	do Joliette Junction to St. Felix	16·80	
	do Ste. Thérèse Junction to St. Jérôme.	13·60	
	do do to St. Eustache.	6·00	
	do St. Lin Junction to St. Lin.	15·00	
	do Buckingham to Buckingham Village.	4·20	
	do Hull to Aylmer.	7·50	
Brockville & Ottawa Railway	do Carleton Jct. to Brockville.	45·00	
	do Sudbury to Sault Ste. Marie.	182·50	
	do Sudbury to Copper Mines	5·60	
	do Winnipeg Junction to Emerson.	64·80	
	do Winnipeg Junction to Manitou	101·10	
	do Rosenfeldt to Gretna	14·00	
	do Winnipeg to West Selkirk	22·50	
	do Air Line Junction to Stonewall.	18·20	
	do Kemnay to Estevan.	156·20	
	do Glenboro' to Souris.	45·20	
	do Deloraine to Napinka.	18·10	

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Canadian Pacific— <i>Continued.</i>	Branches—Menteith Junction to Reston	31·50	
	do North Portal to Pasqua	160·50	
	do New Westminster Junction to New Westminster	8·20	
Lake Temiscamingue Colonization	do Mattawa to Kippewa	45·80	
	do Mission Junction to Mission	10·10	
	do Revelstoke to Arrow Head	27·80	
	do Vancouver to Coal Harbour	1·20	
	do Three Forks to Sandon	4·20	
	Total mileage owned.....	4,119·10	
Leased Lines	Atlantic and North-west (in Canada)— South end Lachine Bridge to Maine boundary, Que. 182·50		
	Renfrew to Eganville, Ont. 22·50	205·00	
	St. Lawrence and Ottawa— Ottawa to Prescott, Ont. 51·80		
	Chaudière Junction to Sussex St., Ottawa. 6·60	58·40	
	Ontario and Quebec— Mile End Junction to South End Lachine Bridge	9·10	
	Montreal, Windsor St., to Toronto	339·00	
	London to Windsor	112·50	
	Toronto Junction to Strachan Avenue. 3·20		
	Leaside Junction to Union Station, Toronto 5·20	469·00	
	Credit Valley— Toronto Junction to St. Thomas	116·10	
	Streetsville Junction to Melville Junction. 31·70		
	Cataract to Elora	27·30	175·10
	West Ontario Pacific—London to Woodstock	26·60	
	Toronto, Grey and Bruce— Toronto Junction to Owen Sound	116·90	
	Orangeville Junction to Teeswater	69·40	
	Glenannan to Wingham	5·00	191·30
	Guelph Junction— Guelph Junction on Credit Valley Ry. to Guelph ..	15·00	
	Montreal and Western— St. Jérôme to Labelle	70·00	
	Montreal and Lake Maskinongé— St. Félix to St. Gabriel de Brandon	12·90	
	Montreal and Ottawa— Vaudreuil to Alfred	45·5	
	Rigaud to Pt. Fortune	7·3	52·8
	New Brunswick System (in Canada)— Vanceboro' to McAdam Junction	6·30	
	McAdam Junction to St. John	83·80	
	Fairville to Carleton	4·00	
	Fredericton Junction to Fredericton	22·10	
	McAdam Junction to St. Stephen	33·90	
	Watt do St. Andrew's	27·50	
	McAdam do Woodstock	51·80	
	Debec do Maine boundary	5·00	
	Woodstock to Maine boundary	59·40	
	Newbury Junction to Fredericton	58·40	
	Aroostock Junction to Edmundston	57·20	409·40

TABLE showing Location of Railways, &c.—Continued.

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TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Central Ontario.....	From Picton, in Prince Edward County, Ont., to Coe Hill Iron Mines, Wollaston, County of Hastings; connects with Grand Trunk at Trenton, Midland Railway, 2 miles west of Stirling, and with Ontario and Quebec, in Township of Rawdon.....		104·00
Central Railway of New Brunswick.....	From Norton Station, on the Intercolonial Railway, to Chipman.....	45·00	
	From Hampton to Quaco (formerly St. Martin's and Upham Railway).....	30·00	75·66
Coast Line, Nova Scotia.....	Yarmouth to Lockeport, 98 miles, of which 28·25 miles have rails laid.....		28·25
Cumberland Railway and Coal Company (formerly Spring Hill and Parrsboro').....	Spring Hill Junction, Intercolonial Railway, to Spring Hill Coal Mines, N.S., and Parrsboro', on the Bay of Fundy.....	32·00	
	Spring Hill and Oxford Branch, from Spring Hill Mines to Oxford Village on the Oxford and New Glasgow Branch, I.C.R.....	14·00	46·00
Dominion Atlantic, comprising Windsor and Annapolis, Yarmouth and Annapolis and Cornwallis Valley and lease of Windsor Branch of Intercolonial.....	Windsor to Annapolis, N.S.....	84·00	
	Annapolis to Yarmouth.....	87·00	
	Branches—		
	Wilmot to Forbrook.....	3·50	
	From Kentville to Kingsport, on Basin of Minas (formerly Cornwallis Valley Railway).....	14·00	
	Windsor Branch of I.C.R.—Windsor to Windsor Junction, Intercolonial Railway, 14 miles from Halifax.....	32·00	220·50
Drummond County.....	Ste. Rosalie, Que., junction with Grand Trunk Railway, to St. Leonard, thence to Moose Park towards Chaudière.....	72·97	
	St. Leonard to Nicolet and Ball's Wharf, on the St. Lawrence.....	17·06	
	Mitchell to Burrill's Mill.....	50	90·53
Elgin and Havelock.....	From Elgin, County of Albert, N.B., to Petitcodiac Junction with Intercolonial Railway; thence to Havelock in County of King's.....		27·00
Erie and Huron.....	Rondeau, Lake Erie, Ont., to Sarnia, passing through the town of Chatham, Ont., connects with Canada Southern and Grand Trunk and Lake Erie and Detroit River Railways.....		76·75
Esquimalt and Nanaimo.....	Victoria to Wellington, Island of Vancouver.....		78·00
Fredericton and St. Mary's Railway Bridge.....	Over the St. John River, connecting the Fredericton Railway, at Fredericton, with the New Brunswick Railway and Canada Eastern Railway at St. Mary's.....		1·33
Grand Trunk (owned)—			
Main Line.....	From Point Edward to Point Lévis and Boundary Line, Vermont.....	719·33	
	From Niagara Falls to Windsor.....	229·32	948·65
Branches..	Connections at Toronto with G. W. and N., and N.W. Montreal to Dorval.....	4·75	10·12

Department of Railways and Canals.

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Grand Trunk— Branches— <i>Con</i>	Sarina Extension—Point Edward to Sarina	3 13	
	Montreal leading to Wharfs	0 83	
	Arthabaska to Doucet's Landing, (Three Rivers Branch)	35 34	
	Kingston—Main Line to Kingston City	2 25	
	Waterloo and Berlin to Galt	14 85	
	St. Mary's to London.	22 00	
	St. Lambert to Boundary Line, N. Y., and St. Isidore to Province Line	65 50	
	Blackwell to St. Clair Tunnel	5 00	
	Port Dover to Warton, Durham and Port Rowan	189 75	
	Brosseaus to Dundee and Valleyfield	81 14	
	Jacques Cartier to Canadian Pacific Junction	6 54	
	Waterloo to Elmira	10 17	
	Belleville to Midland	163 96	
	Lindsay to Scarboro' Junction	60 35	
	do Haliburton	54 20	
	Whitby to Manilla	33 73	
	Lakefield Junction to Lakefield	11 66	
	North Hastings Junction to Eldorado	22 21	
	Blackwater to Coboconk	36 35	
	Porth Hope to Omemee	32 05	
	Millbrook to Peterboro'	12 35	
	Stouffville to Lake Simcoe	26 46	
	Peterboro' to Chemong Lake	8 22	
	Coldwater to end of track	1 50	
	Connection, Merritton	0 17	
	do Stoney Creek	2 08	
	Loop Gages (N. and N. W. Divn.)	0 48	
	Hamilton to Toronto	36 64	
	Loop Junction Cut Branch	0 36	
	Connection, Burlington East	0 13	
	do do West	0 21	
	Harrisburg to Guelph	27 18	
	Connection do (W. G. and B.)	0 11	
	Harrisburg to Brantford	7 76	
	Brantford Branch Junction with G. T.	0 13	
	Komoka to Sarnia	50 85	
	Wyoming to Petrolia	4 71	
	Fort Erie to Glencoe	145 55	
	Connection, Welland Junction, East	0 26	
	do do West	0 50	
	do Canfield Junction	0 19	
	do Simcoe (G. B. & L. E.)	0 24	
	East Y. St. Thomas	0 32	
	Allanburg to Clifton Junction	8 33	
	Port Colborne to Port Dalhousie	25 14	
	Glencoe to Kingscourt Junction	21 04	
	Guelph to Southampton	101 26	
	Palmerston to Kincardine	66 67	
	do connection	0 20	
	Hyde Park to Wingham Junction	68 88	
	Connection, Clinton Junction	0 13	
	Brantford Loop Line	34 78	
	Toronto Belt Line, Swansea to Carleton	4 37	
	do do Don to Fairbank Junction	8 33	
	Toronto to Gravenhurst	111 60	
	Allandale to Collingwood	31 76	
	Hamilton to Allandale	93 82	
	do Port Dover	40 25	
	Collingwood to Meaford	20 50	
	Elmvale to Hillsdale	8 28	
	Beeton Junction to Collingwood	39 83	
	Gravenhurst to Nipissing Junction with C. P. R.	111 37	
	Colwell to Penetanguishene	33 34	

TABLE showing Location of Railways, &c.—Continued.

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Grand Trunk— Branches— <i>Con.</i>	Park Head to Owen Sound.....	12 42	
	Cobourg to Harwood	15 00	
			2,049 58
	Total owned		2,998 23
	Leased and partly owned— Buffalo and Lake Huron, Fort Erie to Goderich....	162 00	
	Leased or rented— Wharf Branch, Montreal.....	1 75	163 75
	Total miles in Grand Trunk system.....		3,161 98
St. Clair Tunnel and approaches..	Under the St. Clair River, between Sarnia and Port Huron—connecting the Grand Trunk Railway with railroads in State of Michigan. (Length of tunnel between portals 6,000 ft., cylindrical in section with clear inside diameter of 19 ft. 10 inches).		2 23
Great Eastern	Constructed from junction with South-eastern Railway at Yamaska to River St. Francis	6 00	
	Constructed from Nicolet to Junction with Grand Trunk Railway at St. Grégoire	7 00	13 00
Great Northern.....	From St. Jérôme to Moncalm	28 00	
	From junction with Lower Laurentian Railway westward to Ste. Flore.....	10 00	38 00
Great North-west Central.....	From junction with C.P.R. at Chater, westward to Hamiota		50 93
Gulf Shore	Junction with Caraque Railway at Pokemouche to Tracadie—14 miles under construction.		
Hamilton, Grimsby and Beamsville (electric).....	Hamilton to Grimsby		23 00
Hamilton and Dundas.....			6 00
Harvey Branch	Albert to Harvey Bank, N.B.		3 00
Hereford	From International Boundary to Dudswell, County Wolfe connects with Canadian Pacific Railway at Cookshire, Maine Central at International boundary, and with Quebec Central at Dudswell.....	48 50	
	Dudswell to Lime Quarries (Dominion Lime Company)	4 80	53 30
Hull Electric.....	Hull to Aylmer		6 30
Irondale, Bancroft and Ottawa ..	From junction with Grand Trunk Railway, near Kinmount Station, to Baptiste Lake		45 00
Joggins, now Canada Coals and Railway Co.....	Maccan Station, I.C.R., to Joggins Mine.....		12 00
Kaslo and Slocan	From Kaslo to Sandon	28 80	
	From Junction to Cody	3 00	31 80
Kent Northern	Richibucto, N.B., to Intercolonial Railway	27 00	
St. Louis and Richibucto.....	Richibucto to St. Louis	7 00	34 00
Kingston and Pembroke	Main Line—Kingston to Renfrew.....	103 10	
	Glendower Branch—Bedford to Zanesville Mine....	4 00	
	Robertsville Branch—To Robertsville Mines	1 00	
	Branches—To Doran's Mills, Charcoal Works, McLaren's Mills, Bethlehem Mines, Lavant Mills, Clyde Forks Mills, Wilson's Mine, Caldwell's Mills, William's Mine, Cameron's Bay	4 75	
	(Connects with Grand Trunk at Kingston, Canadian Pacific at Sharbot Lake and at Renfrew.)		112 85

Department of Railways and Canals.

TABLE showing Location of Railways, &c.—Continued.

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Kingston, Napanee and Western.	Amalgamated with Bay of Quinté Railway : Napanee to Tamworth.....	28·50	
	Yarker to Harrowsmith.....	7·00	
	Tamworth to Tweed.....	20·95	
	Harrowsmith to Sydenham.....	4·87	
			60·82
Lotbinière and Mégantic.....	Lyster Station, Grand Trunk, to Ste. Philomène.....		20·34
L'Assomption.....	L'Epiphanie Station, C.P.R., to L'Assomption.....		3·00
Lake Erie and Detroit River.....	From Walkerville, Ont., to Ridgetown.....	84·05	
	Branch—Foster's to Decew's Mills.....	4·00	
			88·05
Lake Manitoba Railway and Canal Co.....	From junction with Manitoba and North-western at Gladstone to Sifton.....		160·74
London and Port Stanley..	London to Port Stanley on Lake Erie.....		23·75
Lower Laurentian (formerly St. Lawrence, Lower Laurentian and Saguenay).....	From St. Tite, on C.P.R., to Rivière à Pierre, on Quebec and Lake St. John Railway.....		39·50
Manitoba and North-western.....	Portage la Prairie to Yorkton.....	223·05	
	Shell River Branch—Binscarth to Russell.....	11·45	
	Leased—Saskatchewan and Western—Minnedosa to Rapid City.....	15·47	
			249·97
Manitoba and South-eastern.....	From Winnipeg south-easterly to west side of Lake of the Woods; 8 miles under construction.....		
Midland of Nova Scotia (formerly Stewiacke Valley).....	90 miles under construction.....		
Montfort Colonization.....	From junction with Montreal and Western near St. Sauveur to Montfort and westward.....		21·00
Massawippi Valley.....	From Lennoxville to Vermont boundary, there connecting with Connecticut and Passumpsic Rivers Railway; also connects with Grand Trunk and C.P.R. at Lennoxville.....	32·00	
	Branch—Stanstead Junction to Stanstead.....	2·00	
			36·00
Montreal and Vermont Junction.	From Junction with Stanstead, Shefford and Chambly Railway, 2½ miles east of St. Johns, P.Q., to Junction with Vermont and Canada Railway, at Vermont boundary; also connects at Stanbridge with Lake Champlain and St. Lawrence Junction Railway.....		23·60
Montreal, Portland and Boston, now Montreal and Province Line.....	Junction with Grand Trunk at St. Lambert to Farnham.....	32·00	
	Mariville to St. Césaire.....	8·60	
			40·60
Montreal and Atlantic (formerly South-eastern).....	Main Line—West Farnham to Richford on International Boundary.....	33·80	
	Northern Division—Sutton Junction to Sorel.....	95·50	
	Between Newport and Richford—Part of Line in Canada.....	10·80	
			140·10
	Leased—Lake Champlain and St. Lawrence Junction—Stanbridge to St. Guillaume.....	61·40	
			201·50
	(Connects with Connecticut and Passumpsic, Grand Trunk and Stanstead, Shefford and Chambly Rys.).....		
Montreal Park and Island (electric)	City of Montreal and Suburbs.....		40·88
Montreal Island Belt Line (electric).....			11·60
Nelson and Fort Sheppard.....	From West Arm of Kootenay Lake, near Nelson, to Fort Sheppard on International boundary, B.C.....		59·40

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
New Glasgow Iron, Coal and Railway Company, now Nova Scotia Steel Co.	From Ferrona Junction, I.C.R., to Sunny Brae.....		12 50
New Brunswick and Prince Edward Island.....	From Sackville Station, Intercolonial Railway, to Cape Tormentine.....		36 00
Niagara Falls Park and River Electric Railway.....	Queenston to Chippewa.....		13 68
Northern Pacific and Manitoba..	Winnipeg to International boundary.....	65 94	
	Portage Junction to Portage la Prairie.....	52 52	
	Morris to Brandon.....	145 42	
	Connection with C.P. R. at Winnipeg.....	1 23	
			265 11
Nosbonsing and Nipissing.....	From Lake Nosbonsing to Lake Nipissing.....		5 50
Nova Scotia Central.....	From Middleton on the Windsor and Annapolis Railway to town of Lunenburg, on the Atlantic coast, N.S.....		74 00
	Shelburne to New Germany, 11 miles under construction		
Nova Scotia Southern.....	From Junction with Central Ontario Ry. to Iron Mines in Township of Belmont.....		9 60
Ontario, Belmont and Northern.....	Eastman, on C.P.R., to Kingsbury, Que.....		26 50
Orford Mountain.....	From Port Oshawa, Lake Ontario to Grand Trunk Ry. Stations and through town of Oshawa.....		8 50
Oshawa Electric Railway.....	Canadian Pacific Railway Junction at Hull, Que., to Gracefield.....		56 50
Ottawa and Gatineau.....			
Ottawa, Arnprior and Parry Sound.....	Ottawa to Rose Point, Parry Sound.....		260 30
Ottawa Valley.....	Lachute, on C.P.R., to St. Andrews on Ottawa River.		7 00
Philipsburg.....	Standbridge Station of Canadian Pacific and Central Vermont Railways, to Philipsburg, Mississquoi Co.		6 75
Pontiac and Renfrew.....	From Wyman's Station, on Pontiac Pacific Junction Railway, to Bristol Iron Mines, County Pontiac, Que.		4 25
Pontiac Pacific Junction.....	From Junction with Canadian Pacific Railway at Aylmer, Que., to Waltham.....		71 00
Port Arthur, Duluth and Western.....	Port Arthur to Gunfint, Lake on Minnesota boundary (Connects with the C.P.R. at Port Arthur and Fort William.)		85 50
Qu'Appelle, Long Lake and Saskatchewan.....	From Canadian Pacific Railway at Regina, North-westerly to Long Lake and Prince Albert.....		253 96
Quebec and Lake St. John.....	Quebec to Roberval.....	192 00	
	Chambord Junction to Chicoutimi.....	53 85	
			245 85
Quebec Central.....	Main Line—Sherbrooke to Harlaka Junction, Intercolonial Railway, 5 miles from Lévis, Que.....	137 50	
	Chaudière Branch, Beauce Junction to St. Francis.....	15 00	
	Angus Branch—East Angus to Angus Mills.....	1 00	
	Tring Mégantic—Tring Junction to Mégantic.....	60 00	
	(Connects with Grand Trunk, Canadian Pacific and Boston and Maine Rys. at Sherbrooke.)		213 50
Quebec, Montmorency and Charlevoix.....	Hedleyville, Parish of St. Roch, Quebec, to Cap Tourmente.....		30 00
Red Mountain.....	From International boundary Line B. C. to Rossland.....		9 53
Stanstead, Shefford and Chambly.....	From Junction with Montreal and Vermont Junction Railway, near St. Johns, Que., easterly to Waterloo.....		43 00
Shore Line (formerly Grand Southern).....	St. John to St. Stephen, N.B.....		82 50
St. Catharines and Niagara Central.....	(construction). St. Catharines, Ont., to Niagara Falls.....		12 35
St. John Bridge and Railway Extension.....	From St. John to Fairville, crosses St. John River at the Falls by a cantilever steel bridge, and connects Intercolonial Railway with New Brunswick Railway, C. P. R., included in Canadian Pacific System.....		2 00

Department of Railways and Canals.

TABLE showing Location of Railways, &c.—*Concluded.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
St. John Valley and Rivière du Loup.....	From Fredericton, N.B., to Woodstock, N. B. (6 miles under construction)		
Salisbury and Harvey (formerly Albert Railway)	Salisbury to Albert, N.B.		45·00
St. Lawrence and Adirondack.....	From Jct. with Canada Atlantic near Valleyfield to International Boundary	19·80	
	Beauharnois to Junction with Canadian Pacific at Adirondack Junction.....	13·20	33·00
South Shore (formerly Montreal and Sorel)	From Junction with Grand Trunk at St. Lambert to Sorel, West		44·67
Sydney and Louisbourg (Dominion Coal Co).....	Sydney Harbour to Louisbourg Harbour.....	39·15	
	Branches to coal Mines.....	26·75	65·90
Thousand Islands.....	Gananoque on St. Lawrence River to Gananoque Station, G.T.R.		4·33
Témiscouata.....	Rivière du Loup, Que., on Intercolonial, to Edmundston, N.B., on the New Brunswick Railway.....	81·00	
	Branch—Edmundston to Connors, on St. John River.....	32·00	113·00
Tilsonburg, Lake Erie and Pacific	From Port Burwell on Lake Erie to Tilsonburg....		16·00
Toronto, Hamilton and Buffalo, including Brantford, Waterloo and Lake Erie	Main line—Waterford Junction on Canada Southern to Welland Junction on Canada Southern, passing through City of Hamilton	79·93	
	Branch—Chantlers to Fonthill.....	4·00	83·93
United Counties	Iberville Junction with Canadian Pacific Railway to St. Hyacinthe, thence to St. Robert Junction with Montreal and Atlantic, 4½ miles from Sorel		61·00
Victoria and Sidney.....	City of Victoria to Sidney, Vancouver Island.....		16·26
Winnipeg and Hudson Bay, now Winnipeg Great Northern.....	Winnipeg to Port Nelson on Hudson Bay.....		
	(Constructed 40 miles, Winnipeg to St. Laurent on Lake Manitoba).....		40·00

Department of Railways and Canals.

SUMMARY STATEMENT OF CAPITAL

FOR THE

FISCAL YEAR ENDED 30TH JUNE, 1897

A. NOTE.—With regard to Subsidies granted by Dominion Parliament, 60-61 Vic.

By 60-61 Vic., cap. 4.—A subsidy was authorized on certain mileage of this railway, specified in the Act of Parliament, of \$3,200 per mile, and a further subsidy, beyond the sum of \$3,200 per mile, of Fifty per cent on so much of the average cost of the said specified 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.

The amounts of certain of the subsidies authorized by Parliament, 60-61 Vic., given in this Statement, include the determined portion of the subsidies, viz., the amounts produced by the \$3,200 per mile, but the other portion, being now an undetermined amount cannot be shown here.

Of the Railways shown in this Statement the following is the mileage subsidized under the said Act :—

Central Railway of New Brunswick.....	15	miles.
Coast Railway of Nova Scotia.....	61	do
Cobourg, Northumberland and Pacific.....	50	do
Drummond County.....	42 $\frac{1}{2}$	do
Great Northern.....	44	do
Gulf Shore.....	5 $\frac{1}{2}$	do
Kingston, Smith's Falls and Ottawa.....	101	do
Ottawa, Arnprior and Parry Sound.....	56	do
Ottawa and Gatineau.....	20	do
Philipsburg Junction.....	0 $\frac{66}{100}$	do
Pontiac Pacific Junction.....	7 $\frac{1}{2}$	do
St. Lawrence and Adirondack.....	13 $\frac{1}{2}$	do
St. Stephen and Milltown.....	1 $\frac{14}{100}$	do
Tilsonburg, Lake Erie and Pacific.....	3 $\frac{1}{2}$	do
United Counties.....	1	do

No. 1.--Summary Statement of Capital for the Year ended 30th June, 1897.

Length of Line.		Ordinary Share Capital.			Preference Share Capital.			BONDED DEBT.			DOMINION GOVERNMENT AID.			PROVINCIAL GOVERNMENT AID.			MUNICIPAL AID.			CAPITAL FROM OTHER SOURCES.		TOTAL CAPITAL.		FLOATING DEBT.		Total Cost of Railway and Rolling Stock.		OBSERVATIONS.					
Completed.	Under Construction.	Authorized.	Subscribed.	Paid up.	Authorized.	Subscribed.	Paid up.	Authorized.	Issued.	Sold.	Rate of Interest.	Number.	Loan.	Bonds.	Subscription to Shares or Bonds.	Paid up.	Province.	Loan.	Bonds.	Subscription to Shares or Bonds.	Paid up.	Number.	Subscribed.	Paid up.	Subscribed.	Paid up.	Amount.	Rate of Interest.	Number.				
Miles.	Miles.	£	cts.	£	cts.	£	cts.	£	cts.	£	p. c.		£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	p. c.	£	cts.		
174 12		100,000	100,000	100,000	1,500,000	1,000,000	1,000,000	5,475,333 34	5,353,333 34	5,353,333 34	4 and 5	1					Quebec														1 * Alberta Railway, 109 1/2 miles from Dunmore to Lethbridge is in C. P. R. system (under lease, Dominion Land Grant.		
16 00		150,000	150,000	150,000	1,705,500	1,705,500	1,705,500	1,422,640 00	1,422,640 00	1,422,640 00	4 and 5	2					Quebec														2 * Payable on 100 miles in Canada, between St. Lawrence River and Lethbridge, in half yearly instalments of \$35,500 each for 20 years, commencing 1st July, 1890.		
265 00		1,000,000	1,000,000	1,000,000	1,705,500	1,705,500	1,705,500	3,885,066 00	3,885,066 00	3,885,066 00	4 and 5	3					Quebec														3 * Also \$1,140,750 included in cost of Can. Pac. Ry.		
100 00	20 00	10,000,000	2,500,000	270,000				20,000,000	2,433,333 00			4					Quebec																
64 82		1,250,000	144,500	144,500				1,010,500		708,137 84		7					Ontario																
3 00		40,000	28,350	28,350								8					Quebec																
19 10		1,125,000	1,125,000	1,125,000				1,125,000	1,125,000	1,125,000		9					Quebec																
34 78		1,125,000	250,000	250,000				1,125,000	310,000	310,000		10					Quebec																
42 00		1,125,000	250,000	250,000				1,125,000	310,000	310,000		11					Quebec																
26 07		1,000,000	1,000,000	1,000,000	11,972,000	2,555,657 00	2,555,657 00	3,716,355 20	3,716,355 20	3,716,355 20		12					Quebec																
138 00		2,000,000	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	4,650,000	3,450,000	3,450,000		15					Quebec																
268 60		1,000,000	1,000,000	1,000,000				1,823,333 00	1,823,333 00		5 and 6	16					Quebec																
136 00		1,000,000	1,000,000	1,000,000				1,823,333 00	1,823,333 00			17					Quebec																
322 20		15,000,000	15,000,000	15,000,000				10,573,107 08	10,573,107 08			18					Quebec																
7 00		60,000	60,000	60,000				60,000	60,000			19					Quebec																
15 50		50,000	50,000	50,000				105,630 00	130,000 00			20					Quebec																
3,486 80		65,000,000	65,000,000	65,000,000				8,870,666 67	8,870,666 67			21					Manitoba																
1,182 50								55,416,157 15	55,416,157 15			22					Manitoba																
210 00								3,750,565 38	3,750,565 38			23					Manitoba																
2 32		50,000	50,000	50,000				15,000 per mile.	50,000 00			24					Quebec																
68 00		500,000	500,000	500,000				500,000 00	500,000 00			25					Quebec																
38 00		500,000	500,000	500,000				380,000 00	380,000 00			26					Quebec																
38 00		500,000	500,000	500,000				380,000 00	380,000 00			27					Quebec																
75 00		500,000	500,000	500,000				380,000 00	380,000 00			28					Quebec																
104 74	2 75	500,000	500,000	500,000				380,000 00	380,000 00			29					Quebec																
175 10		1,000,000	1,000,000	1,000,000				20,000 per mile.	1,000,000 00			30					Quebec																
46 74		1,000,000	1,000,000	1,000,000				20,000 per mile.	1,000,000 00			31					Quebec																
27 00		1,250,000	125,000	125,000				1,250,000 00	125,000 00	125,000 00		32					Quebec																
75 00		1,500,000	150,000	150,000				1,500,000 00	150,000 00	150,000 00		33					Quebec																
78 00		3,000,000	1,500,000	1,500,000				3,000,000 00	1,500,000 00	1,500,000 00		34					Quebec																
84 25		500,000	500,000	500,000				500,000 00	500,000 00			35					Quebec																
12 13		1,000,000	1,000,000	1,000,000				1,000,000 00	1,000,000 00			36					Quebec																
224 25		113,482,437 50	109,356,384 30	109,356,384 30				80,245,202 10	80,245,202 10			37					Quebec																
12 42								100,000 00	100,000 00			38					Quebec																
38 10		3,000,000	310,000	310,000				4,320,000 00	570,000 00	570,000 00		39					Quebec																
50 38		2,000,000	500,000	500,000				2,500,000 00	500,000 00	500,000 00		40					Quebec																
61 30		30,000 00	10,000 00	10,000 00				232,500 00	62,500 00	62,500 00		41					Quebec		</														

SUMMARY STATEMENTS

**RELATING TO MILEAGE, CHARACTERISTICS OF ROADS, ROLLING
STOCK, OPERATIONS, PASSENGERS AND FREIGHT CAR-
RIED, EARNINGS, OPERATING EXPENSES
AND ACCIDENTS.**

No. 2.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Sidings.	Weight per Yard.	
		Completed (Rails laid.)	Under construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.	Miles.	Lbs.	Lbs.
1	Alberta Railway and Coal Co.	64.62			64.62	4.00		30 to 56
2	Albert Southern	16.00			16.00	.47		56
3	Atlantic and Lake Superior, comprising— Baie des Chaleurs	80.00						
	Great Eastern	13.00						
	Ottawa Valley	7.00						
4	Bay of Quinté Ry. & Navigation Co. . 4.00							
	Kingston, Napanee and Western. . 60.82	64.82			64.82	7.00		50, 56, 60
5	Berlin and Waterloo Electric	3.00			3.00			60 & 42
6	Brockville, Westport & Sault Ste. Marie ..	45.00			45.00	2.00		56
7	Buctouche and Moncton	32.00			32.00	2.50		56
8	Calgary and Edmonton	295.07			295.07	9.38		56
9	Canada Atlantic	138.00						
	Central Counties	38.00			176.00	48.00		56 & 72
10	Canada Eastern	136.00			136.00	6.50		56 to 60
11	Canada Southern	382.19			382.19	165.72		60, 65, 80
12	Canadian Government Railways— Intercolonial (not including Windsor Branch)	1,150.50			1,150.50	158.75		56, 57½, 67
13	Prince Edward Island	210.00		72.00	138.00	15.71	38 & 50	52
14	Canadian Pacific Ry. (owned) . 4,119.10							
	Leased Lines—							
	Fredericton	22.40						
	New Brunswick	175.00						
	New Brunswick and Canada	118.00						
	St. John and Maine	92.00						
	St. John Bridge & Ry. Extension	2.00						
	St. Stephen and Milltown	4.64						
	Tobique Valley	28.00						
	Cap de la Madeleine	2.32						
	Montreal and Lake Maskinongé	12.90						
	Montreal and Western	70.00						
	Atlantic and North-west	205.00						
	Montreal and Ottawa	52.80						
	Ontario and Quebec	469.00						
	St. Lawrence and Ottawa	58.40						
	Credit Valley	175.10						
	Guelph Junction	15.00						
	Toronto, Hamilton and Buffalo	2.70						
	Toronto, Grey and Bruce	191.30						
	West Ontario Pacific	26.60						
	Manitoba Southwestern Coloni- zation	215.20						
	Alberta Railway and Coal Co. . 109.50							
	Columbia and Kootenay	28.50						
	Nakusp and Slocan	36.90						
	Shuswap and Okanagan	51.00						
15	Caraguet	68.00			68.00	3.25		50
16	Carillon and Grenville	13.00		13.00		.25	65	
17	Coast Railway of Nova Scotia	28.25	2.75		28.25	1.75		56
18	Cobourg, Northumberland and Pacific	49.00						
19	Central Ontario	104.00						
	Ontario, Belmont and Northern . 9.60	113.60			113.60	11.00		42 & 56
20	Central of New Brunswick	75.66			75.66	2.50		52 & 56
21	Cumberland Railway and Coal Co., includ- ing Shringhill and Oxford Branch, 14 miles	46.00			46.00	10.00		56 & 67

b 95.21 miles double track

c 1.50 miles double track.

Department of Railways and Canals.

Roads, &c., for the Year ended 30th June, 1897.

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.		No. of Public Road Level crossings	No. of Overhead Bridges.	Height of Overhead Bridges above rail level.	No. Level Crossings of Other Railways.	No. of Junctions with other Railways.	No. of Junctions with branch lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number
		Guarded.	Not Guarded.										
						Feet.				Ft.		Ft.	
2640	Plain fishplates		2					2		573	53	3	1
2640	Plain fishplates		11					2		955	120	4 8½	2
2640	Fishplates		34	3		22		4		717	67	4 8½	3
3000	Plain and angle fishplates		50				1	4		955	90	4 8½	4
2348	Plain and angle fishplates		15				2		1	35	264	4 8½	5
2640	Fisher bridge joint		35					2		717	58	4 8½	6
2640	Plain fishplates		12				1			816	74	4 8½	7
2640	Angle bars	2	158					2		1146	528	4 8½	8
3000	Plain and angle plates	6	134	3		22	6	4	2	1433	64	4 8½	9
2640	Fish and angle plates	1	35				1	4	1	955	80	4 8½	10
3000	Joint splice 4 and 6 bolts, nut locks	9	413	17		20·6	16	9	10	913	75	4 8½	11
2640	Plain and angle fishplates	9	429	29		18½-35	8	24	21	694	65	4 8½	12
2640	Plain and angle fishplates		964	2		17·6				396	90	3·6	13
2640 and 3168	Plane and angle bars	10	33 3575	77		18 to 24	55	67	55	295	253	4 8½	14
2600	Plain fishplates		12					1	1	1000	60	4 8½	15
1760	Chairs	1	8	1		17				1910	100	5·6	16
2640	Angle bars		21					1		955	79	4 8½	17
													18
2640	Plain fishplates		102				3	5		955	105	4 8½	19
2640	Plain fishplates		21				2			816	74	4 8½	20
2600	Plain fishplates		13							820	160	4 8½	21

d 14·2 miles double track

No. 2.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Sidings.	Weight per Yard.	
		Completed (Rails laid.)	Under construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.	Miles.	Lbs.	Lbs.
22	Dominion Atlantic, comprising—							
	Windsor and Annapolis.....	87 50						
	Cornwallis Valley.....	14 00						
	Yarmouth and Annapolis.....	87 00						
	Windsor Branch Intercolonial.....	32 00						
		220 50	....	3 50	217 00	10 00	56	56 & 72
23	Drummond County.....	90 53	43 00		90 53	5 00		56 & 60
24	Elgin and Havelock.....	27 00			27 00	2 00	44	56
25	Erie and Huron.....	76 75			76 75	4 87		54 & 56
26	Esquimalt and Nanaimo.....	78 00			78 00	2 42		50 & 54
27	Fredericton and St. Mary's Ry. Bridge Co.	1 33			1 33	12		56
28	Grand Trunk.....	884 25						
	Great Western.....	561 80						
	Brantford, Norfolk & Pt. Burwell.....	34 78						
	Buffalo and Lake Huron.....	162 00						
	Grand Trunk, Georgian Bay and Lake Erie.....	172 75						
	Owen Sound Branch.....	12 42						
	London, Huron and Bruce.....	69 01						
	Waterloo Junction.....	10 25						
	South Norkolk.....	17 00						
	Wellington, Grey and Bruce.....	168 13						
	Northern.....	172 10						
	North Simcoe.....	33 34						
	Hamilton and North-western.....	173 90						
	Northern and Pacific Junction.....	111 37						
	Toronto Belt Line.....	12 70						
	Midland.....	166 78						
	Grand Junction.....	85 40						
	Toronto and Nipissing.....	85 00						
	Lake Simcoe Junction.....	26 50						
	Victoria.....	53 25						
	Whitby, Port Perry and Lindsay.....	46 50						
	Cobourg, Blairton and Marmora.....	15 00						
	Jacques Cartier Union.....	6 50						
	Montreal and Champlain Junc.....	61 75						
	Beauharnois Junction.....	19 50						
29	Great Northern.....	38 00	10 00		38 00	2 50		56
30	Great Northwest Central.....	50 93			50 93	1 99		56
31	Gulf Shore.....		14 00					56
32	Hamilton, Grimsby and Beamsville Electric.....	23 00			23 00	1 00		56 to 69
33	Hamilton and Dundas Electric.....	6 00		4 75	1 25	50	42	42
34	†Harvey Branch.....	3 00			3 00	20		56
35	Hereford.....	53 30			53 30	5 51		56
36	Hull Electric.....	6 30			6 30	22		56
37	Irondale, Bancroft and Ottawa.....	45 00			45 00	2 50		56
38	Joggins, now Canada Coals and Ry. Co.....	12 00			12 00	2 00		56
39	Kaslo and Slocan.....	31 80			31 80	1 60		45
40	Kent Northern, including St. Louis and Richibucto.....	34 00		3 50	30 50	3 00	67	56
41	Kingston and Pembroke.....	112 85		9 75	103 10	21 00	50 to 84	56
42	L'Assomption.....	3 00			3 00	25	56	
43	Lake Erie and Detroit River.....	88 05						
	London and Port Stanley.....	23 75						
		111 80			111 80	14 00		56 & 67
44	Lake Manitoba Railway and Canal Co.....	100 74			100 74	2 78		56
45	Lotbinière and Megantic.....	30 34			30 34	6 35		56
46	Manitoba and North-western.....	234 50						
	Saskatchewan and Western.....	15 47						
		249 97			249 97	23 87		56
47	Manitoba and South-eastern.....		8 00					
48	Massawippi Valley.....	36 00			36 00	2 10		50 & 60

e 404.75 miles double track.

f 6.85 miles double track.

† Harvey branch not in operation.

Department of Railways and Canals.

Roads, &c., for the Year ended 30th June, 1897—*Continued.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.		No. of Public Road Level crossings	No. of Overhead Bridges.	Height of Overhead Bridges above rail level.	No. Level Crossings of Other Railways.	No. of Junctions with other Railways.	No. of Junctions with branch lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
		Guarded.	Not Guarded.										
						Feet.				Ft.		Ft.	
2640	Plain fishplates	1	109	2	22		3	2	637	79	4 8½	22	
2640	Plain and angle fishplates.....		46				2	4	717	63	36 4 8½	23	
2000	Plain fishplates		24				1	1	717		90 4 8½	24	
2640	Plain fishplates		111				5	6	661		52 4 8½	25	
2992	Angle fishplates		15	1	23				573		80 4 8½	26	
2564	Angle fishplates		6					2	1433		50 4 8½	27	
2640	Fish plates and angle bars.....	10	85	2736	238	15 10 to 29 10	60	76	78	1110 c600	53 4 8½ c105	28	
2640	Angle and plain fishplates		24				1	2	574		66 4 8½	29	
2640	Plain fishplates	9	24					1	955		324 4 8½	30	
2600	Fishplates											31	
2200	Plain fishplates and angle bars		45				1	1	127		237 4 8½	32	
2000	Fishplates	1		1	14				573		200 4 8½	33	
2640	Plain fishplates		2					2	717		53 4 8½	34	
2800	Plain fishplates		28				2	3	955		66 4 8½	35	
2640	Fishplates		3	1	22		1	2	3	191	264 4 8½	36	
2640	Plain fishplates		14					1		1000	60 4 8½	37	
3000	Plain fishplates		7					1	1	955	79 4 8½	38	
2640	Angle fishplates		13						1	193	171 3 0	39	
2432	Angle fishplates		10				1	1		1000	60 4 8½	40	
2640	Plain and angle fishplates		56	3	16 to 21		6	6	13	955	79 4 8½	41	
2500	Plain fishplates		1					1		955	20 4 8½	42	
3000	Plain and angle fishplates	1	126	6	19 6		7	8		1433	53 4 8½	43	
2600	Angle bars	6	76					1		2865	70 4 8½	44	
2640	Plain and angle plates		8				1	2		819	80 4 8½	45	
2700	Plain and angle fishplates	27	188					3	2	955	105 4 8½	46	
2800	Plain fishplates	1	90	1	19		1	2	1	488	76 4 8½	47	
2800	Plain fishplates	1	90	1	19		1	2	1	488	76 4 8½	48	

cBranch lines.

No. 2.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Sidings.	Weight per Yard.	
		Completed (Rails laid.)	Under construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.		Miles.	Lbs.
49	Montfort Colonization.	21 00	12 00	.....	21 00	20	.....	56
50	Montreal and Atlantic, formerly South-eastern 140 10 Lake Champlain & St. Lawrence Junction 61 40	201 50	.....	6 60	194 90	31 99	56	56, 60, 72
51	f Montreal Park and Island Electric	40 88	.....	.....	40 88	98	.....	56
52	Montreal Island Belt Line Electric	11 60	.....	.....	11 60	50	.....	56
53	Montreal and Vermont Junction.	23 60	.....	.....	23 60	2 00	.....	60 & 72
54	Montreal, Portland and Boston, now Mon- treal and Province Line.	40 60	.....	8 60	32 00	1 00	38	56
55	Nelson and Port Sheppard.	59 40	.....	.....	59 40	3 70	.....	56
56	New Brunswick and Prince Edward Island.	36 00	.....	.....	36 00	1 50	.....	56
57	g Niagara Falls Park and River Electric.	13 68	.....	.....	13 68	89	.....	56
58	Northern Pacific and Manitoba	265 11	.....	.....	265 11	30 98	.....	56
59	Nosbonsing and Nipissing	5 50	.....	.....	5 50	1 25	.....	56
60	Nova Scotia Central	74 00	.....	.....	74 00	3 50	.....	56
61	Nova Scotia Southern .....	.....	11 00	.....	.....	.....	.....	.....
62	Nova Scotia Steel Co., formerly New Glas- gow Iron, Coal and Railway Co.	12 50	.....	.....	12 50	3 00	.....	56
63	Orford Mountain	26 50	.....	.....	26 50	1 00	.....	56
64	Oshawa Electric Railway	8 50	.....	.....	8 50	.....	.....	64
65	Ottawa, Arnprior and Parry Sound, in- cluding Parry Sound Colonization.	260 30	3 50	.....	260 30	19 50	.....	72
66	Ottawa and Gatineau	56 50	.....	.....	56 50	2 00	.....	56
67	Philipsburg Railway and Quarry Co	6 75	.....	.....	6 75	.....	.....	56
68	Pontiac and Renfrew	4 25	.....	.....	4 25	75	.....	56
69	Pontiac Pacific Junction	71 00	.....	.....	71 00	3 50	.....	56
70	Port Arthur, Duluth and Western	85 50	.....	.....	85 50	4 00	.....	56
71	Qu'Appelle, Long Lake and Saskatchewan.	253 96	.....	.....	253 96	7 10	.....	56
72	Quebec Central	213 50	.....	.....	213 50	20 50	.....	56 & 70
73	Quebec and Lake St. John. 245 85 Lower Laurentian. 39 50	285 35	.....	.....	285 35	17 00	.....	56 & 60
74	Quebec, Montmorency and Charlevoix	30 00	.....	.....	30 00	2 00	.....	56
75	Red Mountain.	9 53	.....	.....	9 53	.....	.....	.....
76	Salisbury and Harvey	45 00	.....	40 00	5 00	5 75	60	56
77	Shore Line, New Brunswick	82 50	.....	.....	82 50	2 50	.....	50
78	Stanstead, Shefford and Chambly	43 00	.....	12 00	31 00	2 00	60	60
79	St. Catharines and Niagara Central	12 35	.....	.....	12 35	1 00	.....	56
80	h St. Clair Tunnel, Yard and Approach	2 23	.....	.....	2 23	11 00	.....	100
81	St. John Valley and Rivière du Loup .....	.....	6 00	.....	.....	.....	.....	.....
82	St. Lawrence and Adirondack	33 00	.....	.....	33 00	5 30	.....	72 & 80
83	Stewiacke Valley and Lansdowne, now Midland .....	.....	90 00	.....	.....	.....	.....	.....
84	Sydney and Louisbourg (Dominion Coal Co.)	65 90	.....	10 13	55 77	29 50	50	80 & 56
85	South Shore, formerly Montreal and Sorel	44 67	.....	.....	44 67	2 00	.....	56
86	Temiscouata	113 00	.....	.....	113 00	10 00	.....	56
87	Tilsonburg, Lake Erie and Pacific	16 00	.....	.....	16 00	1 25	.....	56
88	Thousand Islands	4 33	.....	.....	4 33	1 00	.....	56
89	i Toronto, Hamilton and Buffalo, including Brantford, Waterloo and Lake Erie.	83 93	.....	.....	83 93	9 00	.....	60 to 80
90	United Counties	61 00	.....	.....	61 00	4 50	.....	56
91	Victoria and Sydney	16 26	.....	.....	16 26	1 20	.....	50
92	Winnipeg Great Northern, formerly Winni- pege and Hudson Bay	40 00	.....	.....	40 00	2 00	.....	50, 56
		16687 37	394 25	210 08	16477 29	2218 58	.....	.....

h Length 6,000 feet; inside diameter 19' 10".

i 2-23 miles double track.

Department of Railways and Canals.

Roads, &c., for the Year ended 30th June, 1897—*Concluded.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.		No. of Public Road Level crossings.	No. of Overhead Bridges.	Height of Overhead Bridges above rail level.	No. Level Crossings of Other Railways.	No. of Junctions with other Railways.	No. of Junctions with branch lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
		Guarded.	Not Guarded.										
						Feet.				Ft.		Ft.	
2620	Plain fishplates		14	1		20				573	132 3 0		49
2640	Fishplates and angle bars		163	1		19 6	8	8	2	520	83 4 8		50
2640	Angle fishplates	1	23				3			40	318 4 8		51
2640	Angle plates		5							950	26 4 8		52
3000	Fishplates		51					3			52 4 8		53
3000	Plain fishplates and chairs		21				3	1	2			4 8	54
2640	Angle bars							1		478	132 4 8		55
2400	Plain fishplates		26					1		750	66 4 8		56
2640	Angle bars	1	16	2		14 22		2	1	115	300 4 8		57
2640	Angle bars	25	6	262			6	2	3	574	63 4 8		58
2800	Plain fishplates		2				1	1		955	132 4 8		59
2640	Angle bars		32	1		20				819	80 4 8		60
													61
2640	Angle bars		5					1	1	955	79 4 8		62
2640	Angle bars		17					1		955	74 4 8		63
2640	Angle bars		28				1	1		80	211 4 8		64
2640	Angle bars	1	4	54	7	22	2	2		955	66 4 8		65
3000	Plain fishplates		44					1		573	106 4 8		66
2816	Plain fishplates		3					1	1	955	52 4 8		67
2640	Plain fishplates							1		717	106 4 8		68
2640	Angle bars		52					1		1146	53 4 8		69
2640	Plain fishplates		5				3	1		573	95 4 8		70
2640	Angle bars	2	53					1	1	1146	65 4 8		71
2640	Plain and angle plates		115				2	7	2	882	76 4 8		72
	Plain and angle fishplates	1	2	85				4	2	717	105 4 8		73
2640	Plain fishplates		10					1		1433	42 4 8		74
2640													75
2600	Plain fishplates		30	1		15		1		717	80 4 8		76
2992	Plain fishplates		15	5		23	3	3		573	85 4 8		77
2640	Plain fishplates		42	1		18	3	4		717	60 4 8		78
2640	Plain fishplates		20	3		22	2	2		717	79 4 8		79
	Angle bars										105 4 8		80
													81
3000	Angle bars		26	1		22	2	3		1146	57 4 8		82
													83
2640	Angle bars		26	2		18		1	7	1433	70 {	*3 0	
												*3 6	84
2640	Plain fishplates		15					2		1910	28 4 8		85
2640	Plain and angle fishplates		38				1	2	1	819	79 4 8		86
2640	Angle bars		14	1		21		1		717	52 4 8		87
3000	Angle bars		8					1		660	84 4 8		88
3000	Plain and angle fishplates		5	116	10	21	1	3	1	674	80 4 8		89
2640	Fishplates			50			4	5		717	40 4 8		90
2464	Plain fishplates			13						637	105 4 8		91
2640	Plain fishplates		6					1		1910	26 4 8		92
		93	167	11239	421		230	327	219				

g 11·43 double track.

f 14·10 miles double track.

* Branches to coal mines.

No. 3.—SUMMARY STATEMENT of the different descriptions of

Number.	Name of Railway.	Length of Line.		Number of Engines.		Number of Sleeping Cars.		Number of Palace or Drawing Room Cars.	
		Completed.	Under Construction.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.
		Miles.	Miles.						
1.	Alberta Railway and Coal Co	64·62		12				2	
2.	Albert Southern	16·00		1					
3.	Atlantic and Lake Superior, comprising—								
	Baie des Chaleurs								
	Great Eastern	100·00	102·00	6					
	Ottawa Valley								
4.	Bay of Quinté Railway	64·82		5					
	Kingston, Napanee and Western								
5.	Berlin and Waterloo (Electric)	3·00							
6.	Brockville, Westport and Sault Ste. Marie	45·00		3					
7.	Buctouche and Moncton	32·00		2					
8.	Calgary and Edmonton	295·07							
9.	Canada Atlantic	138·00		27	9			2	2
	Central Counties	38·00							
10.	Canada Eastern	136·09		9					
11.	Canada Southern	332·19		127	7	126		2	
12.	Canadian Government Railways—								
	Intercolonial	1,150·50		204		15		5	
13.	Prince Edward Island	210·00		21				1	
14.	Canadian Pacific Railway	4,119·10							
	Leased Lines—								
	Fredericton	22·40							
	New Brunswick	175·00							
	New Brunswick and Canada	118·00							
	St. John and Maine	92·00							
	St. John Bridge and Railway extension	2·00							
	St. Stephen and Milltown	4·64							
	Tobique Valley	28·00							
	Cap de la Madeleine	2·32							
	Montreal and Lake Maskinongé	12·90							
	Montreal and Western	70·00							
	Atlantic and North-west	205·00							
	Montreal and Ottawa	52·80	6,283·36	586	20	84		40	
	Ontario and Quebec	4·69							
	St. Lawrence and Ottawa	58·40							
	Credit Valley	175·10							
	Guelph Junction	15·00							
	Toronto, Hamilton and Buffalo	2·70							
	Toronto, Grey and Bruce	191·30							
	West Ontario Pacific	26·60							
	Manitoba South-western Colonization	215·20							
	Alberta Railway and Coal Co	109·50							
	Columbia and Kootenay	28·50							
	Nakusp and Slocan	36·90							
	Shuswap and Okanagan	51·00							
15.	Caraquet	68·00		2					
16.	Carillon and Grenville	13·00		3					
17.	Coast, N.S.	28·25	2·75	3					
18.	Cobourg, Northumberland and Pacific		49·00						
19.	Central Ontario	104·00							
	Ontario, Belmont and Northern	9·60	113·60	8					
20.	Central of New Brunswick		75·66	4					
21.	Cumberland Railway and Coal Co., including Springhill and Oxford Branch, 14 miles		46·00	8					

Department of Railways and Canals.

Rolling Stock, for the Year ended 30th June, 1897.

Number of First Class Cars.		Number of Second Class and Immigrant Cars.		Number of Baggage, Mail and Express Cars.		Number of Cattle and Box Freight Cars.		Number of Platform Cars.		Number of Hopper and Dumping Cars.		Number.	Remarks.
Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.		
2				2		*33		8		246		1	*Including 7 conductors vans, 1 tool car. Also owned by company 3 snow ploughs, 2 flangers, 6 iron water tanks.
		1				2		7	1			2	
1		2		2		8		50				3	1 snow plough, 1 flanger.
7		2		3		*18		92		+12		4	*Including 3 conductors vans. +Ore cars. Also owned 1 snow plough, 2 flangers.
*13												5	*Including 5 motor cars.
1		1		1		20		17	7			6	
2		1				5		30				7	1 snow plough.
												8	Rolling stock furnished by C. P. Ry.
10		15		6		*667	1100	389		46		9	*Including 10 conductors vans, 1 tool car. Also 4 snow ploughs and 6 flangers.
5		2		2		*14		88				10	*Including 2 conductors vans. Also 5 snow ploughs and 1 flanger.
41		22		30		*2,118		214		+40		11	*Including 75 conductors vans, boarding and tool cars. ‡Oil tank cars. †Wagner sleeping and parlor cars passing through from other railways.
92		101		63		*2,273		2,319		2,075		12	*Including 99 conductors vans, 37 refrigerator cars. Also 56 snow ploughs and 21 flangers.
15		13		7		*178		109		16		13	*Including 3 conductors vans. †Official. Also 8 snow ploughs and 7 flangers.
													*Including 15 dining cars, 10 parlor and 15 official and pay cars, also owned 86 snow ploughs and 46 flangers.
													+Including 1 photograph, 3 observation, 1 exhibition, 1 street, 1 commissary and 1 school car.
													§Including 244 refrigeration cars, 30 furniture, 6 oil tank cars, and 305 conductors vans and 37 tool cars.
+226	4	186		205	5	\$11,632	1290	4,072	8	90		14	Miscellaneous in construction and snow service not included in statement, 2 snow scrapers, 1 shovel car, 26 steam shovels, 22 derricks, 15 pile drivers, 3 auxiliary, 1 ballast plough, 1 rail saw, 15 boarding, 8 water, 1 store, 2 snow bank cutters, 1 ditcher, 1 wood saw, 207 gravel, making 306 miscellaneous.
1						2		15				15	1 snow plough.
3		2		1		2		2				16	
7				2		4		20				17	
												18	
2		3		3		*37		82				19	*Including 2 conductors vans, 1 tool car.
3						2		20				20	1 snow plough and 1 flanger.
2				2		2		28		286		21	1 snow plough and 1 flanger.

No. 3.—SUMMARY STATEMENT of the different descriptions of

Number.	Name of Railway.	Length of Line.		Number of Engines.		Number of Sleeping Cars.		Number of Palace or Drawing Room Cars.	
		Completed.	Under Construction.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.
		Miles.	Miles.						
22	Dominion Atlantic, comprising—								
	Windsor and Annapolis.....	87 50							
	Cornwallis Valley.....	14 00							
	Yarmouth and Annapolis.....	87 00							
	Windsor Branch Intercolonial.....	32 00							
		220 50		21				*3	
23	Drummond County.....	90 53	43 00	6					
24	Elgin and Havelock.....	27 00		2					
25	Erie and Huron.....	76 75		5					
26	Esquimalt and Nanaimo.....	78 00		6					
27	Fredericton and St. Mary's Railway Bridge Co.....	1 33							
28	Grand Trunk.....	884 25							
	Great Western.....	561 80							
	Brantford, Norfolk and Port Burwell.....	34 78							
	Buffalo and Lake Huron.....	162 00							
	Grand Trunk, Georgian Bay & Lake Erie.....	172 75							
	Owen Sound Branch.....	12 42							
	London, Huron and Bruce.....	69 01							
	Waterloo Junction.....	10 25							
	South Norfolk.....	17 00							
	Wellington, Grey and Bruce.....	168 13							
	Northern.....	172 10							
	North Simcoe.....	33 34							
	Hamilton and North-western.....	173 90							
	Northern and Pacific Junction.....	111 37							
	Toronto Belt Line.....	12 70							
	Midland.....	166 78							
	Grand Junction.....	85 40							
	Toronto and Nipissing.....	85 00							
	Lake Simcoe Junction.....	26 50							
	Victoria.....	53 25							
	Whitby, Port Perry and Lindsay.....	46 50							
	Cobourg, Blairton and Marmora.....	15 00							
	Jacques Cartier Union.....	6 50							
	Montreal and Champlain Junction.....	61 75							
	Beauharnois Junction.....	19 50							
		3,161 98		722		4		*16	
29	Great Northern.....	38 00	10 00		2				
30	Great North-west Central.....	50 93			1				
31	Gulf Shore.....		14 00						
32	Hamilton, Grimsby and Beamsville (Electric).....	23 00							
33	Hamilton and Dundas.....	6 00		3					
34	Harvey Branch.....	3 00							
35	Hereford.....	53 30			3				
36	Hull Electric.....	6 30		*2				1	
37	Irondale, Bancroft and Ottawa.....	45 00		3					
38	Joggins, now Canada Coal and Railway Co.....	12 00		2					
39	Kaslo and Slocan.....	31 80		3					
40	Kent Northern, including St. Louis and Richibucto.....	34 00		2	1				
41	Kingston and Pembroke.....	112 85		9				1	
42	L'Assomption.....	3 00		1					
43	Lake Erie and Detroit River.....	88 05							
	London and Port Stanley.....	23 75		8					
44	Lake Manitoba Railway and Canal Co.....	100 74		3					
45	Lotbinière and Mégantic.....	30 34		2					
46	Manitoba and North-western.....	234 50		4	5			1	
	Saskatchewan and Western.....	15 47							
47	Manitoba and South-eastern.....		8 00						
48	Massawippi Valley.....	36 00		7					
49	Montford Colonization.....	21 00	12 00	2					
50	Montreal & Atlantic, formerly South-eastern.....	140 10		18		2			
	Lake Champlain & St. Lawrence Junction.....	61 40							
		201 50							

Department of Railways and Canals

Rolling Stock, for the Year ended 30th June, 1897—*Continued.*

Number of First Class Cars.		Number of Second Class and Immigrant Cars.		Number of Baggage, Mail and Express Cars.		Number of Cattle and Box Freight Cars.		Number of Platform Cars.		Number of Hopper and Dumping Cars.		Number.	Remarks.
Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.		
15		10		11		149		187		21		22	*Including 1 dining car. Also owned 2 snow ploughs and 1 flanger.
1		2		1		9		20				23	2 snow ploughs and 1 flanger.
1		1		1		1		8				24	
8				3		25		17				25	
7				3		*15		72		10		26	*Including 3 conductors vans. Also owned 1 snow plough.
												27	
362		216		224		†15970		4,963		1,416		28	*Including 7 officials and 3 dining cars. †Including 13 refrigerators, 370 conductors vans, 64 tool cars. Also owned 66 snow ploughs, 33 flangers.
												29	1 snow plough.
	2		2		2	6						30	*Including 1 conductors van.
							*13		12			31	
†8				4				2				32	†Motor cars.
6				1				4				33	
												34	
	2			1		50			50			35	
†14				1								36	*Electric. †Motor cars. 1 snow plough.
2						2		31				37	
1	1					1				5		38	1 snow plough.
2						*18		3				39	*Including 1 conductors van, and also owned 3 snow ploughs, 3 flangers.
1				1		1		4				40	2 snow ploughs and 1 flanger.
5		5		5		22		150				41	2 snow ploughs and 2 flangers.
2				1								42	
5		6		3		*23		195				43	*Including 3 conductors vans and 2 tool cars.
2				1		*52		31				44	1 snow plough. *Including 2 conductors [vans.
1	1					2		5				45	1 snow plough.
2	2	3		3	1	*58	†112	42	20			46	*2 refrigerator, 4 boarding cars and 1 conductors van, 1 tool car included.
												47	†3 conductors vans. 1 snow plough.
5				4		250						48	
1				1				19				49	1 snow plough.
13		15		17		*429		345				50	*Including 11 conductors vans, 4 refrigerator cars. Also 5 snow ploughs.

No. 3.—SUMMARY STATEMENT of the different descriptions of

Number.	Name of Railway.	Length of Line.		Number of Engines.		Number of Sleeping Cars.		Number of Palace or Drawing Room Cars.	
		Completed.	Under Construction.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.
		Miles.	Miles.						
51	Montreal Park and Island (Electric).....	40.88							
52	Montreal Island Belt Line.....	11.60							
53	Montreal and Vermont Junction.....	23.60			9				
54	Montreal, Portland and Boston, now Montreal and Province Line.....	40.60			2				
55	Nelson and Fort Sheppard.....	59.40		2					
56	New Brunswick and Prince Edward Island.....	36.00		3					
57	Niagara Falls Park and River Electric Railway.....	13.68							
58	Northern Pacific and Manitoba.....	265.11		9				1	
59	Nosbonsing and Nipissing.....	5.50		1					
60	Nova Scotia Central.....	74.00		5					
61	Nova Scotia Southern.....		11.00						
62	Nova Scotia Steel Co., formerly New Glasgow Iron, Coal and Railway Co.....	12.50		3					
63	Orford Mountain.....	26.50			2				
64	Oshawa Electric Railway.....	8.50		*2					
65	Ottawa, Arnprior and Parry Sound.....	260.30	3.50	9	20				
66	Ottawa and Gatineau.....	56.50		2	1				
67	Philipsburg Railway and Quarry Co.....	6.75		1					
68	Pontiac and Renfrew.....	4.25		1					
69	Pontiac Pacific Junction.....	71.00		4				1	
70	Port Arthur, Duluth and Western.....	85.50		4					
71	Qu'Appelle, Long Lake and Saskatchewan.....	253.96							
72	Quebec Central.....	213.50		13		1		1	
73	Quebec and Lake St. John.....	245.85							
	Lower Laurentian.....	39.50		16				4	
74	Quebec, Montmorency and Charlevoix.....	30.00		4					
75	Red Mountain.....	9.53		1					
76	Salisbury and Harvey.....	45.00		2					
77	Shore Line.....	82.50		5					
78	Stanstead, Shefford and Chambly.....	43.00		5					
79	St. Catharines and Niagara Central.....	12.35		1					
80	St. Clair Tunnel Yard and Approach.....	2.23		4					
81	St. John Valley and Rivière du Loup.....		6.00						
82	St. Lawrence and Adirondack.....	33.00			7				
83	Stewiacke Valley and Lansdowne, now Midland.....		90.00						
84	Sydney and Louisbourg (Dominion Coal Co.).....	65.90		19					
85	South Shore, formerly Montreal and Sorel.....	44.67		4					
86	Témiscouata.....	113.00		5				*1	
87	Tilsonburg, Lake Erie and Pacific.....	16.00		1	1				
88	Thousand Islands.....	4.33		1					
89	Toronto, Hamilton and Buffalo, formerly Brantford, Waterloo and Lake Erie.....	83.93		10				+1	
90	United Counties.....	61.00		5	1				
91	Victoria and Sydney, B.C.....	16.26		2					
92	Winnipeg Great Northern, formerly Winnipeg and Hudson Bay.....	40.00							
		16,687.37	394.25	2006	90	105	27	84	10

Department of Railways and Canals.

Rolling Stock, for the Year ended 30th June, 1897—*Concluded.*

Number of First Class Cars.		Number of Second Class and Immigrant Cars.		Number of Baggage, Mail and Express Cars.		Number of Cattle and Box Freight Cars.		Number of Platform Cars.		Number of Hopper and Dumping Cars.		Number.	Remarks.
Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.		
+30	+8					*1		16				51	+Motor cars. *Tool car. Also 3 snow
*8	12				5							52	*Motor cars. [ploughs.
												53	Operated by Central Vermont Ry.
	4			1								54	do do
2		1				2		20				55	1 flanger.
1		1				2		33				56	1 snow plough.
*40				1						5		57	*Motor cars.
3		5		3		*291		179				58	*Including 6 conductors vans.
						*1		56				59	*1 tool car.
4		1		2		13		49				60	1 snow plough.
												61	
		*1				2		15		28		62	*Combined car.
								2				63	
4				1								64	*1 moter and 1 snow scraper.
9		4		4		*3	13	132	85			65	*Conductors vans; 3 snow ploughs, 1
												66	flanger.
2		9		2		*9		28				67	*Including 1 conductors van. Also
1												68	owned 1 snow plough, 1 flanger.
												69	Freight rolling stock furnished by
												70	C. P. R.
1		1		1		5		52				71	1 snow plough and 1 flanger.
2				2		*14		80				72	*Including 4 conductors vans; 1 flanger.
												73	Operated by C. P. R.
8		7		11		*260		275				74	*Including 6 conductors vans and 1 tool
												75	car; 5 snow ploughs, 1 flanger.
6		10		5		*78		263				76	*Including 5 conductors vans, 1 tool car.
4		18				5		23				77	Also owned 1 flanger, 7 snow ploughs.
1				1		10		10				78	1 snow plough.
1				1		*7		22				79	
												80	*Including 1 conductors van. Also
5				3		7		61				81	owned 1 snow plough, 1 flanger.
8				2								82	1 snow plough, 1 flanger.
1				1				2				83	
						*9				25		84	*Conductors vans.
												85	
	2					*4						86	*3 conductors vans, 1 tool car. Also
												87	owned 1 snow plough, 1 flanger.
												88	
2		3				*3		11		610		89	*Including 2 conductors vans. Also
												90	owned 1 snow plough, 1 flanger.
3	1			1		2		48				91	1 snow plough, 1 flanger.
2		4		2		40		54				92	4 snow ploughs, 2 flangers. *Official.
1	1	1		2					20				
				1				1					
6		6		4		*66		33					
3		1				6		9					
1				1		3		15					
1047	38	684	4	663	11	34,939	2532	15,149	203	4,931			

No. 4.—SUMMARY STATEMENT of the Operations of the

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Tra Mileage.
1	Alberta Ry. and Coal Co.	64·62			33,066	33,066
2	Albert Southern.....	16·00		1,440	480	1,920
3	Atlantic and Lake Superior, comprising— Baie des Chaleurs.....					
	Great Eastern (not under traffic).....	80·00	16,513	5,637		22,150
	Ottawa Valley (do).....					
4	Bay of Quinté Ry. and Navigation Co. Kingston, Napanee and Western.....	64·82			133,536	133,536
5	Berlin and Waterloo Electric.....	3·00	72,760			72,760
6	Brockville, Westport and Sault Ste. Marie	45·00	1,078	1,220	30,510	32,808
7	Buctouche and Moncton.....	32·00			20,672	20,672
8	Calgary and Edmonton.....	295·07		4,257	69,377	73,634
9	Canada Atlantic.....	138·00				
	Central Counties.....	38·00				
10	Canada Eastern.....	136·00	91,104	83,309	38,265	212,678
11	Canada Southern.....	382·19	1,139,707	2,211,589	156,124	3,507,420
	Canadian Government Railways—					
12	Intercolonial.....	1,150·50	1,304,657	2,537,845		3,842,502
13	Prince Edward Island.....	210·00	89,134	161,191		250,325
14	Canadian Pacific Ry., owned.....	4,119·10				
	Leased Lines—					
	Fredericton.....	22·40				
	New Brunswick.....	175·00				
	New Brunswick and Canada.....	118·00				
	St. John and Maine.....	92·00				
	St. John Bridge and Railway Extension.....	2·00				
	St. Stephen and Milltown.....	4·64				
	Tobique Valley.....	28·00				
	Cap de la Madeleine.....	2·32				
	Montreal and Lake Maski- nongé.....	12·90				
	Montreal and Western.....	66·90				
	Atlantic and North-west.....	205·00				
	Montreal and Ottawa.....	52·80				
	Ontario and Quebec.....	469·00				
	St. Lawrence and Ottawa.....	58·40				
	Credit Valley.....	175·10				
	Guelph Junction.....	15·00				
	Toronto, Hamilton and Buf- falo.....	2·70				
	Toronto, Grey and Bruce.....	191·30				
	West Ontario Pacific.....	26·60				
	Manitoba South-western Col- onization.....	215·20				
	Alberta Railway and Coal Co.....	109·50				
	Columbia and Kootenay.....	28·50				
	Nakusp and Slocan.....	36·90				
	Shuswap and Okanagan.....	51·00				
15	Caraguet.....	68·00			34,100	34,100
16	Carillon and Grenville.....	13·00	5,800	200		6,000
17	Central Ontario.....	104·00				
	Ontario, Belmont and Northern.....	9·60	14,074	6,372	81,974	102,420
18	Central of New Brunswick.....	75·66			43,200	43,200
19	Cumberland Ry. and Coal Co.....	32·00			66,643	66,643
20	Dominion Atlantic, comprising—					
	Windsor and Annapolis.....	87·50				
	Cornwallis Valley.....	14·00				
	Yarmouth and Annapolis.....	87·00				
	Windsor Branch, Intercolonial.....	32·00				
21	Drummond County.....	90·53	40,985	5,000	48,710	94,695
		34				

Department of Railways and Canals.

Year and Mileage, for the Year ended 30th June, 1897.

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passen- ger Trains—Miles per hour.	Average Rate of Speed of Freight Trains—Miles per hour.	Number.	Remarks.
61,329	1,016	43,997	14	1	From Lethbridge to Coutts on International Boundary, the portion of this railway from Dunmore to Lethbridge, 109·50 miles, is operated by C. P. Ry. under lease.
1,920	80	5,616	.....	16	2
27,418	4,211	2,070	16	.....	3
133,536	50,884	189,788	.....	.....	4
.....	211,735	6	5	{ Baie des Chaleurs Ry. from Metapedia to Caplin, 80 miles only, operated for the five months ended 31st May, 1897, and operated during that period by the Intercolonial Ry.
34,102	27,792	14,583	20	.....	6
21,703	10,240	16,410	16	.....	7
74,746	9,476	27,018	17	.....	8
623,679	187,887	643,293	35	15	9	
219,432	54,095	100,980	30	18	10	
4,390,776	491,071	3,522,052	43	27	11	
4,714,661	1,501,690	1,296,028	25	15	12	
353,991	121,498	52,147	20	14	13	
18,683,856	2,987,163	4,640,578	28	17	14	
34,100	5,572	10,229	15	15	{ St. Stephen and Milltown only operated for 2 months, ended 30th June, 1897. Can. Pac. Ry. have leased from Grand Trunk Ry. running powers on line from Toronto to Hamilton Junction, 35·82 miles.
6,500	6,335	260	25	20	16	
102,420	53,599	83,903	25	20	17	
43,200	10,754	18,978	.....	15	18
117,346	18,776	329,694	20	19	
486,702	212,347	159,148	30	15	20	
96,430	22,593	126,040	20	15	21	

No. 4.—SUMMARY STATEMENT of the Operations of the Year

Number.	Railways.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
22	Elgin and Havelock	27 00			16,902	16,902
23	Erie and Huron	76 75	61,610	47,502	49,087	158,199
24	Esquimalt and Nanaimo	78 00	98,913	36,984		135,897
25	Fredericton & St. Mary's Ry. Bridge Co.	1 33				
26	Grand Trunk	884 25				
	Great Western	561 80				
	Brantford, Norfolk and Port Burwell	34 78				
	Buffalo and Lake Huron	162 00				
	Grand Trunk, Georgian Bay and Lake Erie	172 75				
	Owen Sound Branch	12 42				
	London, Huron and Bruce	69 01				
	Waterloo Junction	10 25				
	South Norfolk	17 00				
	Wellington, Grey and Bruce	168 13				
	Northern	172 10				
	North Simcoe	33 34				
	Hamilton and North-western	173 90				
	Northern and Pacific Junc.	111 37				
	Toronto Belt Line	12 70				
	Midland	166 78				
	Grand Junction	85 40				
	Toronto and Nipissing	85 00				
	Lake Simcoe Junction	26 50				
	Victoria	53 25				
	Whitby, Port Perry & Lindsay	46 50				
	Jacques Cartier Union	6 50				
	Montreal and Champlain Jcn.	61 75				
	Beauharnois Junction	19 50				
27	Great Northern	28 00			17,808	17,808
28	Great North-west Central	50 93	237	1,997	10,718	12,952
29	Hamilton, Grimsby and Beamsville	23 00	192,952			192,952
30	Hamilton and Dundas Electric	6 00	38,544			38,544
31	Hereford	53 30	35,407	73,765		109,172
32	Hull Electric	6 30	196,616	9,601		206,217
33	Irondale, Bancroft and Ottawa	45 00			27,800	27,800
34	Joggins, now Canada Coals and Ry. Co.	12 00	1,200	1,200	14,400	16,800
35	Kaslo and Slocan	31 80	5,379	4,665	22,630	32,674
36	Kent Northern, including St. Louis and Richibucto	34 00			18,366	18,366
37	Kingston and Pembroke	112 85	65,312	5,456	63,004	133,772
38	L'Assomption	3 00			6,194	6,194
39	Lake Erie and Detroit River	88 05				
	London and Port Stanley	23 75				
40	Lake Manitoba Ry. and Canal Co.	100 74			17,548	17,548
41	Lotbinière and Mégantic	30 34			9,360	9,360
42	Manitoba and North-western	234 50				
	Saskatchewan and Western	15 47				
43	Massawippi Valley	36 00	71,808	105,594		177,402
44	Montfort Colonization	21 00	6,074	4,315	2,817	13,206
45	Montreal and Atlantic, formerly South-eastern	140 10				
	Lake Champlain and St. Law- rence Junction	61 40				
46	Montreal Island Belt Line	11 60	95,738			95,738
47	Montreal Park and Island Electric	40 88	456,253			456,253
48	Montreal, Portland and Boston, now Montreal and Province Line	40 60	32,311	19,604	11,094	63,009
49	Montreal and Vermont Junction	23 60	68,436	100,687	1,514	170,637
50	Nelson and Fort Sheppard	59 40	36,004	21,681		57,685
51	New Brunswick and Prince Edward Island	36 00	4,296	8,499	22,500	35,295

Department of Railways and Canals.

and Mileage, for the Year ended 30th June, 1897—*Continued.*

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passen- ger Trains—Miles per hour.	Average Rate of Speed of Freight Trains—Miles per hour.	Number.	Remarks.
16,902	4,338	8,161	16	22	Included in Canada Eastern Railway, which company run their trains across this bridge, paying tolls.
173,022	90,827	106,666	25	15	23	
135,897	40,467	34,112	27	20	24	
.....	.....	.....	.....	.....	25
19,229,011	5,559,105	7,948,998	35	20	26	Running powers over Chaudière Branch of Intercolonial, 6 miles. The Cobourg, Blairton and Marmora not under traffic.
17,976	6,688	6,713	25	27	Running powers on Grand Trunk from Sher- brooke to Lennoxville, 3 miles.
16,136	3,861	28,517	20	17	28	
.....	227,157	1,000	15	.....	29
38,544	172,402	.....	10	.....	30
109,172	10,749	109,946	20	12	31	
.....	347,461	44,680	25	.....	32
28,665	4,683	23,190	.....	18	33
28,800	9,035	53,407	20	15	34	
32,930	28,307	23,754	12	12	35	
18,366	5,602	9,077	18	18	36	
133,772	32,279	80,677	25	18	37	
6,194	5,597	487	.....	15	38
298,200	253,387	174,021	35	25	39	
19,423	4,557	7,837	18	18	40	
9,360	4,513	20,093	25	25	41	
155,467	33,331	146,912	27	15	42	
177,402	73,277	159,778	25	12	43	
15,389	3,121	5,139	15	.....	44
503,784	158,572	540,813	30	18	45	
.....	121,841	.....	14	.....	46
.....	918,118	.....	8	.....	47
63,009	66,217	39,028	30	12	48	
170,637	107,617	702,007	40	15	49	
57,982	28,948	38,587	20	12	50	
39,980	16,609	29,795	20	15	51	

No. 4.—SUMMARY STATEMENT of the Operations of the Year

Number.	Railways.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
52	Niagara Falls Park and River Electric Ry.	13.68	225,639	480		226,119
53	Northern Pacific and Manitoba	265.11	88,201	87,048	33,570	209,819
54	Nosbonsing and Nipissing	5.50		12,190		12,190
55	Nova Scotia Central	74.00	11,319		48,704	60,023
56	Nova Scotia Steel Co., formerly New Glasgow Iron, Coal and Ry. Co.	12.50			15,700	15,700
57	Orford Mountain	26.50	17,584	6,328	8,599	32,511
58	Oshawa Electric Ry.	8.50	33,336	10,955		44,291
59	Ottawa and Gatineau	56.50	20,998	941	34,315	56,254
60	Ottawa, Arnprior and Parry Sound	260.30	198,926	152,652	12,193	363,771
61	Philipsburg Ry. and Quarry Co.	6.75	720	186		906
62	Pontiac Pacific Junction	71.00	955	2,241	47,119	50,315
63	Pontiac and Renfrew	4.25				
64	Port Arthur, Duluth and Western	85.50	1,412		14,466	15,878
65	Qu'Appelle, Long Lake and Saskatchewan	253.96			54,734	54,734
66	Quebec and Lake St. John	242.00				
	Lower Laurentian	39.50	281.50	88,369	42,477	67,735
67	Quebec Central	213.50	142,225	233,034	39,849	415,108
68	Quebec, Montmorency and Charlevoix	30.00	49,861	4,341		54,202
69	Red Mountain	9.53	3,027	5,747		8,774
70	Salisbury and Harvey	45.00			28,170	28,170
71	Shore Line	82.50	1,395		51,645	53,040
72	Stanstead, Shefford and Chambly	43.00	35,480	34,491	8,703	78,674
73	St. Clair Tunnel	2.23				
74	St. Catharines and Niagara Central	12.35	12,000	2,000	6,000	20,000
75	St. Lawrence and Adirondack	33.00	103,574	4,189	51,403	159,166
76	Sydney and Louisbourg	65.90	36,400	95,230		131,630
77	South Shore, formerly Montreal & Sorel	44.67	30,870		28,170	59,040
78	Témiscouata	113.00	9,600		83,260	92,860
79	Tilsonburg, Lake Erie and Pacific	16.00	18,000		7,000	25,000
80	Thousand Islands	4.33			17,850	17,850
81	Toronto, Hamilton and Buffalo	83.93	115,992	48,881	1,978	166,851
82	United Counties	61.00	41,784		41,316	83,100
83	Victoria and Sydney, B.C.	16.26			23,808	23,808
		16,550.17	17,237,974	23,595,000	4,947,877	45,780,851

Department of Railways and Canals

and Mileage, for the Year ended 31st June, 1897—*Concluded.*

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passen- ger Trains—Miles per hour.	Average Rate of Speed of Freight Trains—Miles per hour.	Number.	Remarks.
.....	336,954	2,095	9	8	52	
216,935	36,241	138,531	27	13	53	
13,762		264,320		20	54	
66,200	36,341	22,276	20		55	
15,700	8,113	162,283	15	15	56	
32,511	5,794	31,269	25	15	57	
44,291	93,216	22,086			58	
56,267	45,636	16,936	30	20	59	
478,885	92,419	183,376	30	12	60	
906	363	1,019	20		61	
50,551	20,740	15,828	30	20	62	
.....		1,000			63	
16,018	3,486	15,538	20	15	64	
55,420	3,135	16,229	17	17	65	
276,657	130,009	150,346	22	12	66	
442,332	132,086	260,880	25	15	67	Running powers over Intercolonial Ry. from Harlakia Junction to Lévis, 5 miles.
54,449	203,916	11,547	21	21	68	
8,774	15,286	29,242	10	8	69	Operated from Dec. 19th, 1896, to June 30th, 1897.
30,850	9,701	33,910	13	18	70	
53,666	12,885	10,988	25	20	71	
78,674	128,101	654,630	23	12	72	
44,906					73	
20,000	15,561	74,107	25	20	74	
187,453	72,942	147,345	40	25	75	Running powers on G. T. Ry., Valleyfield to Beauharnois, 13·20 miles; also running powers on Can. Pac. Ry. from Adirondack Junction to Montreal, 8·70 miles.
136,800	47,511	1,207,238	25	17	76	
59,040	91,229	9,116	30	22	77	
92,950	14,693	28,995	22	16	78	
25,000	21,000	6,341	30	30	79	
17,850	19,557	12,323	20	20	80	
320,208	100,275	98,403	40	20	81	
84,600	28,426	29,281	30	18	82	Running powers on Montreal and Atlantic from St. Robert Junction to Sorel, 5 miles.
23,968	18,242	16,646	25	25	83	
54,729,490	16,171,338	25,300,331				

No. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live Number.
			Barrels.	Tons.	Bushels.	Tons.	
1	Alberta Railway and Coal Co.....	64·62	450	45	3,520	88	.....
2	Albert Southern	16·00	85	8	.....	.....	.....
3	Atlantic and Lake Superior, comprising Baie des Chaleurs..... 80·00 Great Eastern... not in operation. Ottawa Valley... do }	80·00	2,341	234	6,806	115	6
4	Bay of Quinté Railway and Navigation Co Kingston, Napanee and Western... }	64·82	27,480	2,748	85,455	2,350	5,090
5	Berlin and Waterloo Electric.....	3·00	.....	.....	.....	.....	.....
6	Brockville, Westport & Sault Ste. Marie	45·00	23,683	2,373	139,863	4,196	7,370
7	Buctouche and Moncton	32·00	.....	.....	.....	.....	.....
8	Calgary and Edmonton	295·07	18,457	1,846	234,235	4,638	15,479
9	Canada Atlantic..... 138·00 Central Counties..... 38·00 }	176·00	101,080	10,108	1,497,100	29,942	24,488
10	Canada Eastern	136·00	63,807	6,380	129,698	2,204	544
11	Canada Southern	382·19	1,721,110	172,111	25,896,905	585,788	880,000
	Canadian Government Railways—						
12	Intercolonial	1,150·50	847,701	84,770	1,093,499	19,315	72,062
13	Prince Edward Island	210·00	16,213	1,723	728,622	12,371	7,830
14	Canadian Pacific Ry. owned. 4,119 10 Leased lines—						
	Fredericton	22·40					
	New Brunswick	175·00					
	New Brunswick & Canada.....	118·00					
	St. John and Maine	92·00					
	St. John Bridge and Rail- way Extension	2·00					
	St. Stephen and Milltown	4·64					
	Tobique Valley	28·00					
	Cap de la Madeleine	2·32					
	Montreal & L. Maskinonge	12·90					
	Montreal and Western	66·90					
	Atlantic and North-west	205·00					
	Montreal and Ottawa	52·80					
	Ontario and Quebec	469·00	6,280·26	3,061,015	31,038,819	808,364	614,053
	St. Lawrence & Ottawa	58·40					
	Credit Valley	175·10					
	Guelph Junction	15·00					
	Toronto, Hamilton and Buffalo	2·70					
	Toronto, Grey and Bruce	191·30					
	West Ontario Pacific	26·60					
	Manitoba South-western Colonization	215·20					
	Alberta Railway and Coal Co.	109·50					
	Columbia and Kootenay	28·50					
	Nakusp and Slocan	36·90					
	Shuswap and Okanagan	51·00					
15	Caraqueet	68·00	7,200	720	1,000	17	44
16	Carillon and Grenville	13·00	150	15	.....	.....	130
17	Central Ontario	104·00					
	Ontario, Belmont & Northern	113·60	9,398	921	249,920	6,248	3,712
18	Central of New Brunswick	75·66	7,929	.....	.....	.....	.....
19	Cumberland Railway and Coal Co.	32·00	.....	792	32,958	560	50
20	Dominion Atlantic, comprising—						
	Windsor and Annapolis	87·50					
	Cornwallis Valley	14·00					
	Yarmouth and Annapolis	87·00	220·50	90,434	9,043	.....	9,183
	Windsor Branch of Interco- lonial	32·00					
21	Drummond County	90·53	22,730	2,302	24,552	417	37

Department of Railways and Canals.

Freight carried for the Year ended 30th June, 1897.

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Tons.	Feet, B.M.	Tons.	Cords.	Tons.	Tons.	Tons.	Tons.		
.....	371,300	650	.....	.....	25	*43,189	43,997	1	Including 42,982 tons of coal.
.....	3,700,000	5,550	.....	.....	.....	58	5,616	2	
3	596,565	757	.....	.....	686	275	2,070	3	Operated by Federal Government for 5 months ended 31st May, 1897.
.....	
2,036	45,521,714	79,663	16,296	24,444	44,363	34,184	189,788	4	
.....	
1,296	458,088	684	.....	.....	4,907	1,127	14,583	5	
.....	4,210,000	5,101	4,214	7,775	1,430	*2,104	16,410	6	
7,196	1,225,086	1,569	336	505	5,682	5,582	27,018	7	*Including 1,491 tons of produce.
.....	
6,122	273,816,000	376,497	25,446	41,985	22,001	*156,638	643,293	8	*General merch'dise, pork, coal and hay.
.....	
160	13,964,655	20,946	13,462	16,827	27,654	26,809	100,980	9	
176,449	233,000,000	350,008	74,000	37,031	440,957	1,759,708	3,522,052	10	
.....	
11,578	243,355,725	304,194	14,971	26,200	313,818	536,153	1,296,028	11	
963	2,270,626	3,525	2,055	3,879	29,686	.....	52,147	12	
.....	.....	.....	.....	.....	.....	.....	.....	13	
.....	
157,506	744,932,013	1,030,782	183,121	314,452	1,128,505	894,868	4,640,578	14	
.....	
.....	
22	5,000,000	6,200	250	360	600	2,310	10,229	15	
60	.....	.....	.....	.....	50	135	260	16	
1,856	11,858,000	14,823	13,574	27,149	28,655	*4,251	83,903	17	*Including 1,713 tons iron ore.
.....	9,500,000	11,256	10,857	1,901	.....	*5,821	18,978	18	
25	9,656,000	12,070	.....	.....	5,269	*310,978	329,694	19	*Incl. 1,133 tons coal. *Coal.
.....	
2,015	15,467,800	23,201	2,505	3,758	36,163	*84,968	159,148	20	*Including apples, potatoes, hay, min- erals, &c.
41	21,275,641	31,067	13,387	17,896	6,297	68,020	126,040	21	

No. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live Number.
			Barrels.	Tons.	Bushels.	Tons.	
22	Elgin and Havelock	27 00	1,839	183	1,152	19	209
23	Erie and Huron	76 75	202,343	20,234	642,708	16,113	38,991
24	Esquimalt and Nanaimo	78 00	2,970	297	11,500	343	2,643
25	Fredericton and St. Mary's Railway and Bridge Co	1 33	.....	.....	.....	.....	.....
26	Grand Trunk	884 25	3,146 98	4,180,650	43,773,320	1,094,333	1,841,135
	Great Western	561 80					
	Brantford, Norfolk and Port Burwell	34 78					
	Buffalo and Lake Huron	162 00					
	Grand Trunk, Georgian Bay and Lake Erie	172 75					
	Owen Sound Branch	12 42					
	London, Huron and Bruce	69 01					
	Waterloo Junction	10 25					
	South Norfolk	17 00					
	Wellington, Grey and Bruce	168 13					
	Northern	172 10					
	North Simcoe	33 34					
	Hamilton & North-western	173 90					
	Northern & Pacific Junction	111 37					
	Toronto Belt Line	12 70					
	Midland	166 78					
	Grand Junction	85 40					
	Toronto and Nipissing	85 00					
	Lake Simcoe Junction	26 50					
	Victoria	53 25					
	Whitby, Port Perry and Lindsay	46 50					
	Jacques Cartier Union	6 50					
	Montreal and Champlain Junction	61 75					
	Beauharnois Junction	19 50					
27	Great Northern	28 00	15,403	1,540	7,500	194	11
28	Great North-west Central	50 93	650	65	650,000	21,859	2,158
29	Hamilton, Grimsby and Beamsville Electric	23 00	.....	.....	.....	.....	.....
30	Hamilton and Dundas Electric	6 00	.....	.....	.....	.....	.....
31	Hereford	53 30	8,880	888	37,371	662	.....
32	Hull Electric	6 30	600	60	88,200	15,000	1,500
33	Irondale, Bancroft and Ottawa	45 00	5,638	552	3,780	64	427
34	Joggins, now Canada Coal and Ry. Co	12 00	1,527	155	12,435	207	11
35	Kaslo and Slocan	31 80	900	90	9,625	155	648
36	Kent Northern	34 00	5,463	546	706	15	26
	St. Louis and Richibucto .....	.....	.....	.....	.....	.....	.....
37	Kingston and Pembroke	112 85	9,450	945	29,500	885	60
38	L'Assomption	3 00	900	90	.....	.....	.....
39	Lake Erie and Detroit River	88 05	.....	.....	.....	.....	.....
	London and Port Stanley	23 75	111 80	11,764	2,270	585,994	16,913
40	Lake Manitoba Railway and Canal Co	100 74	3,640	364	139,015	3,873	165
41	Lotbinière and Mégantic	30 34	830	83	2,000	30	.....
42	Manitoba and North-western	234 50	249 97	85,366	8,537	2,829,713	74,350
	Saskatchewan and Western	15 47	.....	.....	.....	.....	.....
43	Massawippi Valley	36 00	6,310	631	280,000	5,600	3,000
44	Montfort Colonization	21 00	2,677	295	1,016	20	.....
45	Montreal and Atlantic, form- erly South-eastern	140 10	201 50	239,577	23,958	3,014,010	53,981
	Lake Champlain and St. Lawrence Junction	61 40	.....	.....	.....	.....	.....
46	Montreal Island Belt Line	11 60	.....	.....	.....	.....	.....
47	Montreal Park and Island Electric	40 88	.....	.....	.....	.....	.....
48	Montreal, Portland and Boston, now Montreal and Province Line	40 60	4,310	431	9,290	279	67

Department of Railways and Canals.

Freight carried for the Year ended 30th June, 1897—*Continued.*

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet, B.M.	Tons.	Cords.	Tons.	Tons.	Tons.		
48		3,702,000	6,170	212	425	1,092	224	8,161	22
5,461		18,487,000	23,359	174	291	8,203	*33,005	106,666	23
508		4,019,075	6,736	4,650	5,305	2,828	18,095	34,112	24
									25
									Included in Canada Eastern Ry.
368,227	466,457,500	932,915	124,164	186,246	816,654	4,132,558	7,948,998	26	
2	520,000	510	1,400	2,625	625	1,217	6,713	27	
527	950,500	2,007	2,500	869	1,446	1,744	28,517	28	
						1,000	1,000	29	Merchandise & fruit.
707	5,535,014	79,887	343	324	1,813	25,665	109,946	31	
500	17,020,000	25,350	2,000	3,000	498	272	44,680	32	
124	3,505,822	5,359	2,550	5,100	11,873	118	23,190	33	
5	640,000	1,193			819	*51,028	53,407	34	*Incl. 50,902 tons
97	713,866	1,071			3,127	19,214	23,754	35	coal.
11	126,000	780	1,198	1,290	6,435		9,077	36	
30	25,000,000	37,500	83,281	15,375	24,712	1,230	80,677	37	
	30,000	36			73	288	487	38	
7,656	41,600,000	62,417	18,200	9,101	76,264		174,021	39	
59	414,510	356			2,216	969	7,837	40	
	9,160,000	14,044	252	320		5,616	20,093	41	
5,654	6,591,500	8,045	538	695	12,522	37,109	146,912	42	
600	45,120,000	62,040			2,425	*88,482	159,778	43	*Incl. 22,500 tons ore
	1,881,000	3,292	474	948	272	312	5,139	44	and copper matte.
5,936	104,239,740	140,635	19,708	29,562	135,475	151,216	540,813	45	
								46	
								47	
10	3,121,000	3,907	136	195	2,423	31,783	39,028	48	Incl. 15,212 tons hay.

No. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live Number.
			Barrels.	Tons.	Bushels.	Tons.	
49	Montreal and Vermont Junction . . .	23 60	364,720	36,472	5,463,697	164,075	581,052
50	Nelson and Fort Sheppard . . .	59 40	2,630	263	2,300	71	480
51	New Brunswick and Prince Edward Island.	36 00	18,847	1,884	21,540	334	828
52	Niagara Falls, Park and River Electric Railway	13 68					
53	Northern Pacific and Manitoba	265 11	12,490	1,249	1,466,485	42,557	1,982
54	Nosbonsing and Nipissing	5 50					
55	Nova Scotia Central	74 00	11,153	1,115	1,646	20	265
56	Nova Scotia Steel Co., formerly New Glasgow Iron, Coal and Railway Co. . .	12 50	515	52	1,550	26	3
57	Orford Mountain	26 50	5,270	527	39,460	747	489
58	Oshawa Electric Railway	8 50			34,582	951	3
59	Ottawa and Gatineau	56 50	13,537	1,356	49,576	1,053	1,977
60	Ottawa, Arnprior and Parry Sound . .	260 30	18,830	1,883	384,500	7,690	12,448
61	Philipsburg Railway and Quarry Co. .	6 75					
62	Pontiac Pacific Junction.	71 00	3,880	388	221,300	4,076	4,045
63	Pontiac and Renfrew	4 25					
64	Port Arthur, Duluth and Western . .	85 50					35
65	Qu'Appelle, Long Lake and Saskat- chewan.	253 96	7,320	732	275,474	8,139	2,318
66	Quebec and Lake St. John	242 00					
	Lower Laurentian.	39 50	281 50	57,354	5,735	33,061	661
67	Quebec Central	213 50	126,524	12,652	31,274	938	10,580
68	Quebec, Montmorency and Charlevoix. .	30 00	3,792	378	10,107	216	49
69	Red Mountain	9 53	2,060	206	2,000	101	250
70	Salisbury and Harvey	45 00	4,866	486	29,527	501	214
71	Shore Line	82 50	6,242	624	8,950	149	376
72	Stanstead, Shefford and Chambly. . .	43 00	373,490	37,349	5,346,099	162,003	579,515
73	St. Clair Tunnel	2 23					
74	St. Catharines and Niagara Central . .	12 35	1,392	139	24,038	480	89
75	St. Lawrence and Adirondack	33 00	10,370	1,037	93,006	2,325	1,676
76	Sydney and Louisbourg	65 90	4,500	450			47
77	South Shore, formerly Montreal and Sorel	44 67	1,153	115	17,916	322	138
78	Témiscouata	113 00	14,257	1,425	11,107	122	168
79	Tilsonburg, Lake Erie and Pacific . .	16 00	1,120	114	1,610	42	400
80	Thousand Islands	4 33	1,300	130	13,818	380	1,178
81	Toronto, Hamilton and Buffalo	83 93	8,730	873	99,375	2,988	5,000
82	United Counties	61 00	13,390	1,339	29,500	531	242
83	Victoria and Sydney, B. C.	16 26	725	72	16,711	333	648
		16,550 17	11,816,797	1,191,564	127,021,990	3,184,339	4,808,885

Department of Railways and Canals

Freight carried for the Year ended 30th June, 1897—*Concluded.*

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Tons.	Feet, B.M.	Tons.	Cords.	Tons.	Tons.	Tons.	Tons.		
87,245 543	67,240,000 1,800,000	84,156 2,444	398 95	569 90	72,728 4,297	256,762 *30,879	702,007 38,587	49 50	Incl. 64,127 tons hay. *Incl. 18,254 tons ore.
53	12,294,000	17,192	1,429	2,523	2,274	5,535	29,795	51	
						2,095	2,095	52	
1,090	13,030,000	16,288	18,976	33,209	6,965	37,173	138,531	53	
		264,320					264,320	54	Incl. logs and lumber.
32	4,786,096	13,224	2,735	3,755	2,845	1,285	22,276	55	
2	1,648,800	2,061	15	30	942	*159,170	162,283	56	*Incl. ores, iron, coal, slag, &c.
104	13,280,000	13,308	8,118	*11,338	1,661	3,584	31,269	57	*Incl. 3,678 tons of pulpwood.
1	1,202,285	2,104	111	166	12,137	6,727	22,086	58	
501	1,182,495	1,850			8,362	*3,814	16,936	59	*Incl. pulpwood.
3,112	96,134,000	132,185	2,537	4,186	1,553	*32,767	183,376	60	Gen. merchandise, pork, hay, coal, &c.
	65,000	80			107	832	1,019	61	
508	1,601,040	2,430	2,548	3,530	4,195	701	15,828	62	
						1,000	1,000	63	Iron ore.
26	1,706,460	6,825	4,282	6,423	175	2,089	15,538	64	
970	1,083,553	1,373	1,285	1,929	2,317	769	16,229	65	
195	50,892,000	74,271	25,620	46,116	7,805	15,563	150,346	66	
2,277	111,692,981	167,540	638	1,197	4,330	*71,946	260,880	67	*Incl. ore, brick, pulp, lime, asbestos, &c.
38	813,760	1,223	1,904	1,656	2,968	5,068	11,547	68	
277	3,600,000	6,071	1,500	2,740	2,319	*17,528	29,242	69	*Incl. 10,761 tons ore.
107	14,770,000	18,462	1,754	3,288	315	*10,751	33,910	70	*Incl. plaster & hay.
132	4,200,000	4,200	96	136	2,462	3,285	10,988	71	
87,181	36,936,000	46,228	1,056	1,509	67,460	*252,900	654,630	72	*Incl. 49,002 tons hay.
								73	
41	435,000	1,176	98	182	8,564	63,525	74,107	74	
838	25,491,333	38,237	1,666	1,111	15,623	88,174	147,345	75	
30	600,000	1,200			65	*1,205,493	1,207,238	76	*Incl. 1,192,993 tons coal.
70	281,000	422	74	112	1,324	6,751	9,116	77	
84	12,109,510	14,837	2,948	5,798	1,723	5,006	28,995	78	
37	650,000	814	75	81	2,750	2,503	6,341	79	
471	625,714	1,095			5,191	5,056	12,323	80	
1,151	1,500,000	2,155	2,600	1,319	15,777	74,140	98,403	81	
121	5,532,571	9,682	227	454	2,820	14,334	29,281	82	
61	130,300	223	6,453	12,906	598	2,448	16,646	83	
950,188	2,885,347,612	4,643,883	725,492	932,186	3,471,195	10,927,976	25,300,331		

No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.		Freight Traffic.		Mails and Express Freight.
			\$	cts.	\$	cts.	
1	Alberta Railway and Coal Co.....	64·62	2,949	56	34,055	08	678 92
2	Albert Southern.....	16·00		4 10	1,178	37	.....
3	Atlantic and Lake Superior, comprising—						
	Baie des Chaleurs..... 80·00						
	Great Eastern (not under traffic).....	80·00	3,079	91	3,617	87	27 30
	Ottawa Valley do.....						
4	Bay of Quinte Ry. and Navigation Co.....	64·82	18,353	71	101,029	10	8,598 10
	Kingston, Napanee and Western.....						
5	Berlin and Waterloo (Electric).....	3·00	8,928	93			
6	Brockville, Westport and Sault Ste. Marie.....	45·00	12,061	23	14,067	42	2,562 63
7	Buctouche and Moncton.....	32·00	4,344	43	9,190	50	18 22
8	Calgary and Edmonton.....	295·07	38,965	74	90,377	49	4,926 06
9	Canada Atlantic..... 138·00						
	Central Counties..... 38·00	176·00	160,725	20	492,747	30	17,918 70
10	Canada Eastern.....	136·00	33,273	79	86,606	16	4,281 84
11	Canada Southern.....	382·19	964,088	57	3,312,558	80	240,519 63
	Canadian Government Railways—						
12	Intercolonial.....	1,150·50	979,005	57	1,687,050	42	199,972 03
13	Prince Edward Island.....	210·00	62,695	07	69,872	66	20,522 90
14	Canadian Pacific Railway..... 4,119·10						
	Leased Lines—						
	Fredericton..... 22·40						
	New Brunswick..... 175·00						
	New Brunswick and Canada..... 118·00						
	St. John and Maine..... 92·00						
	St. John Bridge and Ry. Extension..... 2·00						
	St. Stephen and Milltown..... 4·64						
	Tobique Valley..... 28·00						
	Cap de la Madeleine..... 2·32						
	Montreal and Lake Maskinongé..... 12·90						
	Montreal and Western..... 66·90						
	Atlantic and North-west..... 205·00						
	Montreal and Ottawa..... 52·80	6,280·26	4,941,486	32	13,036,789	69	1,046,675 94
	Ontario and Quebec..... 4·69						
	St. Lawrence and Ottawa..... 58·40						
	Credit Valley..... 175·10						
	Guelph Junction..... 15·00						
	Toronto, Hamilton and Buffalo... 2·70						
	Toronto, Grey and Bruce..... 191·30						
	West Ontario Pacific..... 26·60						
	Manitoba South-western Coloniza- tion..... 215·20						
	Alberta Railway and Coal Co..... 109·50						
	Columbia and Kootenay..... 28·50						
	Nakusp and Slocan..... 36·90						
	Shuswap and Okanagan..... 51·00						
15	Caraquet.....	68·00	4,624	63	15,206	71	1,974 45
16	Carillon and Grenville.....	13·00	1,581	96	202	48	.....
17	Central Ontario..... 104·00						
	Including Ontario, Belmont and Nor- thern..... 9·60	113·60	25,303	55	57,949	93	9,213 31
18	Central of New Brunswick.....	75·66	5,851	86	10,357	97	280 38
19	Cumberland Railway and Coal Co.....	32·00	9,049	03	13,751	32	2,337 70
20	Dominion Atlantic, comprising—						
	Windsor and Annapolis..... 87·50						
	Cornwallis Valley..... 14·00						
	Yarmouth and Annapolis..... 87·00	220·50	273,859	60	238,806	54	36,266 62
	Windsor Branch of Intercolonial... 32·00						
21	Drummond County.....	90·53	14,018	46	81,692	48	3,916 20
22	Elgin and Havelock.....	27·00	1,324	88	5,557	12	704 95
23	Erie and Huron.....	76·75	39,479	49	60,048	67	7,954 70
24	Esquimalt and Nanaimo.....	78·00	48,308	20	37,109	53	2,929 68

Department of Railways and Canals

for the Year ended 30th June, 1897.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportions of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	p. c.	Cts.		
63,878 12	101,561 68	16,777 48	120	307 13	1	From Lethbridge to Coutts on International boundary—the portion of this railway, from Dunmore to Lethbridge, 109 50 miles, is operated by the Canadian Pacific Railway under lease. 3 Operated by Federal Government for 5 months ending 31st May, 1897.
.....	1,182 47	— 68 04	94	61 58	2	
.....	6,725 08	— 11,954 89	36	30 36	3	
1,844 82	120,825 73	48,463 83	159	97 22	4	
.....	8,928 93	1,533 60	121	12 27	5	
48 56	28,739 84	653 62	102	87 60	6	
236 65	13,789 80	99 04	100	66 70	7	
1,189 51	135,458 80	70,643 34	209	183 96	8	
51,384 53	722,775 73	247,443 14	152	137 64	9	
3,573 69	127,735 48	44,541 14	153	60 06	10	
5,954 41	4,523,121 41	1,631,512 72	156	128 95	11	
.....	2,866,028 02	— 59,940 65	98	74 59	12	
352 50	153,443 13	— 87,046 77	64	61 29	13	
1,798,022 48	20,822,974 43	8,623,982 73	170	147 04	14	Including portion of Alberta Railway and Coal Co's line from Dunmore to Lethbridge, 109 50 miles.
225 60	22,031 39	902 11	104	64 60	15	*Coal.
.....	1,784 44	— 2,041 36	46	29 74	16	
619 46	93,086 25	18,748 42	125	90 89	17	
11 57	16,501 78	— 11,279 28	59	38 20	18	
*74,779 12	99,917 17	50,004 80	200	149 92	19	
.....	548,932 76	186,446 78	151	112 79	20	
343 44	99,970 58	35,101 61	154	105 57	21	
5 36	7,592 31	— 2,297 33	77	44 92	22	
408 33	107,891 19	25,408 44	131	68 20	23	
3,815 83	92,163 24	— 204,544 06	31	67 81	24	

No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.		Freight Traffic.		Mails and Express Freight.	
			\$ cts.		\$ cts.		\$ cts.	
25	Fredericton and St. Mary's Railway and Bridge Co.	1 33	1,155 89		3,530 72		.....
26	Grand Trunk.....	884 25						
	Great Western.....	561 80						
	Brantford, Norfolk and Port Burwell.....	34 78						
	Buffalo and Lake Huron.....	162 00						
	Grand Trunk, Georgian Bay and Lake Huron.....	172 75						
	Owen Sound Branch.....	12 42						
	London, Huron and Bruce.....	69 01						
	Waterloo Junction.....	10 25						
	South Norfolk.....	17 00						
	Wellington, Grey and Bruce.....	168 13						
	Northern.....	172 10						
	North Simcoe.....	33 34	3,146 98		4,856,333 13		11,167,316 70	
	Hamilton and North-western.....	173 90					844,005 37	
	Northern and Pacific Junction.....	111 37						
	Toronto Belt Line.....	12 70						
	Midland.....	166 78						
	Grand Junction.....	85 40						
	Toronto and Nipissing.....	85 00						
	Lake Simcoe Junction.....	26 50						
	Victoria.....	53 25						
	Whitby, Port Perry and Lindsay.....	46 50						
	Jacques Cartier Union.....	6 50						
	Montreal and Champlain Junction.....	61 75						
	Beauharnois Junction.....	19 50						
27	Great Northern.....	28 00	2,250 30		3,852 17		96 00	
28	Great North-west Central.....	50 93	3,785 62		33,841 19		192 94	
29	Hamilton, Grimsby and Beamsville (Electric).....	23 00	30,949 14		3,381 72		486 14	
30	Hamilton and Dundas.....	6 00	16,119 87				1,693 84	
31	Hereford, including Dominion Lime Co's. Ry.....	53 30	6,758 26		35,464 71		1,298 52	
32	Hull (Electric).....	6 30	28,635 54		10,834 93		1,073 28	
33	Irondale, Bancroft and Ottawa.....	45 00	2,821 90		7,748 97		712 56	
34	Joggins, late Canada Coals and Railway Co.....	12 00	2,867 85		22,225 23		424 71	
35	Kaslo and Slocan.....	31 80	40,247 27		75,034 42		1,009 86	
36	Kent Northern.....	34 00	3,290 37		6,992 43		894 37	
	St. Louis & Richibucto.....							
37	Kingston and Pembroke.....	112 85	25,503 70		82,396 19		8,780 68	
38	L'Assomption.....	3 00	1,178 85		200 13		160 15	
39	Lake Erie and Detroit River.....	88 05						
	London and Port Stanley.....	23 75	111 80		73,786 80		100,435 73	
40	Lake Manitoba Railway and Canal Co.....	100 74	9,473 13		16,967 49		190 61	
41	Lotbinière and Mégantic.....	30 34	1,561 94		7,323 96			
42	Manitoba and North-western.....	234 50						
	Saskatchewan and Western.....	15 47	249 97		59,779 18		237,549 42	
43	Massawippi Valley.....	36 00	49,000 28		96,364 72		1,971 90	
44	Montfort Colonization.....	21 00	921 96		2,362 56		46 24	
45	Montreal and Atlantic, formerly South-eastern.....	140 10						
	Lake Champlain and St. Lawrence Junction.....	61 40	201 50		92,805 36		205,025 33	
46	Montreal Island Belt Line.....	11 60	12,027 61					
47	Montreal Park and Island (Electric).....	40 88	68,625 62					
48	Montreal, Portland and Boston, now Montreal and Province Line.....	40 60	24,341 48		27,742 53		2,646 81	
49	Montreal and Vermont Junction.....	23 60	45,457 02		99,648 55		5,268 67	
50	Nelson and Fort Sheppard.....	59 40	62,049 77		52,814 49		2,815 69	
51	New Brunswick and Prince Edward Island.....	36 00	5,924 94		1,507 09		1,722 67	
52	Niagara Falls Park and River Electric Railway.....	13 68	40,056 36					
53	Northern Pacific and Manitoba.....	265 11	50,193 63		163,016 29		10,802 24	
54	Nosbonsing and Nipissing.....	5 50			57,826 60			
55	Nova Scotia Central.....	74 00	24,478 26		20,042 04		2,510 65	

Department of Railways and Canals.

for the Year ended 30th June, 1897.—Continued.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportions of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	p. c.	Cts.		
.....	4,686 61	3,264 88	329	.....	25	Receipts from tolls on trains run by Canada Eastern Railway.
109,657 65	16,977,312 85	5,613,743 36	149	104·08	26	
.....	6,198 47	14 42	100	34·80	27	
680 17	38,499 92	3,529 83	110	297·25	28	
548 27	35,365 27	13,365 95	160	18·33	29	
.....	17,813 71	9,378 79	211	46·22	30	
.....	43,521 49	10,029 65	81	39·86	31	
.....	40,543 75	27,135 20	60	19·66	32	
.....	11,283 43	1,307 63	113	40·58	33	
385 64	25,903 43	17,127 80	295	154·18	34	
1,196 67	117,488 22	66,093 04	228	359·57	35	
.....	11,177 17	2,615 17	130	60·85	36	
6,123 00	122,803 57	21,142 46	121	91·80	37	
.....	1,539 13	15 25	99	24·85	38	
9,582 24	197,503 17	63,383 19	147	87·72	39	
498 18	27,129 41	10,423 07	162	154·60	40	
.....	8,885 90	772 84	92	94·93	41	
7,087 82	314,298 06	73,128 77	130	264·46	42	
4,177 44	151,514 34	31,460 49	126	85·40	43	
.....	3,320 76	4,510 12	42	25·14	44	
11,139 09	320,251 72	8,453 08	97	75·81	45	
.....	12,174 73	2,576 33	127	12·72	46	
400 00	69,025 62	10,945 58	119	15·13	47	
273 50	55,004 32	10,726 83	124	87·29	48	
294 74	150,668 98	44,185 46	141	88·29	49	
.....	117,679 95	62,917 13	215	204·00	50	
39 95	22,757 65	8,028 20	154	64·48	51	
1,842 96	41,899 32	11,372 78	137	18·53	52	
22,615 43	246,627 59	77,534 79	76	117·54	53	
.....	57,826 60	28,909 90	200	474·37	54	
1,090 01	48,120 96	3,716 81	108	80·17	55	

No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.		Freight Traffic.		Mails and Express Freight.	
			\$	cts.	\$	cts.	\$	cts.
56	Nova Scotia Steel Co., formerly New Glasgow Iron, Coal and Railway Co	12 50	1,519	25	16,457	26	313	00
57	Orford Mountain	26 50	2,028	17	17,137	16	525	84
58	Oshawa Electric Railway	8 50	4,989	58	10,753	13	1,329	30
59	Ottawa and Gatineau	56 50	24,933	03	24,167	41	2,938	23
60	Ottawa, Arnprior and Parry Sound	260 30	79,063	55	220,011	41	13,175	89
61	Philipsburg Railway and Quarry Co.	6 75	69	45	495	87		
62	Pontiac Pacific Junction	71 00	14,420	93	15,796	63	2,939	98
63	Pontiac and Renfrew	4 25			20	00		
64	Port Arthur, Duluth and Western	85 50	2,050	41	7,160	75		
65	Qu'Appelle, Long Lake and Saskatchewan ..	253 96	15,158	15	42,808	68	2,349	10
66	Quebec and Lake St. John	242 00						
	Lower Laurentian	39 50	60,020	85	134,063	10	10,783	04
67	Quebec Central	213 50	135,176	04	278,193	92	17,870	92
68	Quebec, Montmorency and Charlevoix	30 00	38,156	20	10,102	30	1,098	96
69	Red Mountain	9 53	11,718	08	29,135	20	603	85
70	Salisbury and Harvey	45 00	6,075	58	14,618	56	2,530	98
71	Shore Line	82 50	12,795	59	13,906	89	3,190	80
72	Stanstead, Shefford and Chambly	43 00	18,250	86	36,054	92	2,717	21
73	St. Clair Tunnel	2 23	*43,234	50	†183,989	50	†160	00
74	St. Catharines and Niagara Central	12 35	3,459	58	20,574	56	437	90
75	St. Lawrence and Adirondack	33 00	26,071	33	56,909	37	8,275	53
76	Sydney and Louisbourg	65 90	20,111	99	223,353	04		
77	South Shore, formerly Montreal and Sorel ..	44 67	24,121	07	8,650	54	1,487	51
78	Témiscouata	113 00	14,816	26	34,906	43	11,097	30
79	Tilsonburg, Lake Erie and Pacific	16 00	2,977	54	3,480	21	310	42
80	Thousand Islands	4 33	4,179	78	7,575	88	2,099	80
81	Toronto, Hamilton and Buffalo	83 93	33,232	36	67,203	73	784	30
82	United Counties	61 00	26,060	71	21,393	00	1,192	21
83	Victoria and Sydney, B.C.	16 26	7,911	20	8,360	03	415	20
	Total	16,550 17	13,929,346	86	33,522,102	40	2,624,573	41

Department of Railways and Canals

for the Year ended 30th June, 1897—Concluded.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportions of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	p. c.	Cts.		
5,400 00	23,689 51	5,666 54	131	150 88	56	
.....	19,691 17	5,147 38	135	60 56	57	
934 78	18,006 79	2,485 07	116	40 65	58	
336 25	52,374 92	10,803 00	126	93 10	59	
.....	312,250 85	85,944 15	138	85 83	60	
1,072 53	1,637 85	255 26	118	180 77	61	
253 75	33,411 29	1,913 86	94	66 40	62	
.....	20 00	20 00	.....	.....	63	
102 45	9,313 61	4,729 26	66	58 66	64	
428 92	60,744 85	12,209 13	125	110 98	65	
9,020 53	213,887 52	24,651 74	113	107 70	66	
3,042 70	434,283 58	152,202 44	154	104 62	67	
1,622 10	50,979 56	14,020 91	138	94 05	68	
.....	41,457 13	12,250 47	142	483 89	69	Operated from 19th December, 1896, to
260 41	23,485 53	527 39	98	83 37	70	30th June, 1897.
240 07	30 133 35	418 45	101	56 81	71	
1,234 63	58,257 62	162 64	99	74 05	72	
1 00	227,385 00	123,830 78	219	.....	73	*Tolls on passenger cars. †Tolls on freight
265 65	24,737 69	945 81	104	123 68	74	cars. ‡Tolls on new locomotives—
.....	91,256 23	6,584 19	107	57 33	75	hailed through tunnel.
*68,262 48	311,727 51	157,137 69	201	236 82	76	*Coal.
309 88	34,569 00	187 63	99	58 55	77	
.....	60,819 99	2,349 83	104	65 49	78	
109 00	6,877 17	597 25	92	27 51	79	
882 94	14,738 40	2,109 65	116	82 57	80	
.....	101,220 39	41,891 62	71	60 66	81	
.....	48,645 92	6,098 80	114	58 54	82	
.....	16,686 43	1,492 00	115	70 08	83	
2,278,106 81	52,353,276 60	17,184,611 00	.....	.....	.....

No. 7.—SUMMARY STATEMENT of Operating

Number.	Name of Railway.	Mileage.	Maintenance of Line, Buildings, &c.		Working and Repairs of Engines.	
			\$	cts.	\$	cts.
1	Alberta Ry. and Coal Co.	64 62	8,531	24	14,284	34
2	Albert Southern ...	16 00	515	86	725	15
3	Atlantic and Lake Superior comprising—					
	Baie des Chaleurs 80 00					
	Great Eastern, not under traffic.					
	Ottawa Valley do 80 00	80 00	9,149	21	6,198	00
4	Bay of Quinté Ry. and Navigation Co., including Kingston, Napanee and Western.	64 82	19,179	62	28,340	69
5	Berlin and Waterloo Electric.	3 00	3,126	21		
6	Brockville, Westport and Sault Ste. Marie.	45 00	11,790	52	7,067	06
7	Buctouche and Moncton 32 00		3,142	28	4,452	39
8	Calgary and Edmonton 295 07		24,873	84	18,287	66
9	Canada Atlantic 138 00	176 00	70,768	93	160,021	48
	Central Gounties. 38 00		21,056	96	34,825	88
10	Canada Eastern 136 00		539,919	45	704,657	65
11	Canada Southern. 382 19					
	Canadian Government Railways—					
12	Intercolonial 1,150 50		624,454	43	995,247	29
13	Prince Edward Island 210 00		102,344	47	55,991	60
14	Canadian Pacific Railway 4,119 10					
	Leased Lines—					
	Fredericton 22 40					
	New Brunswick 175 00					
	New Brunswick and Canada 118 00					
	St. John and Maine 92 00					
	St. John Bridge and Ry. Extension. 2 00					
	St. Stephen and Milltown. 4 64					
	Tobique Valley 28 00					
	Cap de la Madeleine 2 32					
	Montreal and Lake Maskinongé. 12 90					
	Montreal and Western. 66 90					
	Atlantic and North-west. 205 00					
	Montreal and Ottawa. 52 80	6,280 26	2,702,054	00	3,714,794	54
	Ontario and Quebec. 469 00					
	St. Lawrence and Ottawa. 58 40					
	Credit Valley. 175 10					
	Guelph Junction. 15 00					
	Toronto, Hamilton and Buffalo 2 70					
	Toronto, Grey and Bruce. 191 30					
	West Ontario Pacific 26 60					
	Manitoba South-western Colonization. 215 29					
	Alberta Railway and Coal Co. 109 50					
	Columbia and Kootenay 28 50					
	Nakusp and Slocan. 36 90					
	Shuswap and Okanagan. 51 00					
15	Caraquet 68 00		6,831	96	6,968	08
16	Carillon and Grenville 13 00		1,700	00	2,075	00
17	Central Ontario 104 00	113 60	30,993	18	17,869	97
	Ontario, Belmont and Northern. 9 60					
18	Central of New Brunswick 75 66		12,755	76	8,168	59
19	Cumberland Ry. and Coal Co. 32 00		14,136	99	15,402	97
20	Dominion Atlantic, comprising—					
	Windsor and Annapolis. 87 50					
	Cornwallis Valley 14 00					
	Yarmouth and Annapolis. 87 00	220 50	134,013	79	101,803	57
	Windsor Branch of Intercolonial. 32 00					
21	Drummond County 90 53		16,717	74	20,579	44
22	Elgin and Havelock. 27 00		3,936	24	2,810	36
23	Erie and Huron 76 75		19,954	34	25,203	52
24	Esquimalt and Nanaimo 78 00		72,195	31	27,189	12
25	Fredericton and St. Mary's Ry. and Bridge Co. 1 33		663	86		

Department of Railways and Canals.

Expenses for the Year ended 30th June, 1897.

Working and Repairs of Cars.	General Operating Expenses.	Total.	Cost of Operating per train mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	Cents.		
1,807 01	60,161 61	84,784 20	256 41	1	From Lethbridge to Coutts on International boundary—the portion of this railway from Dunmore to Lethbridge 109 50 miles is operated by Canadian Pacific Railway under lease.
.....	9 50	1,250 51	65 13	2	
904 53	2,428 23	18,679 97	84 33	3	Baie des Chaleurs Ry. was operated by Federal Government for the five months ended 31st May, 1897.
7,264 32	26,577 27	81,361 90	60 92	4	
.....	4,269 12	7,395 33	10 16	5	
835 10	8,393 54	28,086 22	85 61	6	
522 07	5,574 02	13,690 76	66 23	7	
3,084 46	18,569 50	64,815 46	88 02	8	
41,283 85	203,258 33	475,332 59	90 52	9	
4,908 60	22,402 90	83,194 34	39 11	10	
241,932 96	1,405,098 63	2,891,608 69	82 44	11	
453,047 38	853,219 57	2,925,968 67	76 14	12	
22,427 88	59,725 95	240,489 90	96 07	13	
817,866 65	4,964,276 51	12,198,991 70	86 14	14	Including portion of Alberta Railway and Coal Company's line, from Dunmore to Lethbridge, 109 5 miles.
1,038 78	6,290 46	21,129 28	61 96	15	
20 00	30 80	3,825 80	63 76	16	
5,014 51	20,460 17	74,337 83	72 58	17	
1,178 16	5,678 55	27,781 06	64 30	18	
5,024 16	15,348 25	49,912 37	74 89	19	
14,544 87	112,123 75	362,485 98	74 47	20	
2,656 78	24,915 01	64,868 97	68 50	21	
.....	3,143 04	9,889 64	58 51	22	
5,788 65	31,536 24	82,482 75	52 13	23	
8,680 40	188,642 47	296,707 30	218 33	24	
.....	757 87	1,421 73	.....	25	

No. 7.—SUMMARY STATEMENT of Operating

Number.	Name of Railway.	Mileage.	Maintenance of Line, Buildings, &c.		Working and Repairs of Engines.	
			\$	cts.	\$	cts.
26	Grand Trunk	884 25				
	Great Western	561 80				
	Brantford, Norfolk and Port Burwell	34 78				
	Buffalo and Lake Huron	162 00				
	Grand Trunk, Georgian Bay and Lake Erie	172 75				
	Owen Sound Branch	12 42				
	London, Huron and Bruce	69 01				
	Waterloo Junction	10 25				
	South Norfolk	17 00				
	Wellington, Grey and Bruce	168 13				
	Northern	172 10				
	North Simcoe	33 34				
	Hamilton and North-western	173 90	3,146	98	2,089,218	83
	Northern and Pacific Junction	111 37			3,790,980	32
	Toronto Belt Line	12 70				
	Midland	166 78				
	Grand Junction	85 40				
	Toronto and Nipissing	85 00				
	Lake Simcoe Junction	26 50				
	Victoria	53 25				
	Whitby, Port Perry and Lindsay	46 50				
	Jacques Cartier Union	6 50				
	Montreal and Champlain Junction	61 75				
	Beauharnois Junction	19 50				
27	Great Northern	28 00		1,399 15		2,341 35
28	Great North-west Central	50 93		12,184 90		7,060 21
29	Hamilton, Grimsby and Beamsville Electric	23 00				
30	Hamilton and Dundas	6 00				
31	Hull Electric	6 30		40,590 46		4,160 30
32	Hereford	53 30		17,287 86		25,062 42
33	Irondale, Bancroft and Ottawa	45 00		2,725 30		3,529 90
34	Joggins, now Canada Coals & Ry. Co.	12 00		2,482 33		3,663 92
35	Kaslo and Slocan	31 80		19,322 58		9,992 11
36	Kent Northern	34 00		2,200 00		2,962 00
37	Kingston and Pembroke	112 85		30,538 53		28,000 64
38	L'Assomption	3 00		233 20		698 53
39	Lake Erie and Detroit River	88 05				
	London and Port Stanley	23 75	111 80	31,132 37		42,038 04
40	Lake Manitoba Railway and Canal Co.	100 74		6,930 66		3,943 08
41	Lotbinière and Mégantic	30 34		3,408 83		3,704 92
42	Manitoba and North-western	234 50	249 97	92,199 99		53,403 23
	Saskatchewan and Western	15 47				
43	Massawippi Valley	36 00		22,996 98		44,628 15
44	Montfort Colonization	21 00		1,281 12		3,616 01
45	Montreal and Atlantic, formerly South-eastern	140 10	201 50	77,537 95		118,635 73
	Lake Champlain and St. Lawrence Junction	61 40				
46	Montreal Island Belt Line (Electric)	11 60		976 17		2,958 03
47	Montreal Park and Island (Electric)	40 88		4,553 90		22,126 39
48	Montreal, Portland and Boston, now Montreal and Province Line	40 60		18,879 24		12,284 06
49	Montreal and Vermont Junction	23 60		18,439 71		37,848 78
50	Nelson and Fort Sheppard	59 40		27,366 80		11,629 50
51	New Brunswick and Prince Edward Island	36 00		6,945 80		5,369 36
52	Niagara Falls Park and River Electric Ry.	13 68		3,220 66		*3,961 55
53	Northern Pacific and Manitoba	265 11		144,085 96		71,231 11
54	Nosbonsing and Nipissing	5 50		5,280 70		10,822 50
55	Nova Scotia Central	74 00		21,266 42		10,484 63
56	Nova Scotia Steel Co., formerly New Glasgow Iron, Coal and Ry. Co.	12 50		5,848 52		9,490 15
57	Orford Mountain	26 50		4,435 26		6,734 93
58	Ottawa Electric Railway	8 50		2,271 44		5,095 59
59	Ottawa and Gatineau	56 50		12,334 67		11,905 44
60	Ottawa, Arnprior and Parry Sound	260 30		58,589 35		80,130 65
61	Philipsburg Ry. and Quarry Co.	6 75		237 46		204 88

Department of Railways and Canals.

Expenses for the Year ended 30th June, 1897.

Working and Repairs of Cars.	General Operating Expenses.	Total.	Cost of Operating per train mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	Cents.		
1,187,602 45	4,295,767 89	11,363,569 49	69 66	26	
125 00	2,318 55	6,184 05	34 72	27	
308 54	15,416 44	34,970 09	270 00	28	
.....	21,999 32	21,999 32	11 40	29	
.....	8,434 92	8,434 92	21 88	30	
1,279 52	21,648 67	67,678 95	32 81	31	
1,923 94	9,276 92	53,551 14	49 05	32	
665 10	3,055 50	9,975 80	35 88	33	
531 24	2,098 14	8,775 63	52 33	34	
1,980 01	20,100 48	51,395 18	157 30	35	
400 00	3,000 00	8,562 00	46 62	36	
5,699 58	37,422 36	101,661 11	75 99	37	
13 58	609 07	1,554 38	25 11	38	
8,208 03	52,741 54	134,119 98	59 56	39	
832 18	5,000 42	16,706 34	95 20	40	
436 81	2,108 18	9,658 74	103 19	41	
27,478 19	68,087 88	241,169 29	202 92	42	
9,847 22	42,581 50	120,053 85	67 67	43	
565 80	2,367 95	7,830 88	59 29	44	
20,268 97	112,263 15	328,704 80	77 81	45	
152 49	5,511 71	9,598 40	10 02	46	
2,578 58	28,821 17	58,080 04	12 73	47	
4,341 55	8,772 64	44,277 49	70 27	48	
27,044 19	23,150 84	106,483 52	62 40	49	
2,047 78	13,718 74	54,762 82	94 93	50	
324 28	2,090 01	14,729 45	41 73	51	
2,677 05	20,667 28	30,526 54	13 50	52	*Engines and power house plant (File tr c
24,732 91	84,112 40	324,162 38	154 49	53	
2,875 00	9,938 50	28,916 70	237 21	54	
1,641 35	11,011 75	44,404 15	73 98	55	
300 40	2,383 90	18,022 97	114 79	56	
39 90	3,333 70	14,543 79	44 73	57	
1,096 46	7,058 23	15,521 72	35 04	58	
3,201 29	14,130 52	41,571 92	73 90	59	
11,328 78	76,257 92	226,306 70	62 21	60	
0 90	939 35	1,382 59	152 60	61	
			55		

No. 7.—SUMMARY STATEMENT of Operating Expenses

Number.	Name of Railway.	Mileage.	Maintenance of Line, Buildings, &c.	Working and Repairs to Engines.
			\$ cts.	\$ cts.
62	Pontiac Pacific Junction.....	71 00	14,573 76	8,662 55
63	Pontiac and Renfrew	4 25		
64	Port Arthur, Duluth and Western.....	85 50	4,029 95	4,039 08
65	Qu'Appelle, Long Lake and Saskatchewan.....	253 96	18,837 49	17,377 61
66	Quebec and Lake St. John.....	242 00		
	Lower Laurentian.....	39 50		
67	Quebec Central.....	281 50	47,170 13	56,652 95
68	Quebec, Montmorency and Charlevoix.....	213 50	63,428 47	79,087 92
69	Red Mountain	30 00	9,823 35	11,583 11
70	Salisbury and Harvey.....	9 53	13,608 16	6,680 67
71	Shore Line.....	45 00	9,780 25	9,201 48
72	Stanstead, Shefford and Chambly.....	82 50	10,414 33	6,990 75
73	St. Clair Tunnel	43 00	21,928 72	14,877 41
74	St. Catharines and Niagara Central.....	2 23	9,194 79	58,230 39
75	St. Lawrence and Adirondack.....	12 35	4,944 92	7,193 59
76	Sydney and Louisbourg.....	53 00	14,057 77	27,960 40
77	South Shore, formerly Montreal and Sorel.....	65 90	21,324 21	36,184 98
78	Temiscouata.....	44 67	11,025 58	8,121 30
79	Tilsonburg, Lake Erie and Pacific.....	113 00	19,896 77	16,486 22
80	Thousand Islands.....	16 00	1,940 00	2,948 00
81	Toronto, Hamilton and Buffalo.....	4 33	2,065 50	4,616 92
82	United Counties.....	83 93	48,840 64	37,705 00
83	Victoria and Sydney, B.C.....	61 00	8,591 67	15,966 24
		16 26	2,725 32	6,843 07
	Total	16,550 17	7,601,411 07	10,861,072 40

Department of Railways and Canals

for the Year ended 30th June, 1897—*Concluded.*

Working and Repairs of Cars.	General Operating Expenses.	Total.	Cost of Operating per train mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	\$ cts.		
2,137 22	9,951 62	35,325 15	70 21	62	
349 93	5,623 91	14,042 87	88 44	63	
1,936 24	10,384 38	48,535 72	88 67	64	
12,850 62	72,562 08	189,235 78	95 29	65	
20,574 55	118,990 20	282,081 14	67 95	66	
4,016 74	11,535 45	36,958 65	68 18	67	
276 19	8,641 64	29,206 66	332 87	68	
861 88	4,169 31	24,012 92	85 24	69	
2,285 91	10,023 91	29,714 90	56 02	70	
4,842 16	16,771 97	58,420 26	74 25	71	
918 35	36,129 04	103,554 22	118 95	72	
2,390 92	10,735 02	23,791 88	53 19	73	
9,571 39	40,262 95	84,672 04	117 44	74	
1,048 69	87,509 24	154,589 82	58 87	75	
4,708 96	14,561 06	34,756 63	62 96	76	
223 29	17,378 21	58,470 16	29 90	77	
6,621 66	2,586 42	7,474 42	70 75	78	
843 03	5,723 04	12,628 75	85 77	79	
247 24	49,944 71	143,112 01	51 20	80	
	17,146 18	42,547 12	63 82	81	
	5,378 80	15,194 43		82	
3,069,085 16	13,637,096 97	35,168,665 60		83	

Operated from 19th Dec., 1896, to 30th June, 1897.

No. 8.—SUMMARY OF ACCIDENTS

Number.	Name of Railway.	Mileage.	Passengers, Employees or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.	
				Killed.	Injured.	Killed.	Injured.
1	Alberta Railway and Coal Co.....	64·62	Employee	1	.....	.....	.....
2	Albert Southern	16·00	.....	.....	.....	.....	.....
3	Atlantic and Lake Superior, comprising—						
	*Baie des Chaleurs..... 80 miles.	80·00	Employees.....	.....	.....	.....	.....
	Great Eastern..... (Not in operation.)						
	Ottawa Valley..... do						
4	Bay of Quinté..... }	64·82	Employee .....	.....	.....	.....	.....
	Kingston, Napanee and Western						
5	Berlin and Waterloo (electric).....	3·00	.....	.....	.....	.....	.....
6	Brockville, Westport and Sault Ste. Marie	45·00	.....	.....	.....	.....	.....
7	Buctuche and Moncton	32·00	.....	.....	.....	.....	.....
8	Calgary and Edmonton	259·07	Employee .....	.....	.....	.....	.....
9	Canada Atlantic..... 138·00 }	176·00	{ Employees ..	.....	.....	.....	.....
	Central Counties..... 38·00 }		{ Others .....	.....	.....	.....	.....
10	Canada Eastern	136·00	.....	.....	.....	.....	.....
11	Canada Southern	359·24 }	{ Passengers ..	.....	3	.....	1
	Sarnia, Chatham and Erie	7·00 }	{ Employees ..	1	3	.....	.....
	Leamington and St. Clair	15·95 }	{ Others .....	.....	.....	1	2
	Canadian Government Railways—						
12	Intercolonial	1,150·50	{ Passengers ..	.....	1	.....	2
			{ Employees ..	1	4	.....	3
			{ Others .....	.....	.....	1	2
13	Prince Edward Island	210·00	{ Passengers ..	.....	.....	.....	.....
			{ Employees ..	.....	.....	.....	.....
14	Canadian Pacific Ry.....	6,280·26	{ Passengers ..	1	2	2	8
			{ Employees ..	6	22	1	10
			{ Others	4	5	4	7
15	Caraquet	68·00	.....	.....	.....	.....	.....
16	Carillon and Grenville.....	13·00	.....	.....	.....	.....	.....
17	Central Ontario..... 104·00 }	113·60	Employees.....	.....	.....	.....	.....
	Ontario, Belmont and Northern	9·60 }					
18	Central of New Brunswick	75·66	.....	.....	.....	.....	.....
19	Cumberland Ry. and Coal Co., including Spring Hill and Oxford Branch, 14 miles.....	32·00	.....	.....	.....	.....	.....
20	Dominion Atlantic, comprising—						
	Windsor and Annapolis..... 87·5 }	220·50	{ Employees ..	.....	.....	.....	.....
	Cornwallis Valley	14·0 }	{ Others	1	.....	.....	.....
	Yarmouth and Annapolis	87·0 }					
	Windsor Branch, Intercolonial	32·0 }					
21	Drummond County	90·53	.....	.....	.....	.....	.....
22	Elgin and Havelock	27·00	.....	.....	.....	.....	.....
23	Erie and Huron	76·75	{ Employees ..	.....	.....	.....	.....
			{ Others .....	.....	.....	.....	.....
24	Esquimalt and Nanaimo	78·00	.....	.....	.....	.....	.....
25	Fredericton and St. Mary's Bridge Co	1·33	.....	.....	.....	.....	.....
26	Grand Trunk	3,146·98	{ Passengers ..	1	2	.....	7
			{ Employees ..	10	33	1	8
			{ Others	7	7	6	15
27	Great Northern	28·00	.....	.....	.....	.....	.....
28	Great North-west Central	50·93	.....	.....	.....	.....	.....
29	Hamilton, Grimsby and Beamsville (electric)	23·00	.....	.....	.....	.....	.....
30	Hamilton and Dundas	6·00	Passenger.....	.....	.....	1	.....
31	Hereford	53·30	.....	.....	.....	.....	.....
32	Hull (electric)	6·30	.....	.....	.....	.....	.....
33	Irondale, Bancroft and Ottawa	45·00	.....	.....	.....	.....	.....
34	Joggins, now Canada Coal and Railway Co	12·00	.....	.....	.....	.....	.....
35	Kaslo and Slocan	31·80	.....	.....	.....	.....	.....
36	Kent Northern, including St. Louis and Richibuctou ..	34·00	.....	.....	.....	.....	.....
37	Kingston and Pembroke.....	112·85	.....	.....	.....	.....	.....

*Operated by the Federal Government for 5 months ended 31st May, 1897.

Department of Railways and Canals

for the Year ended 30th June, 1897.

At work on or near Track making up Trains.		Putting Arms or Heads out of Wind'ws		Coupling Cars.		Collisions, or by Trains thrown from Track.		Walking, standing, lying or being on Track.		Ex-plosions.		Striking Bridges.		Other Causes.		Totals.		Number.
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
.....	1	.....	1
.....	2
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4
.....	5
.....	6
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	7
.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	8
.....	1	.....	.....	.....	.....	.....	.....	.....	1	9
.....	1	10
.....	2	.....	.....	.....	14	.....	.....	2	6	.....	.....	.....	.....	.....	.....	.....	4	11
.....	6	5	.....	.....	.....	.....	2	6	3	31	11
.....	1	24	.....	.....	.....	.....	.....	.....	.....	1	9	8	12
.....	3	.....	.....	1	18	1	24	1	9	.....	.....	.....	.....	.....	14	1	28	12
.....	1	.....	5	.....	.....	.....	.....	.....	.....	10	66	13
.....	1	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	7	14
.....	1	.....	.....	.....	.....	.....	.....	.....	8	.....	1	15
.....	2	88	1	28	.....	.....	.....	.....	.....	.....	.....	5	.....	10	16
.....	3	11	.....	.....	.....	.....	10	37	3	17	17
.....	22	17	.....	.....	.....	.....	8	23	23	196	18
.....	52	19
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
.....	21
.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	22
.....	23
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	24
.....	25
.....	26
2	8	.....	.....	3	100	2	4	3	14	.....	.....	.....	.....	3	1	1	10	27
.....	1	.....	2	38	29	.....	.....	.....	.....	12	25	24	192	28
.....	19	63	73	29
.....	30
.....	31
.....	32
.....	33
.....	34
.....	35
.....	36
.....	37

No. 8.—SUMMARY OF ACCIDENTS for the

Number.	Name of Railway.	Mileage.	Passengers, Employees or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.	
				Killed.	Injured.	Killed.	Injured.
38	L'Assomption	3 00					
39	Lake Erie and Detroit River..... 88 05 }	111 80	{ Passengers.....				1
	London and Port Stanley..... 23 75 }		{ Others.....				
40	Lake Manitoba and Canal Co.....	100 74					
41	Lotbinière and Mégantic.....	30 34					
42	Manitoba and North-western..... 234 50 }	249 97	{ Employees.....				
	Saskatchewan and Western..... 15 47 }		{ Others.....				
43	Massawippi Valley.....	36 00	{ Employees.....		1		
			{ Others.....				
44	Montfort Colonization	21 00					
45	Montreal and Atlantic, formerly South Eastern 140 10 }	201 50	{ Passengers.....				
	Lake Champlain and St. Lawrence Junction 61 40 }		{ Employees.....	1	4		
			{ Others.....				
46	Montreal Island Belt Line (electric)	11 60	Others.....				
47	Montreal Park and Island (electric).....	40 88	{ Passengers.....		1		
			{ Employees.....				
48	Montreal, Portland and Boston, now Province Line.....	40 60					
49	Montreal and Vermont Junction.....	23 60	Employees.....		1		
50	Nelson and Fort Sheppard.....	59 40	Others.....				
51	New Brunswick and Prince Edward Island	36 00					
52	Niagara Falls Park and River Ry., (electric).....	13 68	Others.....				
53	Northern Pacific and Manitoba.....	265 11	Employees.....		2	1	2
54	Nosbonsing and Nipissing.....	5 50	Others.....				1
55	Nova Scotia Central.....	74 00					
56	Nova Scotia Steel Co., formerly New Glasgow Iron, Coal and Railway Co.....	12 50					
57	Orford Mountain.....	26 50					
58	Oshawa Electric Ry.....	8 50					
59	Ottawa and Gatineau.....	56 50	Employees.....		2		
			{ Passengers.....				1
60	Ottawa, Arnprior and Parry Sound.....	260 30	{ Employees.....	3			2
			{ Others.....				
61	Philipsburgh Railway and Quarry Co.....	6 75					
62	Pontiac Pacific Junction.....	71 00					
63	Pontiac and Renfrew.....	4 25					
64	Port Arthur, Duluth and Western.....	85 50					
65	Qu'Appelle, Long Lake and Saskatchewan	253 96					
66	Quebec and Lake St. John..... 242 00 }	281 50	{ Employees.....	1	2		
	Lower Laurentian..... 39 50 }		{ Others.....				1
67	Quebec Central.....	213 50	Employees.....				
68	Quebec, Montmorency and Charlevoix	30 00	Others.....				
69	Red Mountain.....	9 53					
70	Salisbury and Harvey.....	45 00					
71	Shore Line.....	82 50					
72	Stanstead, Shefford and Chambly.....	43 00	Employee.....		1		
73	St. Clair Tunnel.....	2 23	Passenger.....	1			
74	St. Catharines and Niagara Central.....	12 35					
75	St. Lawrence and Adirondack.....	33 00	{ Employees.....				
			{ Others.....				
76	Sydney and Louisbourg.....	65 90	Employee.....		1		
77	South Shore, formerly Montreal and Sorel.....	44 67					
78	Témiscouata.....	113 00					
79	Tilsonburg, Lake Erie and Pacific.....	16 00					
80	Thousand Islands	4 33					
81	Toronto, Hamilton and Buffalo.....	83 93	{ Employees.....		2		
			{ Others.....			1	
82	United Counties.....	61 00					
83	Victoria and Sydney, B.C.....	16 26					
		16,550 17		39	99	19	73

Department of Railways and Canals.

Year ended 30th June, 1897—Continued.

At work on or near Track making up Trains.		Putting Arms or Heads out of Wind'ws		Coupling Cars.		Collisions, or by Trains thrown from Track.		Walking, standing, lying or being on Track.		Ex-plosions.		Striking Bridges.		Other Causes.		Totals.		Number.
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
.....	38
.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	39
.....	40
.....	1	.....	2	.....	.....	.....	.....	.....	.....	2	1	2	4	41
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	42
.....	1	.....	2	43
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	44
.....	9	.....	2	.....	.....	.....	.....	.....	.....	1	8	2	23	45
.....	1	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	.....	.....	.....	1	46
.....	1	.....	4	47
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	48
.....	2	.....	.....	.....	.....	.....	.....	.....	5	49
.....	2	50
.....	1	.....	.....	.....	.....	.....	.....	.....	1	51
.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	17	52
.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	2	53
.....	54
.....	55
.....	56
.....	57
.....	2	58
1	2	3	.....	2	1	.....	.....	.....	.....	1	5	8	1	59
.....	2	7	60
.....	3	61
.....	62
.....	63
.....	64
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	1	3	66
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	67
.....	2	.....	.....	.....	.....	.....	.....	.....	2	.....	68
.....	69
.....	70
.....	2	.....	3	71
.....	1	.....	72
.....	73
.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	74
.....	1	1	.....	.....	.....	.....	.....	.....	1	1	75
.....	1	.....	2	76
.....	77
.....	78
.....	79
.....	3	3	1	1	.....	.....	.....	.....	.....	.....	.....	4	6	80
.....	1	.....	81
.....	82
.....	83
3	16	.....	1	6	254	12	94	94	99	.....	.....	.....	.....	40	171	213	807	

No. 9.—LINES of Railway owned by Coal and Iron Mines, for the Year ended 30th June, 1897.

Name.	Length of Rail- way.	Gauge.	No. of Engines.	No. of Wagons.	Remarks.
NOVA SCOTIA.					
	Miles.	Feet.	/		
Acadia Coal Mining Co.....	3 00	4 8½	2	20	Known as the Albion Mines Railway. Connecting Drummond Colliery with Inter- colonial Railway and Granton Wharf, Pictou Harbour, N.S.
Intercolonial Coal Mining Co..	8 00	4 8½	4	221	
Londonderry Iron Co.....	5 75	4 8½	2	26	From Londonderry Station on I.C.R. to Acadia Mines, with sidings.
	4 50	4 8½	.....	.....	From East Mines Station to East Mines, with sidings.
	7 00	3 1	2	27	From works to West Mines, with sidings.
CAPE BRETON.					
	28 25		10	294	The Londonderry Iron Company having failed to send in a return for the year end- ed 30th June, 1897, their return for the previous year has been used for this state- ment.
General Mining Association of London, England—					
Sydney Mines.....	5 15	4 8½	4	201	This railway is used for colliery purposes only.
Dominion Coal Co.—					
Main Line	40 00	4 8½	10	727	Dominion Coal Co. The lines leading to the several collieries of this railway are included in the branches of the Sydney and Louisbourg Ry., owned by the Dominion Coal Company.
Victoria Branch.....	5 00	4 8½	1	150	
Caledonia do	1 00	4 8½	1	119	
Glace Bay.....	50	4 8½	1	69	
Reserve	10 00	3 0	4	228	No separate return was made by the Do- minion Coal Co. for their colliery roads and equipment for year ended 30th June, 1897, therefore the return of last year has been used for this statement.
Gowrie	1 50	3 6	2	150	
	63 15		23	1644	

No. 10.—STATEMENT of Aid granted to Railways—Constructed and under Construction—by Governments, for the year ended 30th June, 1897.

Department of Railways and Canals.

Name of Railway.	Loan.		Total.		Bonus.		Total.		Subscription to Shares or Bonds.		Total.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
DOMINION GOVERNMENT.												
Albert (now Salisbury and Harvey).....	*	20,665 45										
Albert Southern.....					50,460 00							
Atlantic and North-west in Canada.....					<i>a</i> 1,422,000 00							
Baie des Chaleurs.....					620,000 00							
Belleville and North Hastings—Grand Junction (now in Grand Trunk).....					21,888 00							
Beauharnois Junction.....					62,400 00							
Brantford, Waterloo and Lake Erie (now Toronto, Hamilton and Buffalo).....					57,660 00							
Brockville, Westport and Sault Ste. Marie.....					105,200 00							
Buctouche and Moncton.....					101,600 00							
Canada Atlantic.....					282,355 20							
Canada Central.....					1,525,250 00							
Canada Eastern (formerly Northern and Western of New Brunswick).....					<i>b</i> 366,839 84							
Canadian Pacific.....					<i>c</i> 36,093,887 77							
do Revelstoke to Arrow Lake.....					80,000 00							
Cap de la Madeleine.....					9,600 00							
Carsquet.....					224,000 00							
Central of New Brunswick.....					<i>+</i> 208,712 54							
Coast Railway of Nova Scotia.....					195,200 00							
Cobourg, Northumberland and Pacific.....					160,000 00							
Columbia and Kootenay.....					88,800 00							
Cornwallis Valley (now in Dominion Atlantic).....					44,800 00							
Cumberland Railway and Coal Company.....					39,850 00							
Drummond County.....					433,920 00							
Dominion Lime Company (now in Hereford Ry).....					15,360 00							
Elgin and Havelock.....					82,652 82							
Erie and Huron.....					96,000 00							
Esquimaux and Nanaimo.....					750,000 00							
Fredericton and St. Mary's Railway and Bridge Company.....		300,000 00			30,000 00							
Grand Trunk.....		15,142,633 33										
do Georgian Bay and Lake Erie, Owen Sound Branch.....					39,744 00							
Great Eastern.....					40,345 00							
Great Northern (exclusive of Ottawa Valley Section).....					495,988 00							
Guelpf Junction.....					46,000 00							

* \$14,665 45 rails. *+* Including \$83,612 54 rails to St. Martin's and Upham Ry. *a* Payable in half-yearly instalments of \$35,550 each for 20 years, commencing 1st July, 1889. *b* Including \$24,439 84, rails to Chatham Branch. *c* Including cost of Railway Lines built by Dominion Government, and transferred to Canadian Pacific Railway Company, \$31,093,887.77. *d* Including \$44,252.82, rails.

No. 10.—STATEMENT of Aid Granted to Railways by Governments—Continued.

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
DOMINION GOVERNMENT—Continued.						
Gulf Shore.....			56,000 00			
Harvey Branch.....			5,553 57			
Hereford.....			155,200 00			
Intercolonial.....			55,416 157 15			
International (Atlantic and North-west) C. P. R.			156,800 00			
Irondale, Bancroft and Ottawa.....			160,000 00			
Joggins (now Canada Coals and Railway Co.).....			37,500 00			
Kent Northern.....						
Kingston, Nanpew and Western, now Bay of Quinte.			208,732 80			
Kingston and Pembroke.....			48,000 00			
Kingston, Smith's Falls and Ottawa.....			323,200 00			
L'Assomption.....			11,200 00			
Lake Erie and Detroit River.....			338,731 00			
Lake Temiscamingue Colonization.....			310,335 95			
Leamington and St. Clair (now in Canada Southern).			51,200 00			
Lotbinière and Mégantic.....			96,000 00			
Lower Laurentian.....			217,600 00			
Midland of Nova Scotia (formerly Stewiacke Valley and Lansdowne).			171,600 00			
Montfort Colonization.....			41,280 00			
Montreal and Lake Maskinongé.....			103,600 00			
Montreal and Champlain Junction.....			192,000 00			
Montreal and Ottawa.....			93,757 57			
Montreal and Sorel (now South Shore).			361,270 00			
Montreal and Western.....			121,600 00			
Nakusp and Slocan.....			113,440 00			
New Brunswick and Prince Edward Island.....			39,840 00			
New Glasgow Iron and Coal Co.....			1,320,000 00			
Northern and Pacific Junction.....			290,700 00			
Nova Scotia Central.....			240,000 00			
Nova Scotia Southern.....			32,000 00			
Ontario, Belmont and Northern.....			196,000 00			
Ontario and Quebec.....			84,800 00			
Orford Mountain.....			22,400 00			
Oshawa.....			609,600 00			
Ottawa, Arnprior and Parry Sound.....			320,000 00			
Ottawa and Gatineau.....						

† Rails, 58,334.27.

Department of Railways and Canals.

Ottawa Valley (formerly part of Great Northern)	21,600 00		
Perry Sound Colonization	152,800 00		
Philipsburg Railway and Quarry Co.	23,712 00		
Pontiac Pacific Junction.	307,850 00		
Pontiac and Renfrew.	13,000 00		
Port Arthur, Duluth and Western.	271,200 00		
Prince Edward Island.	3,750,565 38		
Quebec and Lake St. John.	1,006,743 50		
Quebec Central.	348,342 00		
Quebec, Montmorency and Charlevoix.	96,000 00		
Quebec, Montreal, Ottawa and Occidental, North Shore, Montreal to Quebec	4954,000 00		
do do	1,500,000 00		
do do	11,440,000 00		
do do	38,400 00		
do do	22,400 00		
St. Catharines and Niagara Central.			
St. Louis and Richibucto.			
St. John Bridge and Railway extension.	108,201 60		
St. John Valley and Rivière du Loup (subsidy lapsed).	375,000 00		
St. Lawrence and Adirondack	14,848 00		
St. Clair Tunnel.	163,200 00		
St. Stephen and Milltown	54,400 00		
Shuswap and Okanagan	87,808 00		
South Norfolk.	645,850 00		
Sydney and Louisbourg—Dominion Coal Co.	24,400 00		
Temiscouata.	62,400 00		
Thousand Islands	134,016 00		
Tilsonburg, Lake Erie and Pacific.	14,656 00		
Tobique Valley	208,000 00		
Toronto, Grey and Bruce.	32,800 00		
United Counties.	60,000 00		
Waterloo Junction.	500,000 00		
West Ontario Pacific.	1,193,369 00		
Western Counties (now in Dominion Atlantic)			
Windsor and A napolis (now in Dominion Atlantic)...			
† Dominion Government pays to Quebec Government 5 per cent interest per annum	15,964,533 05	on these two amounts.	139,662,812 69
ONTARIO GOVERNMENT.			
Brantford, Norfolk and Port Burwell, in Grand Trunk.			
Canada Atlantic.	68,000 00		
Canada Central.	270,000 00		
Canada Southern.	1,479,000 00		
Central Ontario.	147,858 65		
Cobourg, Blairton and Marmora.	126,500 00		
Credit Valley.	18,740 00		
Erie and Huron.	531,000 00		
Grand Junction and Belleville & North Hastings	83,000 00		
Grand Trunk, Georgian Bay and Lake Erie.	224,660 00		
Hamilton and North-western.	336,000 00		
Irondale, Bancroft and Ottawa.	565,020 00		
Kingston and Pembroke.	135,000 00		
	456,493 00		

No. 10.—STATEMENT of Aid granted to Railways by Governments—Continued.

Name of Railway.	Loan.		Total.		Bonus.		Total.		Subscription to Shares or Bonds.		Total.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
ONTARIO GOVERNMENT—Continued.												
Kingston, Napanee and Western (now in Bay of Quinté)							90,000	00				
London, Huron and Bruce							178,630	00				
Midland							168,350	00				
Montreal and Ottawa							100,000	00				
Northern							196,188	00				
North Simcoe							83,300	00				
Ontario, Belmont and Northern							19,149	39				
Ottawa, Arnprior and Parry Sound							431,000	00				
Parry Sound Colonization							148,500	00				
Port Arthur, Duluth and Western							261,000	00				
Tilsenburg, Lake Erie and Pacific							32,000	00				
Toronto and Nipissing							105,212	00				
6 Lake Simcoe Junction							53,000	00				
Toronto, Grey and Bruce							375,282	00				
Victoria							312,000	00				
Wellington, Grey and Bruce							241,276	00				
Whitby, Port Perry and Lindsay							94,957	59				
							20,000	00				
												7,331,116 63
QUEBEC GOVERNMENT.												
Baie des Chaleurs (now in Atlantic and Lake Superior)							988,546	00				
Beauharnois Junction							179,073	00				
Canada Atlantic							200,000	00				
Great Eastern (now in Atlantic and Lake Superior)							156,000	00				
Great Northern							438,250	00				
Drummond County							549,000	00				
Hereford							103,000	00				
International (now Atlantic and North-west—C. P. R.)							391,122	02				
Lake Champlain and St. Lawrence Junction							250,280	00				
Lake Temiscamingue Colonization Railway							350,076	82				
L'Assomption							7,350	00				
Lotbinière and Mégantic							126,994	00				
Lower Laurentian							252,000	00				
Missquoi Valley (now Atlantic and North-west—C. P. R.)							228,000	00				
Montford Colonization							109,845	80				
Montreal and Champlain Junction							150,000	00				

Department of Railways and Canals

Montreal and Ottawa.....	182,210 00		
Montreal, Portland and Boston (now Montreal and Province Line).....	231,122 00		
Montreal and Sorel (now South Shore).....	275,645 00		
Montreal and Western.....	472,500 00		
Montreal and Lake Maskinonge.....	87,750 00		
Orford Mountain.....	154,000 00		
Ottawa and Gatineau.....	780,770 00		
Ottawa Valley (now in Atlantic and Lake Superior).....	25,390 00		
Philipsburg Ry. and Quarry Co.....	25,667 00		
Pontiac Pacific Junction.....	536,000 00		
Pontiac and Renfrew.....	17,433 60		
Quebec and Lake St. John.....	2,533,000 00		
Quebec Central.....	1,076,123 14		
Quebec, Montreal, Ottawa and Occidental, including North Shore.....	727,000 00		
Quebec, Montmorency and Charlevoix.....	292,090 00		
South-eastern (now Montreal and Atlantic).....	444,000 00		
St. Lawrence and Adirondack.....	65,216 00		
Temisouata.....	241,500 00		
United Counties.....	210,000 00		
Waterloo and Magog (now Atlantic and North-west—C. P. R.).....	92,000 00		
	12,949,914 38		
	3,722,956 00		
NEW BRUNSWICK GOVERNMENT.			
Albert (now Salisbury and Harvey).....	455,000 00		
Albert Southern.....	48,680 00		
Buctouche and Moncton.....	96,000 00		
Caracquet.....	180,000 00		
Central of New Brunswick.....	139,000 00		
Chatham Branch (now part of Canada Eastern).....	56,000 00		
Fredericton.....	230,000 00		
Grand Southern (now Shore Line).....	413,000 00		
Gulf Shore.....	35,000 00		
Harvey Branch.....	9,000 00		
Kent Northern.....	135,000 00		
New Brunswick.....	76,000 00		
New Brunswick and Canada.....	575,000 00		
New Brunswick and Prince Edward Island.....	99,708 90		
Northern and Western (now Canada Eastern).....	344,000 00		
Elgin, Petitcodiac and Havelock (now Elgin and Havelock).....	107,500 00		
St. Martin's and Upham (now Central of New Brunswick).....	145,600 00		
St. John Bridge and Railway Extension.....	5,181 81		
St. John and Maine.....	880,000 00		
St. John Valley and Riviere du Loup.....	21,000 00		
St. Louis and Richibucto.....	13,920 00		
St. Stephen and Milltown.....	66,000 00		
Temisouata.....	70,000 00		
Tobique Valley.....			
	300,000 00		
	4,200,590 71		

No. 10.—Statement of Aid granted to Railways by Governments—Concluded.

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$
NOVA SCOTIA GOVERNMENT.						
Coast Line.....			288,000 00			
Cornwallis Valley (now in Dominion Atlantic).....			44,800 00			
Joggins (now Canada Coats and Railway Co.).....			36,200 00			
Midland Ry. of Nova Scotia (formerly Stewiacke Valley and Lansdowne).....			192,000 00			
New Glasgow Iron, Coal and Railway Co. (now Nova Scotia Steel Co.).....			40,000 00			
Nova Scotia Central.....			432,261 08			
Nova Scotia Southern.....			307,200 00			
Springhill and Paresboro' (Cumberland Railway and Coal Co.).....			173,650 00			
Sydney and Louisbourg, Dominion Coal Co.			87,808 00			
Western Counties (now in Dominion Atlantic).....			679,197 45	2,280,116 53		
MANITOBA GOVERNMENT.						
Canadian Pacific.....			237,377 50			
Manitoba and North-western.....	649,934 27					
Manitoba South-western Colonization.....	900,000 00					
Northern Pacific and Manitoba.....			533,300 00	770,677 50		
Saskatchewan and Western.....	50,000 00					
Winnipeg and Hudson Bay, (now Winnipeg Great Northern).....	256,000 00	1,855,934 27				
BRITISH COLUMBIA GOVERNMENT.						
Canadian Pacific.....			37,500 00	37,500 00		
Total aid granted by Governments.....		21,569,423 32		167,232,728 44		300,000 00

Department of Railways and Canals

No. 10.—STATEMENT of Aid granted to Railways—Constructed and under Construction—by Municipalities, 30th June, 1897.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
ONTARIO.							
Deseronto	Bay of Quinté Ry. & Navigation Co.						
Town of Brockville	Brockville, Westport and Sault Ste. Marie.				5,000 00		
Elizabethtown.	do			36,000 00			
Rear of Yonge and Escott.	do			7,000 00			
Rear of Leeds and Lansdowne.	do			15,000 00			
Eastard and Burgess.	do			5,000 00			
South Crosby.	do			28,000 00			
Village of Newboro.	do			6,000 00			
North Crosby.	do			4,000 00			
	do			15,000 00			
Various Municipalities.	Buffalo and Lake Huron.				116,000 00		
Renfrew	Canada Central, now Can. Pacific.				966,000 00	30,000 00	
Horton	do					7,500 00	
Adnaston.	do					5,000 00	
County of Elgin.	Canada Southern.			200,000 00			
Township of Townsend	do			30,000 00			
do Durham	do			15,000 00			
do Anderton	do			15,000 00			
Town of St. Thomas.	do			25,000 00			
Township of Malden.	do			15,000 00			
Town of Amherstburg.	do			15,000 00			
South Norwich.	do			7,500 00			
					322,500 00		
Sault Ste. Marie.	Canadian Pacific			20,000 00			
Carleton Place.	do			20,000 00			
Owen Sound.	do			40,000 00			
					80,000 00		
Northumberland and Durham.	Cobourg, Blairton and Marmora.			15,000 00			
West Hawkesbury.	Central Counties.			1,200 00			
Vankieek Hill.	do			800 00			
Dalkeith.	do			6,000 00			
Rockland.	do			1,000 00			
Clarence.	do						
					24,000 00		
Town of Trenton.	Central Ontario.			10,000 00			
Wellington Village.	do			2,500 00			
							42,500 00

No. 10.—STATEMENT of Aid granted to Railways by Municipalities.—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
ONTARIO—Continued.							
Town of Picton.....	Central Ontario	.....	.....	21,000 00	.....	.....	.....
County of Prince Edward.....	do	.....	.....	60,000 00	93,500 00	.....	.....
Town of Cobourg.....	Cobourg, Northumberland & Pacific	.....	.....	30,000 00	.....	.....	.....
Village of Campbellford.....	do	.....	.....	15,000 00	.....	.....	.....
Township of Percy.....	do	.....	.....	25,000 00	.....	.....	.....
do Haldimand.....	do	.....	.....	14,000 00	.....	.....	.....
do Brighton.....	do	.....	.....	2,000 00	.....	.....	.....
do Hamilton.....	do	.....	.....	4,500 00	.....	.....	.....
do Cramahe.....	do	.....	.....	3,000 00	93,500 00	.....	.....
County of Oxford.....	Credit Valley	.....	.....	200,000 00	.....	.....	.....
do Wellington.....	do	.....	.....	135,000 00	.....	.....	.....
do Waterloo.....	do	.....	.....	110,000 00	.....	.....	.....
do Peel.....	do	.....	.....	75,000 00	.....	.....	.....
do Halton.....	do	.....	.....	70,000 00	.....	.....	.....
City of Toronto.....	do	.....	.....	350,000 00	.....	.....	.....
do St. Thomas.....	do	.....	.....	50,000 00	.....	.....	.....
Town of Milton.....	do	.....	.....	30,000 00	.....	.....	.....
do Brantford.....	do	.....	.....	20,000 00	.....	.....	.....
do Ingersoll.....	do	.....	.....	10,000 00	.....	.....	.....
do Orangeville.....	do	.....	.....	15,000 00	.....	.....	.....
Village of Streetsville.....	do	.....	.....	20,000 00	1,085,000 00	.....	.....
County of Kent.....	Erie and Huron.	.....	.....	135,000 00	.....	.....	.....
City of Chatham.....	do	.....	.....	30,000 00	.....	.....	.....
Town of Sarnia.....	do	.....	.....	16,000 00	.....	.....	.....
Village of Dresden.....	do	.....	.....	20,500 00	.....	.....	.....
do Blenheim.....	do	.....	.....	11,000 00	.....	.....	.....
do Wallaceburg.....	do	.....	.....	11,000 00	.....	.....	.....
Township of Simbra.....	do	.....	.....	14,000 00	.....	.....	.....
do Woodhouse.....	Grand Trunk, Georgian Bay and Lake Erie.....	.....	.....	15,000 00	.....	.....	.....
Town of Simcoe.....	do	.....	.....	10,000 00	.....	.....	.....
Township of South Norwich.....	do	10,000 00
do North.....	do	40,000 00
Town of Woodstock.....	do	257,500 00

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Township of East Oxford.....	do	do	25,000 00			
do Woodstock.....	do	do	25,000 00			
Town of Woodstock.....	do	do	60,000 00			
do Stratford.....	do	do	120,000 00			
County of Perth.....	do	do	40,000 00			
Township of Mornington.....	do	do	10,000 00			
do Elma.....	do	do	15,000 00			
Town of Listowel.....	do	do	10,000 00			
Township of Wallace.....	do	do	30,000 00			
Town of Palmerston.....	do	do	25,000 00			
Township of Minto.....	do	do	20,000 00			
Town of Harriston.....	do	do	80,000 00			
Township of Normanby.....	do	do	65,000 00			
do Bentinck.....	do	do	20,000 00			
do Brant.....	do	do	45,000 00			
do Elderslie.....	do	do	45,000 00			
do Arran.....	do	do	43,000 00			
do Annabel.....	do	do	32,000 00			
do Keppel.....	do	do	10,000 00			
do Albemarle.....	do	do	22,000 00			
Town of Mount Forest.....	do	do	60,000 00			
Township of Egrement.....	do	do	20,000 00			
Township of Glenelg.....	do	do	32,000 00			
Town of Durham.....	do	do				
Grand Trunk, Owen Sound Branch				923,000 00		
Town of Owen Sound.....	do	do	75,000 00			
Township of Sarawak.....	do	do	7,500 00			
do Keppel.....	do	do	3,000 00			
Grand Junction.....				85,500 00		
City of Belleville.....	do	do	150,000 00			
Village of Sterling.....	do	do	5,000 00			
Township of Rawdon.....	do	do	15,000 00			
do Seymour.....	do	do	35,000 00			
do Percy.....	do	do				
do Asphodel.....	do	do	8,000 00			
Guelph Junction.....				50,000 00		
City of Guelph.....	do	do				
County of Frontenac.....	do	do	170,000 00			
City of Kingston.....	do	do	318,000 00			
Village of Renfrew.....	do	do	3,000 00			
City of Kingston and other Municipalities.....	do	do				
Town of Napanee.....	do	do	30,000 00			
Village of Newburgh.....	do	do	7,500 00			
Township of Camden.....	do	do	30,000 00			
do Sheffield.....	do	do	15,000 00			
do Loughborough.....	do	do	5,000 00			
City of Kingston.....	do	do	75,000 00			
Hamilton and North-western.....				162,500 00		
City of Hamilton.....	do	do	99,733 00			
					50,000 00	
					193,000 00	

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
ONTARIO—Continued.							
Village of Georgetown.	Hamilton and North-western			11,289 00			
County of Peel	do			30,974 00			
do Simcoe	do			354,007 00			
Town of Collingwood	do			12,084 00			
Township of Innisfil	do			22,592 00			
do Woodhouse	do			20,740 00			
do Adjala	do			2,500 00			
do Fessa	do			2,500 00			
do Toronto	do			10,000 00			
do Mulmur	do			5,000 00			
Village of Alliston	do			8,000 00			
Township of Nottawasaga.	do			20,346 00			
City of Hamilton	Hamilton, Grimsby and Beamsville.			25,000 00	599,805 00		
Township of Saltfleet.	do			3,000 00	28,000 00		
Town of Dundas	Hamilton and Dundas.			20,000 00			
Township of South Colchester.	Lake Erie and Detroit River.			15,000 00			
do Garfield.	do			10,000 00			
Village of Kingsville.	do			10,000 00			
Township of Romney	do			5,000 00			
Township of East Tilbury	do			10,000 00			
do Raleigh	do			5,000 00			
Village of Blenheim.	do			5,000 00			
do Ridgetown.	do			12,500 00	87,500 00		
Township of East Gwillimbury	Lake Simcoe Junction			45,000 00			
do North	do			20,000 00			
do Georgina	do			20,000 00			
do Whitchurch	do			15,000 00			
Village of Leamington	Leamington and St. Clair, in Canada Southern.			12,000 00	100,000 00		
Township of Mersea.	do			15,000 00			
Village of Comber.	do			6,000 00			
Township of London	London, Huron and Bruce.			15,000 00	333,000 00		
do Stephen.	do			17,500 00			

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[illegible]

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$	\$	\$	\$	\$	\$
		cts.	cts.	cts.	cts.	cts.	cts.
ONTARIO—Continued.							
Municipality of Neebing.....	Port Arthur, Duluth and Western.			15,000 00	40,000 00		
Town of Simcoe.....	South Norfolk.....			5,000 00			
Township of Charlotteville.....	do.....			20,000 00			
do South Walsingham.....	do.....			40,000 00			
City of St. Catharines.....	St. Catharines and Niagara Central	40,000 00	40,000 00		65,000 00	80,000 00	
Town of Thorold.....	do.....						
City of Ottawa.....	St. Lawrence and Ottawa.....	200,000 00				20,000 00	100,000 00
Town of Prescott.....	do.....	100,000 00	300,000 00			60,000 00	
do Gananoque.....	Thousand Islands.....				10,000 00	30,000 00	90,000 00
Township of Bayham.....	Tilsonburg, Lake Erie and Pacific			35,000 00			
Township of Malahide.....	Tilsonburg, Lake Erie and Pacific			4,000 00			
do Houghton.....	do.....			3,000 00			
Town of Tilsonburg.....	do.....			10,000 00	55,000 00		
Village of Vienna.....	do.....			3,000 00			
City of Toronto.....	Toronto and Nipissing.....			150,000 00			
Township of Scarborough.....	do.....			10,000 00			
do Markham.....	do.....			30,000 00			
do Uxbridge.....	do.....			50,000 00			
do Scott.....	do.....			10,000 00			
do Brock.....	do.....			50,000 00			
do Eldon.....	do.....			44,000 00			
do Bexley.....	do.....			15,000 00			
do Somerville.....	do.....			15,000 00			
Townships of Luxton, Digby and Langford.....	do.....			12,500 00	388,500 00		
Town of Uxbridge.....	do.....			2,000 00			
Township of Albion.....	Toronto, Grey and Bruce			40,000 00			
do Caledon.....	do.....			45,000 00			
do Mono.....	do.....			45,000 00			
do Amaranth.....	do.....			30,000 00			
do Arthur.....	do.....			35,000 00			

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Town of Orangeville.....	do	15,000 00	
do Mount Forest.....	do	24,000 00	
City of Toronto.....	do	350,000 00	
County of Grey (Group).....	do	.....	300,000 00	
Town of Owen Sound.....	do	.....	5,000 00	
Township of Minto.....	do	.....	15,000 00	
do Howick.....	do	.....	35,000 00	
do Gorrie and Wroxeter.....	do	.....	5,000 00	
Village of Teeswater.....	do	.....	5,000 00	
Township of Culross.....	do	.....	38,000 00	
do Turnbury.....	do	.....	5,000 00	
City of Brantford.....	Toronto, Hamilton and Buffalo, comprising Brantford, Waterloo and Lake Erie.....	.....	988,000 00	
Township of Oakland.....	do	.....	25,000 00	
Village of Waterford.....	do	.....	9,000 00	
City of Hamilton.....	do	.....	5,000 00	
Township of South Grimsby.....	do	.....	225,000 00	
Town of Lindsay.....	Victoria.....	.....	4,000 00	268,000 00
Village of Fenelon Falls.....	do	.....	85,000 00	
Townships of Verulam and Somerville.....	do	.....	25,000 00	
County of Haliburton.....	do	.....	22,000 00	
Township of Woolwich.....	Waterloo Junction.....	.....	54,000 00	186,000 00
Section of Peel.....	do	.....	28,000 00	
Village of Elmira.....	do	.....	7,000 00	
do St. Jacobs.....	do	.....	10,000 00	
Fergus.....	Wellington, Grey and Bruce.....	.....	2,000 00	47,000 00
Peel.....	do	.....	10,000 00	
Elora.....	do	.....	40,000 00	
Maryboro.....	do	.....	10,000 00	
Nichol.....	do	.....	40,000 00	
Wallace.....	do	.....	10,000 00	
Minto.....	do	.....	35,000 00	
Bruce.....	do	.....	65,000 00	
Howick.....	do	.....	278,000 00	
Listowel.....	do	.....	20,000 00	
Grey.....	do	.....	15,000 00	
Elma.....	do	.....	35,000 00	
Morris.....	do	.....	30,000 00	
W. Wawanosh.....	do	.....	30,000 00	
Ashfield.....	do	.....	18,000 00	
Turnbury.....	do	.....	10,000 00	
Kincardine.....	do	.....	28,000 00	
City of London.....	West Ontario Pacific.....	.....	8,000 00	682,000 00
Town of Whitby.....	Whitby, Port Perry and Lindsay.....	.....	70,000 00	25,000 00
Township of Whitby.....	do	.....	15,000 00	

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
ONTARIO—Concluded.							
Township of Reach...	Whitby, Port Perry and Lindsay			30,000 00			
do Saugog...	do			2,000 00			
County of Victoria...	do			85,000 00			
Village of Port Perry...	do			20,000 00			
Manufacturing Co...	do			94 93	222,094 93		
QUEBEC.							
Caplin	Baie des Chaleurs.		1,020,311 00		10,088,942 78		1,311,500 00
New Richmond...	do			5,000 00			
Maria...	do			6,000 00			
Carlston...	do			6,000 00			
Nouvelle and Shoolbred...	do			6,000 00			
New Carlisle	Baie des Chaleurs			6,000 00			
Paspébiac...	do			3,000 00			
Hamilton	do			2,500 00			
Farnham...	Canadian Pacific				40,500 00		
Town of Nicolet...	Drummond County			10,000 00	20,000 00		
Municipality of St. Leonard	do			5,000 00			
Parish of St. Antoine	Great Eastern			10,000 00	15,000 00		
do St. Denis.	do			10,000 00			
Parish of Ste. Sophie...	Great Northern.			4,000 00	20,000 00		
Village of New Glasgow...	do			2,000 00			
County of Compton.	International, now in Atlantic and North-west, C.P.R.				6,000 00		
St. Pie.	Lake Champlain & St. Lawrence J.			20,000 00			
L'Ange Gardien.	do			10,000 00			
St. Paul.	do			6,000 00			
Philipsburg...	do			15,000 00			
Town of L'Assomption	L'Assomption...				51,000 00		
City of Three Rivers.	Lower Laurentian.				1,500 00		
Ascot.	Massawippi Valley.					40,000 00	25,000 00
							225,000 00

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Hatley.....	do	25,000 00	65,000 00
Township of Melbourne and Bromp- ton Gore.....	Missisquoi & Black River Valley, now in Atlantic & North-west, C.P.R.	do	25,000 00	20,000 00
Township of Ely.....	do	do	.....	.....	20,000 00	20,000 00
do North Stukely.....	do	do	.....	.....	20,000 00	20,000 00
do Bolton.....	do	do	.....	.....	20,000 00	20,000 00
Ormstown.....	Montreal & Champlain Junction (Grand Trunk).....	do	.....	.....	10,000 00	85,000 00
St. Constant.....	do	do	.....	.....	1,800 00	
Ste. Philomène.....	do	do	.....	.....	2,820 00	
Laprairie.....	do	do	.....	.....	1,904 00	
Huntingdon.....	do	do	.....	.....	3,000 00	
St. Isidore.....	do	do	.....	.....	1,500 00	
Dewittville.....	do	do	.....	.....	750 00	
Municipality of Rigaud.....	Montreal and Ottawa.....	do	.....	.....	2,000 00	21,774 00
Parish of Rigaud.....	do	do	.....	.....	800 00	
Point Fortune.....	do	do	.....	.....	2,500 00	
Chambly Canton.....	Montreal, Portland and Boston.....	do	.....	.....	15,000 00	5,300 00
do Basin.....	do	do	.....	.....	10,000 00	
County of Pontiac.....	Pontiac Pacific Junction.....	do	.....	.....	100,000 00	25,000 00
Village of Shawville.....	do	do	.....	.....	1,000 00	
Village of St. Andrews.....	Ottawa Valley.....	do	.....	.....	50,000 00	101,000 00
Parish of Sherbrooke.....	Quebec Central.....	do	.....	.....	25,000 00	10,000 00
do Dudswell.....	do	do	.....	.....	25,000 00	
do Weedon.....	do	do	.....	.....	3,000 00	
Township of Garthby.....	do	do	.....	.....		103,000 00
City of Quebec.....	Quebec and Lake St. John.....	do	.....	.....		12,000 00
Town of Chicoutimi.....	do	do	.....	.....
City of Montreal.....	Quebec, Montreal, Ottawa and Oc- cidental.....	do	.....	.....	1,000,000 00	450,000 00
do Quebec.....	do	do	.....	.....	1,000,000 00	
do Three Rivers.....	do	do	.....	.....	200,000 00	
County of Ottawa.....	do	do	.....	.....
St. Sauveur de Québec.....	do	do	.....	.....	25,000 00	
Côte St. Louis.....	do	do	.....	.....	25,000 00	
Village of Ste. Thérèse.....	do	do	.....	.....	12,000 00	
Parish of do.....	do	do	.....	.....	10,000 00	
do St. Jérôme.....	do	do	.....	.....	15,000 00	
Village of do.....	do	do	.....	.....	10,000 00	
Ste. Scholastique.....	do	do	.....	.....	10,000 00	
St. Andrews.....	do	do	.....	.....	25,000 00	
St. Jérusalem d'Argenteuil.....	do	do	.....	.....	25,000 00	25,000 00
2,494,000 00						

Department of Railways and Canals.

Town of Fort Fairfield.	New Brunswick.	12,000 00			
do Lyndon	do	11,000 00			
City of Calais	New Brunswick and Canada.	12,500 00		23,000 00	
do Houlton	do	22,000 00			
do St. Stephen.	do	13,000 00		47,500 00	
Town of Chatham.	Northern and Western of New Brunswick, now Canada Eastern.		20,000 00		
Parish of Elgin	Elgin, Petitediac and Havelock.			13,000 00	60,000 00
City of St. John.	St. John and Maine.				
			23,000 00	273,500 00	60,000 00
NOVA SCOTIA.					
County of King's.	Cornwallis Valley, now in Dominion Atlantic.			27,685 00	
Counties of Yarmouth, Digby and Annapolis.	Western Counties, now Dominion Atlantic.			150,000 00	
County of Pictou	New Glasgow Iron, Coal and Railway Co.			4,000 00	
do Shelburne	Nova Scotia Southern.	50,000 00			
do Queen's.	do	25,000 00			
do Lunenburg	do	5,000 00		80,000 00	
				261,685 00	
MANITOBA.					
City of Winnipeg.	Canadian Pacific.	200,000 00			
County of Selkirk.	do	35,000 00			
Township of St. Andrews.	do	35,000 00			
Town of Morris.	do	100,000 00		370,000 00	
County of Westbourne.	Manitoba and North-western.	75,000 00			
Town of Portage la Prairie	do	50,000 00			
do Minnedosa	do	30,000 00			
Municipality of Shoal Lake	do	20,000 00			
do Birtle	do	40,000 00			
do Strathclair	do	600 00			
Rapid City	Saskatchewan and Western.			215,600 00	
				10,000 00	
				595,600 00	
BRITISH COLUMBIA.					
City of New Westminster	Canadian Pacific.			37,500 00	

No. 10.—STATEMENT of Aid granted to Railways constructed and under construction by Governments and Municipalities, 30th June, 1897.

	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.	Grand Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Governments.</i>							
Dominion	15,964,533 05		139,652,812 69				155,627,345 74
Ontario	26,000 00		7,331,116 63				7,357,116 63
Quebec	3,722,956 03		12,949,914 38				16,672,870 38
New Brunswick			4,200,590 71		300,000 00		4,500,590 71
Nova Scotia			2,280,116 53				2,280,116 53
Manitoba	1,855,934 27		770,677 50				2,626,611 77
British Columbia		21,569,423 32	37,500 00	167,232,728 44		300,000 00	189,102,151 76
<i>Municipalities.</i>							
Ontario	1,020,311 00		10,088,942 78		1,311,500 00		12,420,753 78
Quebec	2,434,000 00		532,074 00		1,393,000 00		4,359,074 00
New Brunswick	23,000 00		273,500 00		60,000 00		356,500 00
Nova Scotia			261,085 00				261,085 00
Manitoba			595,600 00				595,600 00
British Columbia			37,500 00				37,500 00
North-west Territories							
		3,477,311 00		11,789,301 78		2,764,500 00	18,031,112 78
		25,046,734 32		179,022,030 22		3,064,500 00	207,133,264 54

Department of Railways and Canals

PART VII

REPORT OF THE CANADIAN DEEP WATERWAYS COMMISSIONERS

Department of Railways and Canals.

REPORT OF THE CANADIAN DEEP WATERWAYS COMMISSIONERS.

OTTAWA, 17th June, 1897.

The Honourable R. W. SCOTT, Senator,
Secretary of State,
Ottawa.

SIR,—The undersigned, Commissioners appointed by Order in Council November, 1895, had the honour, in their interim reports of March and August of last year, to give an account of meetings with their American colleagues at Detroit and Niagara, in January and July, 1896, and of the work done and in progress at those dates in co-operation with the United States Commission. Your Commissioners have now to report a third meeting held at Detroit, in December last, by invitation of the United States Commission, preparatory to the reports of both Commissions. The United States Commissioners presented their report to the President of the United States in January last, and it has since been printed and distributed. It has also been reprinted at Ottawa and is appended to the report of the Minister of Railways and Canals.

This report is most important in that it asserts the entire feasibility of constructing a deep waterway adequate to any scale of navigation which may be required between the several great lakes and the sea-board; and, also, that it will be wise to provide for securing a channel of a navigable depth of not less than 28 feet. This was the first duty imposed on that Commission by the Act of Congress of 1895.

Secondly, they report that "the most eligible route" is by the Niagara River, and by canal, on the east side, from Tonawanda to Olcott on Lake Ontario; that the sea-board may be reached (from Lake Ontario) by the St. Lawrence River, and via Lake Champlain to the Hudson River; or, by way of the Oswego Oneida-Mohawk Valley and the Hudson River, and that these alternative routes require complete surveys in order to compare them in all respects, and comply with the provisions of the Act of Congress as to "probable cost with estimates in detail."

For surveys \$350,000 are estimated, of which an appropriation of \$150,000 is asked for the first year.

Specifically, the matters which call for early action are epitomized under the head "Recommendations" in this report in the following words:—"That complete surveys and investigations be made, and all needful data be procured, to mature projects for controlling the level of Lake Erie, and projection to the Niagara Ship Canal; developing the Oswego Oneida-Mohawk route; developing the St. Lawrence and Champlain route; improving the tidal Hudson River, and improving intermediate channels of the lakes."

Inasmuch as New York and the Atlantic States (including all New England ones) form by far the most important market both for home consumption and for exportation, no deep waterways route which is not the best for reaching that market would be considered by the originators of this International Commission. The fact, therefore, that such a commission has been established indicates a belief on their part, that an international route may prove to be the best, if not the only practicable one to reach the American sea-board at New York, as it certainly would be the shortest and best to reach tidewater, and also Lake Champlain with its New England frontier.

The supreme value, to the North-western States as well as to the Canadian prairies of an international route for deeper waterways, is that it will combine the shortest route to the Canadian sea-board, Europe, and Lake Champlain, with the broadest, deepest, and most speedily navigated waters, and, therefore, the quickest route from the heart of this northern continent to New York.

The probable route of such an international work will be one by which all the new large canals required between Lake Erie and the Hudson River will be located along the northern and eastern boundary of the state of New York, with the single exception of the one between the River St. Lawrence and Lake Champlain; which is the only one necessarily within Canadian territory.

The Order in Council establishing a Canadian Deep Waterways Commission declares that "this question is one of sufficient importance to justify expenditure in the direction of the inquiry indicated in the Act of Congress," and instructs us "to carry on such inquiry on the lines specified in the said Act, and to meet and confer with the committee appointed by the President of the United States, and to report to His Excellency in Council."

No joint action of the two Commissions is provided for by either Government. The responsibility of recommending the route to be adopted, of ascertaining the cost of the same with estimates in detail, as well as of pronouncing upon the feasibility of the scheme, rests exclusively with the three persons appointed by the President of the United States viz.:—Jas. B. Angell, LL.D., President of the University of Michigan, ex-United States Minister to China, and recently appointed Minister to Turkey; John E. Russell, ex-member of the United States Congress, of Leicester, Massachusetts; and Lyman E. Cooley, Civil Engineer, Chicago Drainage Canal. The powers and duties of these Commissioners are defined in the law of 2nd March, 1895, in the following words:—"To meet and confer with any similar committee which may be appointed by the Government of Great Britain, or the Dominion of Canada, and make inquiry and report, whether it is feasible to build such canals as shall enable vessels engaged in ocean commerce to pass to and fro between the Great Lakes and the Atlantic Ocean, with an adequate and controllable supply of water for continual use; where such canals can be most conveniently located, and the probable cost of the same, with estimates in detail; and if any part of the same should be built in the territory of Canada, what regulations or treaty arrangements will be necessary between the United States and Great Britain to preserve the free use of such canals to the people of this country at all times; and all necessary facts and considerations relating to the construction and future use of deep water channels between the Great Lakes and the Atlantic Ocean."

The above instructions for the American Commission are fully set forth in the Order in Council appointing the Canadian one, and we are directed "to accept the Order in Council as our instructions," and thus empowered to co-operate with the United States Commission.

The United States Commissioners in their report, say of their investigations:—"They are tentative in part and ignore the boundary line, and are intended to present in logical sequence the leading considerations which determine the choice of routes, and the character of an enterprise, as well as the collateral bearing of the same." This is the spirit in which your Commissioners have been met throughout by their United States colleagues, and it appears to us to be the proper spirit to give effect to the true intent of an international commission of this nature.

It would, moreover, be premature for the Canadian Commission now to deal with the many important questions which are involved in so great a proposition from an exclusively Canadian standpoint, unless and until specially instructed by its own Government to do so, because we cannot yet assume the continuance of the American Commission, which has expended its appropriation, and made its first report as hereinbefore referred to. Until Congress adopts that report and makes provision for complying with the terms of the law of 1895, and similar action is taken by the Government of Canada, both Commissions (unless cancelled) are in a state of suspended animation.

Your Commissioners have supplied their United States colleagues with all the information they were able to obtain with the means placed at their disposal, for an international route between Lake Ontario and Lake Champlain, and have made a preliminary survey of a trial line between Lake St. Francis and the Richelieu River, which, while it demonstrates the remarkably favourable character of the country, is not upon the shortest practicable route between Lake St. Francis and Lake Champlain,

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within Canadian territory. If the International Commission is continued, such a survey will be needed, accompanied by all the information necessary "to estimate the cost in detail," as well as a survey of the same character for the extension of this international deeper waterway, upon the best route, from Lake St. Francis to Montreal. To this extension no special reference is made in the report of the American Commissioners (possibly in order to emphasize the New York terminus for an international route), but they point out that it is practicable "to construct in separate sections, so that benefit shall follow closely on expenditure." Thus, the completion of the Niagara Ship Canal would bring Lake Ontario into communication with the great steel fleet above Niagara (which is valued at many tens of millions), 300 of the vessels of which are unable to pass the Welland Canal. In like manner, the completion of the section between Lake St. Francis and Lake Champlain in advance of new-deep water canals on the south side of the St. Lawrence, and of the connection of Lake Champlain with the Hudson River by a similar deep-water canal, would bring New England at once into connection with the whole Great Lake system, although at first only on the smaller scale of the Welland Canal.

There has been no demand upon Canada for any specific contribution to this inquiry; but as the Order in Council instructed us to carry on such inquiry on the lines specified in the Act of Congress, we have hitherto assumed the duties of the Canadian section of the international route, and, should the inquiry be continued, Canada will no doubt be expected to contribute the necessary information with respect to that section of this great scheme which lies within her own territory. We hoped to have been able to present some more material which would illustrate the superiority of the St. Lawrence route as an outlet for the large fleet imprisoned above Niagara, whether its destination were New York or Montreal, but we failed to obtain the necessary means to give effect to this purpose last year.

The general collection of facts and statistics relating to engineering questions devolved upon Mr. Cooley, the engineering member of the United States Commission, and, in view of the time and money at his disposal, is enormous and invaluable. The contributions of the Canadian Commission in this respect are due wholly to the labours of Mr. Monro, and to the courteous assistance of the officers of the various departments of the Government of Canada and of the provinces of Ontario and Quebec; and these are acknowledged in the report of the United States Commission. A memorandum by Mr. Monro relating to his contribution will be found in the appendix.

If it is the desire of the Government further to contribute to this international enterprise, we recommend that a sufficient sum be appropriated, to be used if required, so that, if Congress continues the International Commission and provides the means to complete its work, Canada may be in a position to proceed with the surveys and estimates in that portion of the route which lies within her territory.

Your Commissioners have, in the foregoing, set forth all of which they believe to be necessary to show how far they have discharged the duties imposed on them, and to explain the present position of this important question; but in view of the possibility that this may be their last report, and more particularly because they have found that there is much difference of opinion and some misconception about an "International Deep Waterway between the Great Lakes and the Atlantic Sea-board," they deem it proper to give some information as to this movement, the conditions which have led up to the formation of an International Commission, and some of the reasons in support of it, as well as some reference to Canada's interest in the question, which may prove of future service. We consider this to be the more necessary since our American colleagues have already pronounced in favour both of the feasibility and desirability of this deeper waterway, and have declared that "the completion of the entire system as quickly as plans can be matured and economically executed, is fully justified." With this conclusion of our United States colleagues both as to feasibility and desirability, as well as to earliest possible completion, your Commissioners fully concur.

CONVENTIONS.

International, and deeper waterways, by other than existing routes, have been agitated for many years. As early as 1849 a convention was held in Burlington, Vermont, for the purpose of considering the connection of Lake Champlain with the St. Lawrence canals by a shorter route of larger and deeper dimensions than the Chambly Canal; in consequence of which the Caughnawaga Canal route was surveyed by the Canadian Government over 40 years ago. Opposition from the Canadian side, and the absence of any similar outlet from Lake Champlain to the Hudson River prevented further effort in that direction.

Deep water conventions were held at several points in the Upper Lake region since the General Government assumed the Michigan Canal at Sault Ste. Marie in 1881, which assumption has since led to the deepening, by that Government, of the Detroit, St. Clair, and St. Mary's rivers, for 20 feet draught at a cost of over \$10,000,000. This work was to have been completed in 1895, but in consequence of the extreme low water of that year, has fallen short of 20 feet. The effect of this deepening, however, by doubling the tonnage of the vessels, has been to "cut previous rates of freight in two," and has given strength to the agitation to extend this deeper waterway to the sea-board in the firm conviction that it will again cut existing rates (between Lake Erie and the sea-board) "in two."

After a dozen conventions had been held, at various United States cities and in the lake region, and after two bills had been introduced by congressmen from Minnesota, the first of which (in 1892) invited negotiations with Canada for the speedy completion and deepening of the St. Lawrence route, a Deep Waterways Convention was called by the city of Toronto, in 1894, to which representatives from the United States lake cities were invited. These came in force and joined the Canadian delegation in the formation of an "International Deep Waterways Association," which held its first convention at Cleveland in 1895, and from these proceedings the Act of Congress creating an International Commission originated.

UPPER LAKES TRAFFIC.

It is impossible to convey, within reasonable space, an adequate idea of the extraordinary development of inland water transportation on the Upper Lakes,—which for rapidity, extent, economy, and efficiency has no counterpart even on the Ocean. More than half of the best steamships of the United States are imprisoned above Niagara Falls, and more than half of the tonnage built in the United States in 1896 was launched upon the lakes. Of the exclusively passenger steamers, the "North West" and the "North Land" (5,000 tons displacement, 7,000 horse-power, with a speed of over 21 miles per hour, and a capacity of 550 first-class passengers), built at a cost of \$700,000 each, are unsurpassed except by the recent Atlantic Liners. Of 34 steamers built in 1895-96, the side-wheel passenger steamer "Buffalo" was valued at \$375,000, and a steel "car ferry steamer" at \$300,000.

This inland water commerce has built up twelve cities on the southern shores above Niagara, five of which have over 200,000 population, one over a million, and the remainder above 20,000 each, and within these same limits there are 27 dry docks, the largest of which is on Lake Superior and is 560 feet long, 50 feet wide, with 18 feet water.

There are 63 life-saving stations upon these lakes, ten of which are Canadian. Of the 53 United States lake stations, all but five are above Niagara.

The economy of this inland water transportation is the result of deep water primarily, and, in the second place, of practically unlimited dimensions in other respects for the vessel; there being but the lift of one lock (of ample dimensions) to reach Lake Superior, and none at all between Buffalo and Chicago.

The large cargo steamers take two or three sailers in tow, each carrying thousands of tons, and, with their triple expansion engines, show a coal consumption (for the best practice) of 2 pounds per developed horse-power per hour. Actual runs give four-fifths of an ounce of coal per mile consumed per ton of cargo carried. Thirdly, the economy results from special port facilities, to be found nowhere else, by which loading and discharging is

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effected in the shortest possible time by specially designed plant and with the least amount of manual labour. In some cases ore is excavated as in a gravel pit, by steam shovels, and dumped from the cars into the hold of the vessel. Five thousand tons of ore can be unloaded in twelve hours by the "ten leg" King plant, specially designed for this purpose.

The United States "business fleet" of the lakes above Niagara Falls consists of steel freight steamers and sailers valued at over \$60,000,000, some attaining a speed of 16 miles per hour, though the average is about 12 miles. The sailers are steel consorts often carrying 4,000 tons cargo, which, though using sail, depend on towing. They are fitted with a steam plant, used only for electric light, steering, and warping in and out of port. A typical freight steamer is 432 feet over all, 48 feet beam and 28 feet depth (180 feet too long, 4 feet too wide and much too deep for the Welland Canal) and is double bottomed, with compartments into which water ballast can be admitted or pumped out; with tripple expansion engines, cylinders, 24, 39, and 63 inches in diameter and 7 feet stroke, supplied from boilers carrying 160 pounds working pressure. It carries over 5,000 gross tons iron ore on 16 feet 10 inches draught of water.

The total United States lake fleet (including that upon Lake Champlain) in June, 1896, was nearly 3,000 vessels of about 1,300,000 registered tonnage, over 1,800 of which are steamers with about one million registered tonnage. There are 300 of these above Niagara (embracing all the finest vessels of the lakes) which are too long to pass the Welland Canal locks. More than half of these are built of steel or iron, and, of the last fifty built, forty-one were of steel, and only nine of wood.

The rapid extension of steel and iron in lake ship-building is shown by the official return of vessels built on the lakes in the year ending with June, 1896, as follows:—

25 steam vessels—all iron or steel—gross tonnage.....	64,592
5 sail " " " " ".....	13,684
6 barges " " " " ".....	3,147
	81,423

The average tonnage of the iron and steel vessels on the lakes is 1,500 tons each, while that of the United States Atlantic and Gulf coast vessels is only 1,000 tons.

There are eight steel ship-building yards above Niagara, three of which are in Ohio, two in Michigan, and one each in Wisconsin, Illinois, and New York State, all but two of which were established within the last ten years.

The losses on the lakes since 1890 have been about 400 vessels with 200,000 tonnage and valued at about \$6,000,000.

IRON ORE TRAFFIC.

The iron ore trade is the primary cause of the wonderful development of the steel "business fleet" of the Upper Lakes. It has led to an increased coal trade for which it provides ample tonnage at the lowest rates, as well as to the manufacture on the spot of the steel used in boat construction.

Over 100 million tons of this ore have been mined in the lake region within the last 40 years, 75 per cent of which has been produced within the last ten years.

The estimated capital engaged in mining and transporting this ore, by rail and water, to the 120 furnaces in Ohio, Pennsylvania, Buffalo, and Chicago is over \$230,000,000, distributed as follows:—

Capital in mines.....	\$ 96,000,000
Ore docks and equipment in Lake Superior and Lake Michigan.....	14,000,000
Mining railroads.....	32,000,000
Ore fleet.....	46,000,000
Ore docks at Lake Erie ports.....	15,000,000
Railroads to furnaces.....	28,000,000
Total.....	\$231,000,000

Sixty per cent of the iron ore used in the United States is carried upon these lakes, and, as seen above, the ore fleet is valued at over two-thirds of the total valuation of the steel business fleet (\$64,000,000) of the lakes.

Iron is the most important of the metals and the United States already claim that their production exceeds that of any other country, and, of this, Lake Superior is the most important district, as it certainly is, in situation, quantity and quality, one of the most remarkable. There are over two hundred mines in five separate "ranges" known as Marquette, Menominee, Gogebic, Mesabi, and Vermilion, on the United States shores, besides, large quantities of excellent ore on the Canadian side which has not yet been touched. The ores are "hard" and "soft" Bessemer, and "non-Bessemer," the latter of such character and variety that some are the complement of others, which, in proper proportions, produce from two non-Bessemer ores, a Bessemer blend. Analysis of 100 cargoes from four of the ranges gives 62 per cent to 67 per cent metallic iron. (See Appendix). A portion of the Lake Superior ore goes to furnaces upon Lake Michigan, but the great bulk is brought to ten Lake Erie ports for transfer to furnaces in Ohio and Western Pennsylvania, as well as for consumption at such great steel producing points as Cleveland on Lake Erie, a city the population of which has increased four fold in less than twenty years. The annual output exceeds ten million tons, exceeding the supply from all other quarters and furnishing more than half of the 8,623,000 tons of pig iron produced in the United States in 1896. This amount equals the output of Great Britain which has hitherto held the lead both in iron and coal production. England imports much of her ore, and it may safely be asserted that there is no iron district in the world, as yet known, which can rival that around Lake Superior. This ore is water borne to Lake Erie at a cost of one-tenth of a cent per ton per mile, less than one-fourth the lowest railroad rate as yet. At Cleveland it meets the best coke from Western Pennsylvania, laid down there by rail from the ovens at less than \$2 per ton. Ore is sold in Cleveland for less than \$3 per ton.

Mine owners, iron and steel manufacturers, and shipbuilders have pronounced in favour of a deeper waterway from Lake Erie to the Atlantic; and they contend that iron ore, pig iron, coal, coke and steel steamers can be exported from the lakes by such a route and compete at tide-water with their kind from any other quarter. In fact it is boldly claimed that ore, coal, coke and limestone can be assembled on Lake Erie so as to produce steel more cheaply than it can be done in any other part of the world. It is reported that Messrs. Carnegie and Rockefeller have secured control of the Lake Superior ore production and are building a freight railway designed to carry ore, coal and coke, in fifty ton cars at the lowest possible rates, between the furnaces and coal mines, and Lake Erie.

LUMBER TRADE.

Until recently the tonnage in lumber ranked second, or next to ore in the water borne freight of the lake region, but is not now so important to this question because but a small percentage of it seeks the sea-board; the great bulk being local for the supply of the lake cities and for shipment westward from these. There is, however, a prospective lumber traffic (which may be vastly increased by a deep waterway) in Pacific coast lumber, dropped into the waters of Lake Superior by the east bound "empties" of the overland railways.

COAL TRAFFIC.

Coal, in point of tonnage, comes next to lumber in the proportion which is water borne on the lakes, which, of course, is not half of that which is consumed at lake ports. The amount which reached Lake Erie alone, in 1894, from Pennsylvania, Ohio, and West Virginia, exceeded 11,000,000 tons, only half of which was shipped westward from these ports. With lake shore transshipment plant and the proposed freight railway on shortest route, with lowest grades and heaviest rails and structures, car loads may be so increased that coal and coke can be laid down on the Atlantic sea-board, via a deep waterway from Lake Erie, at a less rate than by any other United States route; or from any other quarter, except Nova Scotia.

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THE GRAIN TRADE (INCLUDING FLOUR).

This trade though ranking hitherto below lumber, coal and ore, in tonnage quantity, is constantly increasing, and is the most important, from the value of the tonnage and its destination, which is chiefly through to the sea-board, where its value is greatest. To it every reduction in the cost of transportation will be the most wide reaching in extent, and will directly influence the greatest number of individuals. Each reduction extends the area of cultivation in those districts (like the Dakotas and the Canadian prairies,) which are entirely dependent on the Lake Superior route, and also extends the area of attraction towards the lake route from the more southern districts having a choice of routes to the Atlantic.

The total receipts of grain (including flour at $4\frac{1}{2}$ bushels to the barrel) at North Atlantic tide water, in 1896, from the Chesapeake to the St. Lawrence was over 350,000,000 bushels, of which wheat and flour formed the largest number of bushels, or 150,000,000. Corn came second with 107 million bushels, and oats seventy-four millions—the remainder being barley and rye. New York received much the largest quantity, 145,000,000 bushels, exceeding Baltimore, Boston and Philadelphia combined, more than doubling the receipt of any other port in every kind of grain, except corn, in which Baltimore and the Chesapeake (Newport News and Norfolk) approached her closely. Corn receipts were larger than usual at all points of export on account of the low price in 1896. Montreal, the only sea-port which can reach a lake port in the same bottom, is, in “receipts,” at the foot of the list;—is below Boston, Philadelphia and Chesapeake, all of which have only rail connection with the lakes or the corn belt; but exceeds both Boston and Philadelphia in “shipments.”

The receipts of wheat, corn and flour, in 1896, were:—

	Wheat. Bushels.	Corn. Bushels.	Flour. Barrels.
Buffalo.....	54,400,000	47,800,000	10,384,484
Montreal....	9,400,000	6,600,000	1,590,000

All of Buffalo's ten million barrels of flour came by lake. Of Montreal's million and a half, only 133,000 barrels came by the St. Lawrence, while 267,000 barrels went to Ogdensburg by water.

Of the total movement to tide-water of 150,000,000 bushels of wheat and flour, Montreal received 16,600,000, about 11 per cent.

Of the total movement to tide-water of 107,000,000 bushels of corn, Montreal received 6,600,000, about 6 per cent.

Of the total 19,035,377 barrels of flour received at tide-water, North Atlantic, Montreal received 1,593,169, 8 per cent.

Of the total receipt of wheat at tide-water (65,000,000 bushels), Montreal received 9,500,000, or $14\frac{1}{2}$ per cent.

Of the 350 million bushels grain and flour received at tide-water (North Atlantic), less than 250 millions were exported, leaving for home consumption at these ports over 100 million bushels, besides interior receipts from the west which did not reach these Atlantic ports. For instance, Buffalo received 54 million bushels of wheat by lake, in 1896, New York, from all points by rail and water, only 28 million bushels. Buffalo received over 10 million barrels of flour, New York only 6 millions.

Of Buffalo's grain receipts in 1896, which were 163,400,000 bushels, there was forwarded by rail 121,000,000, and by Erie Canal 35,000,000, a total of 156,000,000; and of over 10,000,000 barrels of flour only 65,500 were forwarded by Erie Canal.

Buffalo has 52 elevators including transfer and floating ones, 16 million bushels storage capacity, and 6 million bushels elevating capacity in 24 hours. The transfer charges there upon wheat are $1\frac{1}{2}$ cents per bushel, and in New York $1\frac{3}{4}$ cents.

While 1896 was the banner year for Montreal's grain trade (including flour) the trade has been so fluctuating, and non-progressive by decades, in comparison with all other Atlantic ports that it may be classed as stationary. It first attained the twenty million mark in 1878, reached 26 millions in 1880, dropped to 16 millions in 1882, rose

to 21 millions in 1886, dropped to 14 millions in 1888, rose to 28 millions in 1892, dropped to 16 millions in 1894, and for the first time in its history attained the 30,000,000 mark in 1896, when it reached 30,100,809 bushels, including pease and local receipts. Buffalo's receipts, by lake only, for the same year were 215 million bushels (including flour as grain) while Montreal's flour receipts were chiefly by rail.

The flour receipts of Montreal in 1863 were 1,193,486 barrels. This quantity was not exceeded until 1895; the receipts of that year as well as of 1896 being each 50 per cent over the average of preceding years. Until 1895 there were only 3 years in which flour receipts at Montreal reached one million barrels.

The wheat receipts at Montreal were highest in 1879 when they reached 11,313,000 bushels. This has not been equalled since.

Montreal grain receipts in 1878 were 22 million bushels nearly; in the 19 years which followed (including 1878, the first twenty million year, and the banner year of 1896) the average is less than the receipts of 1878, showing practically no advance in the last twenty years.

There is apparently no other explanation of this failure to secure a larger share of the inland water commerce by our principal sea-port, than the want of deeper waterways and therefore lower freight rates from the lakes. The larger locks of the Welland Canal have been opened with 12 feet water since 1881, and with 14 feet since 1887, and the effect has been felt at Ogdensburg; but the St. Lawrence is still with less than 9 feet.

Of 34,400,000 bushels of Manitoba wheat shipped from Lake Superior in 1894, '95 and '96, 14,800,000 were exported from New York and 4,700,000 from Montreal, the greater portion (2,498,000 bushels) in 1896.

LAKE ERIE.

There is no fresh water or salt water lake in the world the commerce of which can compare with that on Lake Erie, in annual tonnage and value, despite its almost total suspension by winter for about one-fourth of the year.

Besides being the receiving reservoir for all the water borne agricultural produce of Lakes Huron, Michigan and Superior, and for the return cargoes for these from the east, it possesses an enormous inland tonnage distributed along its shores, in the transfer of ore and coal with a most important iron and steel industry arising out of the junction of these at many of the cities on its southern shore—along which there are distributed, within 300 miles, about a dozen cities, the receiving ports for ore and the shipping ports for coal as well as agricultural exports.

The number of vessels with tonnage owned, and ore received at these in 1896, are:—

Ports.	Vessels.	Tonnage.	Ore received.
			Tons.
Toledo.....	80	29,905	301,794
Sandusky.....	96	46,375	58,667
Huron.....			226,515
Loraine.....			191,445
Cleveland.....	267	271,609	2,313,170
Fairport.....			941,446
Ashtabula.....			2,272,822
Erie.....	63	38,671	847,849
Conneaut.....			327,623
Buffalo.....	388	191,853	545,101
	894	573,413	8,026,432

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The tonnage is that registered in the customs districts and includes adjoining ports. Cleveland has the largest tonnage and the highest average per vessel (1,000 tons), and her district alone embraces 20 per cent of all the United States tonnage (about 1,300,000 tons) on all the lakes, including Champlain. The Lake Erie ports have nearly half the total tonnage of the five Great Lakes, and if Detroit (which is within a few miles of the head of Lake Erie) is taken as a Lake Erie port, with her three hundred vessels of about 175,000 tons, this lake would represent about 60 per cent of the total of all the lakes.

It is claimed for Cleveland that, with the exception of the Clyde, she is the largest ship-building port, as she is the largest iron ore market in the world. Her population is said to have quadrupled in the last twenty years, being in the first rank in the United States in iron and steel production and their allied industries, as well as the chief centre of receipt and distribution of ore and coal; and also because nearly half of the population of the United States is said to be found within a radius of 400 miles.

These facts explain the strong sentiment in favour of unrestricted communication between Lake Erie and the ocean, and the combination of agricultural and shipping interests at the Cleveland Convention of 1895 and its results.

Of the eight ship-building yards above Niagara, two are in Cleveland, one at Buffalo and one at Toledo (making half the number on Lake Erie), one on the Detroit River, and one each on Lakes Huron, Michigan and Superior.

Buffalo, the second city in population of the Empire State of New York, and the third upon the Great Lakes, is as pre-eminent in the grain, flour and cattle business as her sister city is in ore and steel.

Each of these Lake Erie cities largely exceeds in population any Canadian one. The population of Buffalo is stated at "over 365,000," and there are there 52 elevators with storage of over 16,000,000 bushels which handled 170 million bushels grain in 1896. The city claims the largest flour depot, and the largest cattle market "in the world," the receipts of flour (by lake) in 1896 exceeding ten million barrels, and of live stock over seven million head. The principal receipts by lake are flour, grain, ore, lumber, copper, pig iron, glucose, lard and pork, while the principal shipments by lake in 1896 were 2,400,000 tons coal, 1,200,000 barrels sugar, 670,000 barrels cement and plaster, and 621,000 barrels salt; aggregating nearly 3,000,000 tons.

This enormous transfer business is now threatened by a Cleveland steel fleet of barges for direct shipment from lake ports through the Erie Canal to New York. This fleet consists of a propeller (cost, \$15,000) and five 250-ton barges (costing \$6,000 each), total \$45,000. Two trips were made in 1895, successfully encountering Lake Erie storms (where an additional tug boat is used), and two or three additional fleets were put on in 1896.

NECESSITY FOR DEEP WATER OUTLET.

Experience with large vessels on Lake Erie between 1880 and 1890, and up to date, having been to reduce previous rates of freight, between Buffalo and Lakes Superior and Michigan, about one-half (representing many millions of dollars saved in transportation charges), has convinced the representatives of the hundreds of millions of capital engaged in the commerce of the Upper Lakes, that an extension of deep water to the Atlantic sea-board will effect an annual saving of more millions than will be required to pay the interest on the cost of such a work, great as that may be.

One steamer brought into Buffalo last year, 1896, 206,673 bushels corn, or 5,787 net tons; another, 176,800 bushels wheat, or 5,304 net tons. These were the largest cargoes known on the lakes.

It is also evident from the foregoing that such a waterway would only be undertaken upon the best route to New York, and Canada's interest in the question is, whether that will be an international one?

There is only one international route possible, which is that via the St. Lawrence and Lake Champlain, which is also one which permits of the extension of this deep water system to Montreal and thence to Europe on the shortest possible line. This fact,

together with the consideration that the St. Lawrence-Champlain route gives the greatest extent of wide and deep water, the least mileage of artificial channel, and the minimum of lockage has given rise to this International Commission.

Canada's interest in such a waterway is only second to that of the United States. It would give an opportunity of doing what our canals were intended to do, but have failed to do: that is, to obtain the maximum amount of the western trade for the St. Lawrence route; and, in addition it would afford a most direct navigation upon the largest scale between Montreal (as well as the Ottawa), and Lake Champlain with its New England frontier, and with the Hudson River, and New York; as also the most economical connection possible with Chicago, Duluth, and Fort William on Lake Superior.

The late John B. Jervis, one of the most distinguished engineers of the United States, the builder of the Croton Water Works, chief engineer of the New York Central and Hudson River Railway, Erie Canal and Western Railway, in his report, 13th February, 1855, thus speaks of the effect of the construction of the Caughnawaga Canal when accompanied by the connection, on the same scale, of Lake Champlain with the Hudson River:—

“Regarding the vast magnitude which the lake trade must reach, and the extent and excellence of navigation, this route presents an inland navigation which, for grandeur in outline and for commercial importance has no equal on the globe. The idea of a vessel 500 to 700 tons loading at an inland port and proceeding (without breaking bulk (2,000 miles, without meeting currents in either direction, to reach a port on the ocean, can nowhere else be indulged in.”

Nothing shows the marvellous advance of inland navigation on the Great Lakes more than the above reference to vessels of 500 and 700 tons, now that so many are plying above Niagara, carrying 5,000 tons and over.

Some tables are appended, showing receipts and shipments of produce at St. Lawrence and Atlantic ports, as also the movement of tonnage in both directions upon the St. Lawrence, Welland and Sault Ste. Marie Canals; and freight rates on grain from the Upper Lakes to tide-water for a series of years.

A memorandum prepared by the Chairman of this Commission relating to treaty arrangements necessary in connection with an international route—as referred to in the Act of the United States Congress, and also in the Canadian Order in Council thereon—was submitted to and approved by the U. S. Commission at their last meeting at Detroit, and is, at their request, attached to this report as Appendix A.

O. A. HOWLAND,
THOMAS MONRO,
THOS. C. KEEFER.

Department of Railways and Canals

APPENDIX A.

ON AN INTERNATIONAL COURT.

MEMORANDUM.—*Submitted by Chairman of Canadian Commission and Approved by the International Commission.*

DETROIT, 21st December, 1896.

By the terms of the Commission issued by the President of the United States under authority of Act of Congress, which terms have been followed by the order of the Governor General in Council appointing and determining the functions of the Canadian Commissioners, it appears that it is only after it has been found that a canal for ships of sea-going capacity will in respect of the territories upon which it must be constructed partake of an international character, and only in that event, that the Commissioners are to report what international arrangements will be necessary to secure the use of the canals to United States ships and commerce.

As it appears by the present report of the United States Commission that the primary question of the necessity of a route international in character cannot at present be determined, until means have been provided for complete surveys of all the possible routes, it is obvious that it would be premature to enter upon the consideration of the general terms and treaties that would be necessary to carry out a scheme of an international character.

There is, however, one portion of this postponed subject to which circumstances seem to make it proper to devote some attention at this stage.

It is demonstrable that the acceptability to both nations of any international terms or arrangements will be materially influenced by the existence or want of satisfactory machinery for preventing or settling disputes that might afterwards arise in the interpretation and execution of any treaty embodying the international arrangements. This branch of the subject will apparently involve a consideration of the possibility of the establishment of a court of law or arbitration for the settlement of such and other matters of difference between the British Empire and the United States.

In view of the fact that it has been announced that negotiations are pending between those two governments on the subject of establishing a permanent court of some nature, it would appear to be proper that the Commission should lay before those authorities in connection with their present report, any suggestions which may occur to them to be of importance as to the scope, form and possibilities of such an institution, in so far as it may relate to the subject of the labours of this International Commission.

As popular acceptability is no unimportant element in the consideration of any scheme to be established by treaty, it will seem proper in the first instance to call attention to certain views which have already been under consideration by certain large popular conventions, which although of a voluntary nature, had in the elements constituting them, a considerable representative character. The first of these assemblies was an international gathering which took place at Toronto in the month of September, 1894. The second was the meeting known as the Mississippi Congress held at St. Louis later in the same year, and constituted by delegates of commercial bodies and municipalities from a very wide area in the Western States.

The third meeting was the first annual convention of the International Deep Waterways Association, held at Cleveland, Ohio, in September, 1896, at which were present a very large number of men of commercial, legal and political eminence, including representatives in [many cases officially appointed from the governments of states,

cities, chambers of commerce, and other commercial bodies and municipalities, derived from sixteen states of the union and eight provinces and territories of the Dominion of Canada. Members of both Houses of Congress, of State Legislatures, of the Parliament and Provincial Legislatures of Canada, and eminent members of the legal profession were among the delegates.

At each of these three popular assemblies the subject of the necessity of an International Court between the United States and Great Britain was made a leading subject of discussion, and the following resolution (originating at the first mentioned convention at Toronto) was unanimously adopted by all three conventions:

“Resolved, that as a preparation for the joint promotion of common interests, it is desirable that a permanent court should be constituted for the decision by rules of law of all questions of an international character which may in any wise arise between the peoples and governments of the British Empire and the United States.”

By the Mississippi Congress the words “and Mexico” were added to the resolution.

At the Convention of the Deep Waterways Association, at Cleveland, the foregoing resolution was emphasized by an additional clause in the platform as follows:

“That special and renewed attention is called to the desirability of establishing a permanent International Court, as set forth in the organizing convention in Toronto in 1894.”

This latest resolution seems more important, from the fact that it followed upon a very elaborate presentation, in the president's opening address to the convention, of the reasons for the adoption of the principle, and discussion in some detail of the necessity, practicability and form of the court referred to in the resolutions.

The views thus expressed may therefore be considered to be approved by this last convention, in its unqualified re-affirmation of the original resolution. Those views are to be found in the official report of the International Deep Waterways Association Convention at pages 47 to 61, a copy of which is annexed.

It will be found that they are largely directed to the following points:—

1st. That for a new international institution of this nature the relationships in constitution, legal system and mutual interest between the British Empire and the United States make those two states a peculiarly appropriate field for the experiment.

2nd. That the institution should take the form of a permanent court, and not of appointees *ad hoc*.

3rd. That its members should be, at least in the main, appointed from, and perhaps by, the Supreme Appellate Courts of the two states. (This principle would not be violated by the addition of a minority of special assessors, either generally or for special cases.)

4th. That the court should follow the model of a domestic judicial body, like the Supreme Court of the United States in preference to the model of arbitration tribunal; in other words, that the decisions should be given by permanent members of the Court belonging to the judiciary of the two nations, and not by an arbitrator appointed by or selected from some foreign nation.

5th. That if these conditions are observed, it is argued that the court would constitute a federal union for judicial purposes between the two countries, and produce on that account the best guarantee for the decisions of the court commanding respect and obedience by both nations, even if their enforcement be left as now to local legislative and administrative action.

While the time has not arrived, nor has the opportunity existed for the Commission to ripen its views upon this extremely weighty matter, to the point of expressing definite recommendation, it feels, that it is performing a duty in calling the attention of the proper authorities to these expressions of opinion from so many popular bodies, and also to the reasoning which appears to have commanded their approval.

The Commission would make one further observation. The hesitation which is likely to be felt at entering into binding treaty obligations on the subject of a permanent International Court seems most likely to arise from doubts as to the effectiveness of decisions given by such a tribunal. Its decisions would from the nature of the case approximate more nearly to the recommendations of a presiding judge to a jury on

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matters of law on which their finding was to be based, than to decrees of an ordinary court which the superior power of the state as a whole may be invoked to execute against individuals and localities. There can be no corresponding power to carry the findings of a joint court into execution in the territories of one of the two nations concerned. The assurance of execution and obedience must rest in the last resort upon the assent of the people of the two nations. This assent is more likely to be given to the action of a judicial institution, forming a point of unconstitutional union and mutual confidence, than to the action of a body having foreign constituents to any extent, and by its very existence marking division and distrust rather than a union between the two peoples concerned. On the other hand, were it made generally understood that the court constituted a permanent principle of union, in the same manner as the Supreme Court of the United States is an element of the federal union of those states, by providing for the observation of mutual justice between the subjects and Governments of the two greater states, then the problem of securing obedience to its decrees would be greatly simplified. Actions of states must take place through acts of persons as agents and a procedure might be framed and executive power provided which would give effect to decrees by operating mandatively or prohibitively upon the acts of individuals. Such acts would then become unlawful and thenceforth fall under the purview of the local courts of original and appellate jurisdiction.

While local partiality sometimes in fact interferes with the course of justice where claims of subjects and foreigners are in conflict, it would be a too tremendous indictment to allege that justice is not now rendered in the majority of such instances. And it is to be observed that the very tendency of the institution, of a common court of law, if constituted upon the principles proposed, would be in time to obliterate in contentions between subjects of these two nations the invidious distinctions and jealousies of nationality.

The vast importance of such a result to the happiness of the two peoples, and to the cause of civilization, coupled with its connection with the matters submitted to this Commission, seem to justify the respectful submission of those representations for the consideration of the respective Governments.

EXTRACT from a report made to the War Department at Washington, by General J. M. Wilson, the chief of Engineers, U. S. Army, on a preliminary examination for a ship canal from the Great Lakes to the River Hudson, dated the 13th of July, 1897, such examination having been made by Major T. W. Symons. (Printed in Sessional papers, 55th Congress, Document No. 86.)

“Major Symons states that there are three possible routes for a ship canal, entirely within the United States from the Great Lakes to the navigable waters of the Hudson.

“The first mentioned route extends from Lake Erie, via the Upper Niagara River, to the vicinity of Tonawanda or Lasalle, thence by canal with locks to the Lower Niagara River at or near Lewiston, or to some point on Lake Ontario; thence through Lake Ontario to Oswego; thence up the Oswego and Oneida Rivers to Oneida Lake and through Oneida Lake; thence across the divide to the Mohawk River, and down said river to the Hudson at Troy; and thence down the Hudson. This is designated as the Oswego route.

“The second route follows the line of the Erie Canal from Lake Erie and the Niagara River through to the Hudson, or this line so modified as to provide for a continuously descending canal from Lake Erie to the Hudson. This is designated as the Erie Canal route.

“The third route coincides with the first from Lake Erie to Lake Ontario, running thence through Lake Ontario, to the St. Lawrence River, and down said river to some point near Ogdensburg; thence crossing the state of New York to Lake Champlain, and up said lake to its head, and thence following in general the route of the Champlain Canal to the Hudson at Troy. While the local officer mentions this as a possible route, he is of opinion, for reasons stated, that it is not a practicable one.

"Allusion is also made in the report to still another route—the St. Lawrence-Champlain route—all of which, except a small portion, is in the United States.

"The relative merits of these routes are discussed in the report, and it is in the opinion of the local officer that the best route for the contemplated ship canal is that by way of Niagara River, Lake Ontario, Oswego, Oneida Lake, and Mohawk and Hudson Rivers; that to build such canal from the great lakes to the ocean, by any of the possible routes mentioned, would at a rough estimate, cost \$200,000,000 depending to a very great extent upon the action of the state of New York in regard to its canals, feeders, reservoirs, etc.; that to maintain the canal and to keep it and all its structures in repair, including operation of locks, bridges, etc., and the maintenance of river channels, reservoirs, feeders, etc., would cost at a rough estimate \$2,000,000 per year, and that such a canal, if constructed, would have no military value. He is further of opinion that the construction of such canal is not a project worthy of being undertaken by the General Government, as the benefits to be derived therefrom would not be properly commensurate with the cost.

"Major Symons is also of opinion that the Erie Canal, when enlarged under existing plans of the state of New York, will if all restrictions imposed by the state upon its use be removed, give commercial advantages practically equal to the commercial advantages that would be given by a ship canal; and that, if it be further improved by enlargement to a size sufficient for 1,500 ton barges, making necessary alterations in its alignment so as to give a continuously descending canal all the way from Lake Erie to the Hudson, and canalizing the Mohawk River, such improved canal, navigated by barges, would enable freight to be transported between the east and the west at a lower rate than by a ship canal navigated by the large lake or ocean vessels. And Major Symons states that the enlargement of the Erie Canal, as suggested, with everything adapted to transport the tonnage of the lakes, is a project worthy of being undertaken by the General Government, as the benefits to be derived therefrom would be properly commensurate with the cost, which is estimated to be approximately one-fourth that of the ship canal.

"The cost of the necessary surveys for a ship canal along the Niagara—Oswego route is estimated at \$190,000. An entirely independent survey for the enlargement of the Erie Canal and the canalization of the Mohawk River will, it is estimated, cost \$125,000. It is further estimated that a combined survey for the Niagara-Oswego Ship Canal and for the enlargement of the Erie Canal would cost \$250,000. In this connection it is stated in the report that such surveys must precede the preparation of detailed plans and estimates of cost of improvement, and that the whole plan of survey is based upon using locks of the ordinary type and of the size mentioned in said report."

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